Spring 1984 United States Department of Agriculture

# extension review

## Electronic Communications

# ACE Teleconference: The High Tech Frontier

Each of us faces the formidable task of attempting to keep up with and make use of developments in electronic communications. We read the literature, attend users groups, participate in seminars and workshops, share information with colleagues, and use electronic communications methods regularly. Many of us belong to professional organizations that focus on or include training in communications.

One such group, Agricultural Communicators in Education (ACE), an international professional organization of agricultural communicators including many USDA and land-grant staff members, held two nationwide audio teleconferences on March 21, 1984. These were part of regional meetings at four "interactive" sites with 16 additional state sites participating on a "listen-only" basis.

ACE sponsored the tele-conferences in an ongoing effort to keep its members up to date with fast-breaking changes, advances, and challenges in electronic communication nationwide.

The first conference featured Charles Lecht, president of Lecht Sciences, Inc., a New York based "think tank" specializing in computer and communications technology. Lecht, a regular columnist in *Computerworld,* is a noted consultant and speaker on the emerging communications networks now challenging us.

**Electronics at Our Fingertips**

In his conversation with ACE members, Lecht described the development of the "whatchamacallit," an integrated personal multipurpose machine composed of the television set, the typewriter, and the personal computer, plus other types of electronic add-ons that will put all types of creative tasks literally at our fingertips, at home, on the road, in the office. He further talked of the growth of massive macroland computer/communications systems, or Integrated Services Digital Networks (ISDN), that will nourish and be nourished by our personal multipurpose machines.

"Imagine," Lecht invited ACE participants, "having your own personal whatchamacallit providing such integrated services as may currently be found only through AT&T, the Post Office, IBM, a secretarial service, a music/video recording studio, and a TV/radio station—all in one room." Lecht believes that the emerging sea of options will "profoundly improve how we see, hear, and speak to one another. They will change the way we think."

**Stay on the Cutting Edge**

When asked how an organization can stay on the cutting edge, Lecht stressed functioning as a pump in a large network, making information available, and transmitting it back and forth.

Diane M. Gayeski and David V. Williams, a husband and wife consulting team, were the presentors for the second teleconference. On the staff at Ithaca College, New York, they also operate OmniCom Associates, and consult on the impact of new information technologies on individuals and organizations.

They took as a topic: "When to Change—Analyzing/Using New Communications Technologies."

**Precise Formats**

Gayeski and Williams described their perspective as coming from an electronic cottage where they specialize in interactive technology and how individuals can use it. They see design skills as essential in interactive video.

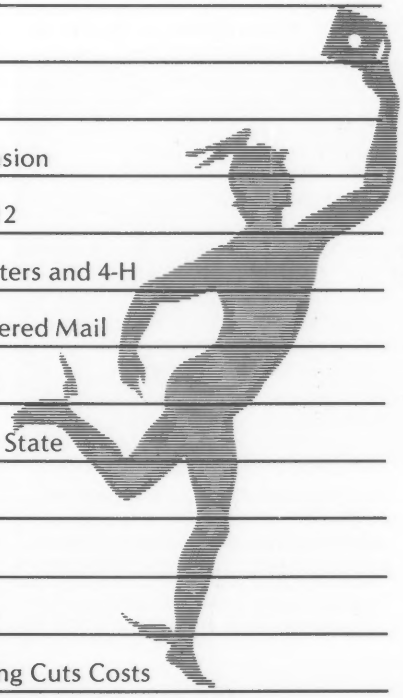
When asked how to change our traditional educational methods, Gayeski and Williams explained that we have been conditioned to linear messages in which a television producer directs our attention. In interactive video, users are doing the final edit, choosing what they want from the smorgasbord presented to them. A user could design 5, 10, or 30 messages from the original program.

**More Human Interaction**

They believe that the technology creates the need for more, not less, human interaction, that the user can have an ongoing relationship with the author of an interactive video program, for example, and that the author could review the user's questions and gain a deeper understanding of the subject.

Following completion of the second teleconference, ACE members continued discussion engendered by the lively presentations, and they critiqued the two teleconferences for the national ACE committee that planned them. For those of you who've not tried audio teleconferencing, consider it as an economical and stimulating way to bring together people who might otherwise not get the opportunity and to obtain presentations by experts whose fees might otherwise not be affordable.

In this issue we explore several dimensions of the rapidly developing field that is electronic communications today. The special emphasis is on you, the Extension professional, as you use communications skills and technologies to go about your daily work more efficiently and effectively. Across the board, in every area of Extension work at the national, state, and local levels, you are molding these technologies to meet your needs, to expand your outreach to clientele, and to streamline your operations. During these times of limited budgets and staff, you are discovering new, creative ways to get the job done and to get it done well. These articles reflect your expertise and may well simulate its further development. We invite your response to them, or further comments, on AGS096. □

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# Sky Eye Scans Land

*Julia C. Graddy*
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*Institute of Food and Agricultural Sciences*
*University of Florida, Gainesville*

A fast-growing Florida county is applying satellite photography as a tool to gather basic land use information and to analyze urban planning and land use problems.

Sunning itself on Florida's southwest coast, Charlotte County is blessed with a tropical climate, natural harbor, and powder sand Gulf beaches. Natural attractions like these more than doubled the population between 1970 and 1980.

Citrus groves, cattle ranches, and some vegetable and flower growers still dominate the eastern interior of the county, while urban pursuits of tourism and construction concentrate themselves on the Gulf Coast. Distance still provides a buffer between the two, although rising land prices tell a familiar story of pressure on the agriculturalist.

**Strain on Resources**

Unfortunately, the population boom, while bringing jobs to boost the country's economy, also puts strains on limited natural resources as well. Jan Masteryanni, Charlotte County Extension Service director, shares concern with county planners and local government officials about limited resources like fresh water, and about problems such as salt water intrusion, sewage, and adequate drainage. "We know that planners and policymakers don't have all the information they need to make the wisest land use and urban planning decision," she explains. "The obvious assumption we make is that in boom times like these, growth happens in places that sometimes don't make the best use of limited natural resources," says Masteryanni.

But knowing that and having the ability to measure growth in graphic form are two different things. Enter the remarkable tool of remote sensing satellite photography.

"Remote sensing photography can solve large-scale problems that are difficult to do otherwise," says Doug Jordan, a researcher with the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida in Gainesville. Jordan operates the computer-driven analysis equipment at UF's Remote Sensing Lab. The system, on permanent loan under a memorandum of agreement with Kennedy Space Center, is capable of anlayzing NASA's LANDSAT satellite snapshots, which photograph the entire earth's surface every 18 days. Currently, about 13 years of information are available for study.

**LANDSAT's Earth Views**

Remote sensing works on the principle that any land feature, whether citrus grove, marsh, or pine forest, reflects differing intensities of light. LANDSAT extends this principle by taking seven versions of each 100-square-nautical mile view it shoots, using a different light filter every time.

The camera divides each filter's shot into thousands of 1.1-acre grids called pixels. The value of the reflected brightness in each pixel is translated into a number. Thus, every filter sees a slightly different "view" of the same scene. The developed LANDSAT photo beamed earthward arrives as a series of numbers, turned into a more conventional image by IFAS lab equipment. The system zeroes in on the pixels under study and compares them under several filters. The split-second comparison produces a unique set of numbers which becomes that earth feature's "signature."

A color is then assigned to the signature, and the computer can find and display that feature wherever it appears on the LANDSAT photo. Once the earth features are identified, up to eight or nine can be studied at a time by looking at one colorful map.

**Pilot Project**

To develop the Charlotte County pilot project, Jan Masteryanni tapped the expertise of the county planner and county appraiser, the 4-H horticulture and marine agents, and personnel from the Soil Conservation Service, the Agricultural Stabilization and Conservation Service, and the Florida Forestry Department.

"We decided to use the satellite data to find out how growth is affecting our land use—to look at changes in the land, development trends, and then to make some predictions," says Masteryanni.

The team settled on about 20 land features and vegetation types from which to study changes over the last 12 years. Included among them are urban areas, salt and fresh water marshes, virgin lands, wetlands, hard and softwood forests, and improved pastures.

With categories in mind, the tedious process of "ground-truthing" began. Armed with plat maps he painstakingly marked, Extension Agent Dave Lambert criss-crossed the county

many times, making sure that each land feature the group wanted studied actually appeared where they thought it did.

**Fast Land Inventory**

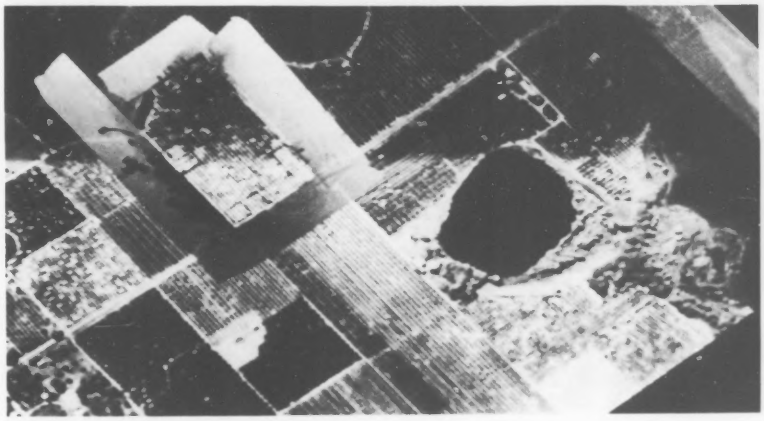
The marked maps are sent next to UF, where they will be used as a guide to match "signatures" against the LANDSAT views of the county. The computer work will pull together a fast inventory of county land use features in a comprehensive way never done before. And since maps from 1972 on will be studied, the group will also get a profile of changes in the county over time.

County Appraiser Merv Bilbrey is excited about the project. "This will enable us to see exactly where changes and growth are taking place and to keep track of it. We're hoping that we can make yearly updates. It's a real shortcut to look at these maps instead of physicially walking a piece of dirt," he says.

Dave Lambert believes it's too early to know everything the project will mean for Charlotte County. "At first, we were just thinking this would give us basic information, like acreage counts for vegetation types. Now we realize we have a very valuable tool in planning programming, because it will tell us exactly what the ranchers and growers are having to deal with and help us keep up with changing conditions," he says.

**Informed Land Decisions**

Masteryanni agrees. She believes that at the very least the project will give policymakers an effective, graphic tool to help make better informed land use decisions, and provide a way to communicate previously difficult-to-measure data in simple form. □



***Remote sensing photography is enabling urban planners to discover how growth is affecting land use in booming Charlotte County, Florida. Jan Masteryanni, county Extension Director, who helped develop the pilot project, consults with Doug Jordan, researcher, Institute of Food and Agricultural Sciences, at the University of Florida's Remote Sensing Laboratory.***

# Video County Update Scores

*Jimmy Bonner*
*Extension Writer-Editor*
*Information Department*
*Mississippi State University*

Getting information to county Extension staffs is the yeast that makes the dough rise. But the tricky part is getting that information, particularly production information, to county staffs in a timely, innovative fashion.

The Mississippi Cooperative Extension Service thinks it's found a tailor-made answer to the problem—using a videotape.

The tape, called "County Agent (CA) Update," features timely information on a variety of topics mailed directly to county agents on a weekly basis. The agents play back the tape using ½-inch Betamax units.

**Production Information**
"CA Update" gives county personnel the latest production information covering a wide variety of topics important to Mississippi agriculture. The tape is made available each week from early April to November during the crop production season.

Suggested by George Berry, district agent in Mississippi in 1981, this method of using videotapes to deliver immediate information is unique among Extension nationwide.

"County agents needs quick, timely production information," Berry says. "The electronic media is tailor-made to show this kind of information, and we already had the video system in place to deliver it."

This innovative approach revolves around the input of subject matter specialists who provide necessary production information. Originally geared toward cotton and soybean production in the Mississippi Delta area, the video concept has expanded to include all major crops and livestock produced in the state.

Across the state, this concept of specialists to address timely production practices directly for county agents is being hailed as one of the most successful endeavors since installing county playback systems for educational purposes.

Having quick access to the latest production information using the videotape system has been adopted overwhelmingly by county agent users, many of whom weren't exactly overjoyed at first at the prospect of using this advanced technology.

**Pilot Project**
Mississippi first made the tapes available in 1981 to 27 counties on a pilot basis. A survey of those counties indicated agents believed it to be an exceptionally valuable tool in keeping them informed about the latest developments in technology and growing conditions.

"Many of our older county agents really weren't too excited about using video, but they turned out to be most enthusiastic about the program," says Dave Hutto, producer and director of "CA Update." "They use it on a regular basis and really look forward to getting the material."

Based on such positive response, Mississippi expanded the video concept statewide to include all 82 counties in 1982. Also based on agents' suggestions, the tape was expaned to include forestry, horticulture, landscaping, orchard management, animal science, beef and pork production, and other aspects of production agriculture.

"We found that county agents were really starving for current, timely information that could be presented in this kind of format," Hutto says.

**Program Development**
The program format follows an informal approach in which subject matter specialists give their recommendations on ways to control weeds, diseases, insects, and other production tips. Specialists also use the format to address immediate, specific problems.

"CA Update" is recorded in the Extension studio each Friday morning. Tapes usually run 30- to 40-minutes in length, although that may vary depending on the subject matter. Tapes are duplicated immediately, for 82 counties and district staffs, and are usually in the agents' hands by Monday morning.

The tapes are recorded using two Hitachi color cameras and a film chain capable of incorporating 16 mm film and 35 mm slides into the video production. Specialists use the slides, and also bring actual plants and other teaching aids into the studio, to illustrate their presentations.

The material is duplicated using an 8:1 ratio on the Beta I format. Each county office in Mississippi has a playback unit and a 19-inch color monitor on which to view the tapes.

The cost of developing and mailing each tape is less than $13, which includes $10 for the videotape and about $2.30 for First Class mailing. Of course, the tapes are used over and over again, so total cost is much less.

**Timely Information**
Because the tape is provided each week, information sent to county staffs can be updated and adapted very quickly as growing conditions and local situations merit. That time factor is the key to the success of "CA Update".

"From the beginning, our philosophy was to deal with only timely and pertinent topics as they related to agricultural production," Hutto says. "We don't try to put together materials that have great longevity. We feel that as long as we take advantage of the need for current, relative information, the program will be successful and well used."

For county agents, "CA Update" provides that timely information in a format that is readily accessible. For subject matter specialists, it gives the opportunity to communicate special problems and needs.

Wayne Jordan, head of the Mississippi Extension Agronomy Department, uses the video concept as a specialist to communicate anticipated problems during the production season.

"I accumulate several telephone calls a week about a particular problem, and I use 'County Agent Update' to address these problems," Jordan says. "We try to make sure that the information we give is always fresh, accurate, and to the point."

That fresh, timely approach on which the program is built is specifically the reason why county agents in Mississippi are so high on the videotape.

"I think this is one of the best training tools for weekly production practices we've had," County Agent Phil Nicols said of "CA Update." "This support and effort from our specialists are extremely helpful and appreciated."

"The tape is one of the most innovative attempts to communicate to agents in the field with 'need to know' information," agrees County Agent George Alley. "It's a job extremely well done."

**Other Benefits**
County agents also benefit because the video format is a welcome relief from mounds of printed materials covering the same topics. Plugging in the videotape every Monday morning is a lot easier than shuffling through printed material that agents may not have time to read.

And, while agents view the tapes and then pass the information on to their farmer clients, some invite farmers for a personal look at the latest production tips.

Hutto says one consideration in using the video format is the need for reliable and fast duplication equipment. Video duplication must be done in "real time," which means a 30-minute tape takes 30 minutes to duplicate.

"Duplicating speed must be gained by adding multiple copies," Hutto says. "We are now using eight duplicating videocassette recorders instead of six, which reduced our turnaround time considerably."

Another factor is that some subject matter specialists are more attuned to presenting information using the video format, while others may be less effective. Thus, it takes time to build a reliable resource pool from which to draw information.

Still, "CA Update" is considered a highly successful endeavor whose success has spilled over into subject matter areas. Similar videotapes featuring home economics programs are now being provided on a quarterly basis. A video administrative newsletter also has been developed dealing with office management tips, inservice training, and other materials. □

# The Electronic Cattle Counter

*Erin Stephenson*
*4-H Journalism Intern*
*El Paso County Extension Office*
*Colorado State University, Colorado Springs*

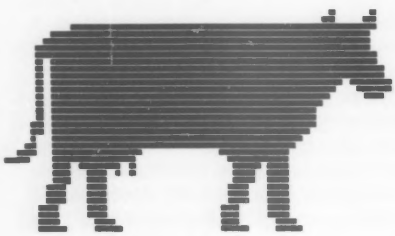
Sometimes it takes a group of kids to introduce adults to the efficiencies of a modern world. Six Colorado 4-H'ers recently did just that by developing a computer program to catalog the El Paso County 4-H livestock sale.

Under the leadership of Rich Lewis and John Read, both of Digital Equipment Corporation Inc., Colorado Springs, Colorado, the kids from Mount Hermen 4-H Club developed a computer program that was used at this year's livestock sale. The 4-H'ers involved were: Wendy Younger, 18; Scott Hittner, 15; Fred "Rusty" Schellman, 16; Lynn Abdella, 13; Anne Redner, 16; and Joe Redner, 15.

Read says the purpose of the computer project, which began in February was to teach the 4-H members technical programming skills. By using Digital computer equipment, the young people learned how to write a computer program, how to make the program run, and how to store and recall that data.

**Computer Fears**

Wendy Younger, a 10-year 4-H member who was also enrolled in sewing, crocheting, food preservation, and market beef projects this year, found the computer intimidating at the beginning of the project.



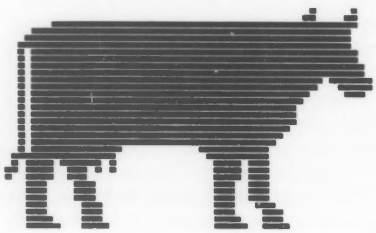
"Computers kind of scare me, but it's getting better. It just takes time," Wendy says. "When we first came down here to Digital, we learned one new thing every night. Then we went home and made up programs. We'd learn how to write a menu and we'd make up goofy ones at home. We made mistakes every single time. We kept experimenting with correcting mistakes. Then we'd make more when we were correcting them."

But according to Read, it's the mistakes the kids learned from.

He states, "Programming and learning to program are very much hands-on things. You've got to mess up to get better. You have to learn that you can't hurt the computer—short of blowing it up."

The sale program created by Rich Lewis for the El Paso County 4-H group was written in BASIC, Beginner's All-Purpose symbolic Instructional Code. In essence, BASIC is the English language adapted to computer use.

Read explains that BASIC was designed with the intention of "teaching people who did not or could not program."



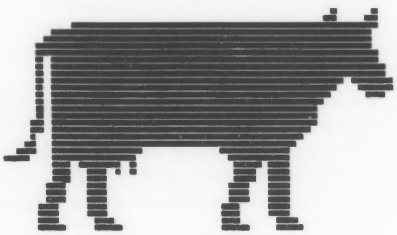
All the 4-H'ers already had some experience with computers before the became involved with the 4-H project—either in school or at home. However, the simplified language made the program much easier to use.

**Switching Computers**

Anne Redner, a senior at Lewis Palmer High School in Monument, Colorado, started using computers in geometry and math analysis. She had some problems switching from the computer language they used at school to BASIC.

"I had a lot of trouble with CLS, clear screen, at first," Anne reports. "Mr. Read kept wondering what I was doing. The computers at school do one thing and this one does something else."

The difficulties did not end as soon as the 4-H'ers mastered the program. Because they were on a time-sharing account with another group that used Digital's equipment in the evenings, they had to contend with outside forces.



"Everyone is different," Read says. "Some people catch on with programming very quickly; others don't. Another group using Digital's computers wiped out all the programs on our time-sharing account. The sale

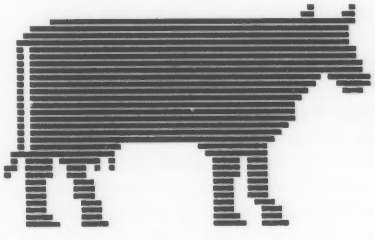
program developed by the 4-H'ers was one of the ones lost. Luckily, the program was put on backup so we got it back.'''

The 4-H'ers agreed that, while not the most difficult part of the project, the actual livestock sale was hard to manage. Four of the six youngsters sold animals at the auction.

Joe Redner, a future Air Force Academy cadet, describes the sale night as pretty hectic. ''I had a steer to sell. Yeah, it was hard, but I think I handled it okay. My fingers didn't even get tired.''

**Computers Lose Livestock Data**

The 4-H livestock sale was held July 30. Rich Lewis brought two PDTs, Programmable Data Terminals, to the fairgrounds in Calhan, Colorado He also brought a printer and a telephone hookup that could connect the sale to Digital's main computer if anything went wrong.

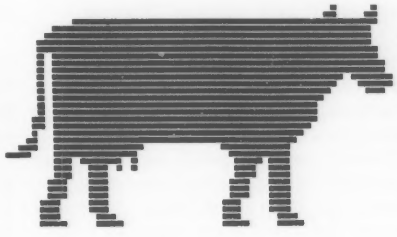


Anne Redner, Lynn Abdella, and John Read's daughter, Amelia, spent the afternoon of the sale typing seller information into the computer.

Midway through the afternoon, a power surge shut down the computer and it lost about 25 entries. As they were working under a tight timeframe, they could not go through the list of sellers to find the missing names, but had to operate the sale without them.

Ellan Chetkin, the El Paso County Extension 4-H secretary, typed the buyer information into the computer. The original plan was to type in the information as the buyers registered before the sale. However, because of a late start in the morning and a delay due to the power surge, she had countless buyer registration forms to input from immediately before the sale was scheduled to begin.

As a result, the sale began without the computer. The hogs and half the sheep were sold while buyer information was still being entered in the computer.



However, most of the individual sales were cataloged by the computer. The computer generated bills of sale for approximately half of the 28 sheep and all 53 steers sold that night.

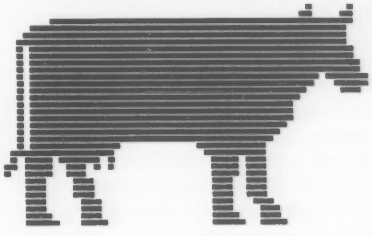
The computer-generated bill of sale included the animals number, the buyer's name and address, and the seller's name and address. Given the weight of the animal and the price per pound, the computer calculated the total selling price.

**Learning From Experience**

''We got off to a slow start,'' Bill Keck, Colorado State University Extension agent, El Paso County, says, ''and that power surge really put us behind schedule. But once we got the computer on the auctioneer's stand, it worked beautifully. I think everyone was pleased with the final results. We'll just have to get an earlier start next year.''

Now that the computer has proven its worth, Keck would like to see the program made transferrable to other systems and available for use by other counties.

Lewis says the program will be easy to implement at subsequent fairs.



The problems they had this year won't be barriers again, he believes.

Read thinks the knowledge the 4-H'ers got out of their project is invaluable. ''Joe is our computer whiz. Scott has a PDT at home so he's used to Digital commands. Wendy doesn't have a computer so she wrote out all the programs by hand,'' Read says. ''This group has been very good to work with. I've been dealing with computers for 20 years and getting other people involved is exciting.'' □

# Micros—A Hoosier Approach

*Betty Fleming*
*Program Leader, Information and Communications Staff*
*Extension Service, USDA*

My task was clearcut. Visit Indiana, talk to home economics state and county staff and find out what Extension is accomplishing using the computer as a teaching tool. Indiana has a reputation for being a leader in the field, a state where Kellogg, general assembly and county government funding (over a million) put computers in every county 8 years ago. Surely, everything and everyone was "computerized" by now. Right? Wrong!

With only recent face-to-face experience with a micro myself (and with a long way to go to master the machine) I was rather intimidated when I set out to ask questions of the Indiana computer users. But, I soon found that Indiana Extension computer users remain distinctly human in their approach!

**Farm Family Computer Forum**
First stop on my trip—attending the "On-Farm Computer Use" conference, an annual event at Purdue. Indiana is the first state to provide such a forum for farm families to gather, interact with experts, and inspect new equipment.

One session advised people on what to do before they purchased a computer. A panel included a farmer who told how computerized his operation was. Later on, someone asked, "How much time do you spend inputting information?" Very little, it turned out. The farmer's wife was the computer input expert!

A day is devoted to family computer topics. Speakers there covered topics on "The Computer Tool" (now and in the future), "Computers In Education," and "Robots In Your Home." It was exciting to learn all the things computers are doing and can do in the future. It was also somewhat reassuring to learn that robots, as yet, are pretty limited creatures. It took *1,000* different instructions, for example, to program the small Heathkit robot we saw to move around the room. And, even then, he wasn't too successful in his journey.

Industrial robots, costing in the neighborhood of $10,000 and upwards, can be seen in assembly line operations. The small "household" version at the forum cost $1,500 as a kit and has appeared on the cover of 30 magazines, in countless articles, and on all major network news shows. And now, there's even one on the Purdue campus!

**How a State Leader Sees It**
Have all Indiana staff taken computers to their hearts? "Some staff have been here since computers first came, and they still haven't adapted," says Assistant Director Karen Craig. "Some personalities are better suited to computers than others. Perfectionists avoid it. You have to be able to make errors and get frustrated." Is Craig concerned about those who aren't using computers? "We encourage everyone to learn, but it's a good thing, in some ways, that more state staff aren't active in this area. We'd have too many demands on our one programmer. And, there's a backlog of programs now."

Craig is a computer owner at home (Kay Pro) as well as at the office (DEC). She roughs up things for the office on her home word processor and printer. She also uses spread sheet software to keep track of some rental property finances. She figures she spends 1½ hours three times a week on these home chores. She does word processing and report tabulation on the office machine, maybe spending about five hours a week. "It's made my secretary more productive. For example, I drafted three field staff surveys, she edited them, and the job was done in half a day. Ordinarily, it would have taken 1½ days."

What about software? Craig says, "Land-grant universities probably shouldn't be developing much, except in a few selected areas. We ought to perfect our skills in evaluating programs so we can help in the selection process."

Asked why Purdue, in 1983, had only eight pieces of home economics software, Craig said, "It takes time to develop it. You *don't* want to know how much!" Pressed further, she said, "We have a nutrition program that's taken 2 years."

Craig says many Extension professionals don't know how to talk to programmers. "It's very concrete thinking, like work simplification. Making a bed may have 400 steps!"

Craig says home economics may have fewer programs than agriculture but, "our programs are heavily used."

**A State Specialists' View**
Dixie Jackson, Purdue consumer economics specialist, is another professional who works on a computer at the office (DEC or IBM) and at home (IBM). She can bring a disk of material from home for editing and printing at the office.

When she arrived at Purdue in 1981, Jackson volunteered to "idiot test" some word processing software. "I knew I had to get into it," she says.

Jackson's had no formal computer training. She's just seized every opportunity, along the way, to learn. "I learned a lot when I purchased my computer for home. People started

asking me for tips." She also put herself on the line in 1982 when she planned consumer management training for field staff and, instead of calling in "experts," decided to offer computer training for beginners, based on her experience.

Jackson has worked with staff members like ag economist George Patrick to transfer IRA software from mainframe to (DEC) minicomputers. She also has ideas for software she'd like to develop, but the time involved makes her cautious. "It took us a year to do the IRA program!"

**Write on Processor**

Publication writing is easier for Jackson with computers. "I do the original word processing. My secretary gets input from reviewers, edits the copy and makes changes. Then we send the copy to Ag Communications by electronic mail. Getting a publication manuscript produced may only take a few weeks this way."

*Sue Merkley, Extension housing specialist at Purdue University, talks to a new voice-activated microcomputer. Merkley is developing various software packages to support Extension field staff.*

Housing specialist Sue Merkley is another Purdue professional with a computer at the office (DEC) and home (Timex-Sinclair). "I purposely bought an inexpensive computer at home to learn on," she says.

Merkley's strategy is like Jackson's, to seize every opportunity to learn more."I have more interdepartmental contacts that I've been working with, too," she says. "They had designed a home insulation analysis program. I wanted agents to better use it. So, we got together on field staff training."

Merkley has appeared on a computer-related video teleconference, an interdepartmental effort, using the Indiana Higher Education Telecommunications System (IHETS). "At least 65 percent of our 92 counties were represented."

Merkley is also working with interdepartmental contacts to develop a software package. One on water heating is due to be tested shortly. "I want to do one on buying a home next," she says. Her work in agent training makes her aware of the danger of oversimplification. "Field staff need to know the rationale, why a program was developed the way it is. If we're not careful, consumers will accept an answer from the system, and, because it comes from the system, they'll think it's *THE* answer. It isn't always, and field staff can help them realize that—its a decision-making tool, not an answer tool."

Another area for agent training is learning to make multiple use of existing programs, says Merkley. Computer training for Indiana home economics field staff is done primarily by home economics state specialists at the same time subject matter is taught.

**What Field Staff Think**

Not all field staff think that state specialists should produce more software. Polly Hughes, Washington County home economist, says, "It's more important to use well what we have. Already, we have enough so it's hard to keep track of what's up to date and what isn't."

Hughes says it's good PR in a small county to have a computer, "We've found newspapers really promote our programs, sometimes before we're ready to deliver." She also says that county government officials have discovered the benefits of computers. "They come in the afternoon and stay until 9 or 10 p.m. working on taxes and other matters. Now they're getting their own."

**Allow Budget Comparison**
Purdue's budgeting program has been of great value to Hughes. "Without having to ask too many personal questions, we can compare family budgets with average budgets and give people an idea of how they're doing with expenditures," she says.

Does Hughes carry the computer to meetings? Hardly. It's not that portable, although there is a portable unit available from the state office. "Sometimes I can predict the make-up of a group. I simply take some printouts and we discuss those," she says. "Sometimes, people make arrangements to stop by the office."

Carolyn Gordon, Jackson County home economist, belongs to the FACTS County Terminal Committee, a group of about 20 county, state, information, and administration people. "We look at problems and make recommendations," she says. "I have a 10-county computer teaching responsibility. We all report on what other agents think and feel."

A computer owner at home (Texas Instruments) Gordon says her two children use it more than she does. No time.

"I taught myself to use computers," says Gordon. "There was no initial training when all the original office computers were installed. As long as you're not afraid of it, you can learn."

**Major Use: Office Management**
"I use the office computer (DEC) to communicate with other counties and the state office, for word processing, mailing lists, demographic information that helps me plan programs for people, enrollment in home economics programs, etc. The major use in our county is for office management, not teaching as yet."

"My main teaching with computers is to help people get comfortable with them," says Gordon. "People are concerned that computers will take away or change their jobs. They're afraid children won't learn basic skills. The security thing frightens them."

Gordon meets with small and large groups to introduce them to the computer, often taking a portable terminal with her. She also uses the Purdue publication, *A Microcomputer In the Farm Family*.

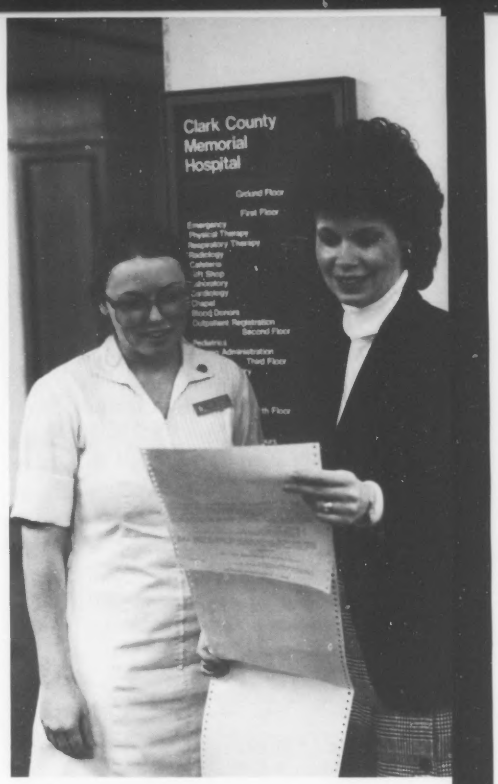
"I wish we had one like it directed to urban and suburban families," she says. She's met with groups of 400 people. "I used the food costs software at our area day and gave out 120 printouts to help people compare their spending to others."

"I'm not sure how long Cooperative Extension will be in this teaching role," says Gordon. "For now, we can help people understand the concepts of programming (*not* the nitty-gritties), be aware of whether or not a component is a good buy, and generally gain a basic understanding."

"In some environments, there are a lot of people providing help in this area. And, as yet, not really all that many families have made a major investment. We have to work with all families."

Pam Robbins, Clark County home economist, was on maternity leave when a computer arrived in her office. "I have real empathy for those who need to learn about computers. I had to run to catch up."

Now she's leading in many ways. She's a member (and former chairman) of the county/state computer committee which includes Carolyn Gordon. She hasn't bought a home computer yet but she's "investigating."




***Indiana Extension has been pioneering the use of high tech. Here, Extension Home Economist Pam Robbins (right) delivers a "Nutri 1" computer printout to Debbie Majors, a Clark County Memorial Hospital dietician. The printouts inform the patients of the nutritional content of various foods.***

**Budget Software for Victims**
Robbins also helps people learn what they need to know to understand computers and make computer purchases. She's worked with a vocational rehabilitation center, using budget software to help accident, injury, and disease victims better understand how they allocate resources.

"We need more advanced software," she says. "Some families don't want to compare their budgets to low-, medium- or high-income budgets. They're ready to input data and get their own budget. They want personalized data." Robbins said she used to think people wouldn't provide such personal data. No longer.

Robbins is chairman of a training committee looking at ways to bring other agents along in the new technology process. "I think it's got to be

a personal thing. You know, you invite a home economist or other agent to sit down at the computer and run programs. Maybe you both go to a computer store and check out what's on the market."

"Improved office management thanks to computers benefits our clientele. I don't think computers are going to do all our teaching for us. We may just adapt or modify our teaching style because of them."

**Clientele Story**

Robbins, as a regular service, delivers "Nutri 1" printouts to Debbie Majors, Clark Memorial Hospital dietician. These printouts spell out the sodium, cholesterol, potassium, and iron content of various foods. They're stamped with Robbins' address and used in counseling with patients. Major says, "Our patients seem pleased to get this information. If they've had a medical problem, they're really motivated and want information, and they love handouts. The printout is a new twist."

Carolyn Gordon's been working with Orville Lubker, high school counselor in Brownstown. He's found that the FACTS careers software is a valuable teaching tool for sophomores. "Last year, Extension provided input forms for all our students. Indiana Vocational Technical College students ran off the programs for us."

"Students could find out whether they prefer working with data, people, or things," says Lubker. The computer also identifies certain areas, based on their interests, where they might logically pursue employment. "A student who indicated he's not going to finish high school might have few options. A student who's going on for more education might see she has *pages* of options!" This year, Gordon will borrow a portable computer unit and the students will run their own programs.

**Accountability**

How are the Purdue home economics educators being asked to be accountable in the computer delivery of information to people? "Overall, we have to be accountable and show we're doing our job," says Craig, "but there's no special push for us to be accountable about our work with computers. Everyone just keeps saying, we've got to catch with with the latest in new technology. It's a constant cry!"

Carolyn Gordon says home economics doesn't have the software it needs to assess change in behavior. Gordon also says, however, that last year, she reached 2000 people in 6 counties with computer information. "Some of it was leader training." She also does mass media and exhibits and works with schools.

**Down the Road**

What about the future? Karen Craig says, "The computer's going to change the work life of families. It already has in many farm families where women are heavily involved."

"Computer hackers are already causing problems in marriages," says Craig. "It's been documented. We can see our next generation, the college students, spending all night in computer labs. As new families are formed, there are bound to be communication problems if one, or even both people are into their own isolated worlds."

On the positive side, Craig says, "Extension needs to help families see the impact of all this, the potential, and the alternatives for lifestyles including computers. We need research."

Eldon Fredericks, head of Ag Communications, and another computer user on the job (DEC) as well as at home (Apple), says he feels Purdue has a leadership function to perform. "People are coming here to study us, go to school on us, so to speak, picking out our successes and failures."

"We may be change agents, but sometimes change comes hard, even for us," says Fredericks. Purdue is in the process of determining how it will upgrade its hardware, making improvements in its FACTS Communications system. "One of our challenges is to continue to provide information to the increasingly wide range of computer literate people. We've got farm families here who are practically experts now. Some families are just getting interested. We're pleased that we can draw 600 people to our On-Farm Computer Conference, but it's increasingly difficult to meet all of their needs."

Fredericks also wants Purdue to do some work with generic software. "I think we should target a couple of machines and write software for them, with the help of a nonproprietary operating system like CPM, for example." He says he hates to write to people and tell them they can't use Purdue software. "Clientele will be able to dial county offices and connect with their computers," says Fredericks. "It's coming."

**An Eye To Change**

The trip to Indiana showed me (and I hope—*you*) that this is a forward thinking state with a lot of computer experience and success under their belt. But it's also a state that's taking nothing for granted, looking at themselves with an eye to change, and concentrating on doing even better in the future. I went looking for illustrations of ways that computers are being used as teaching tools. I found them. But—I also found the tools in the hands of extremely capable educators. The combination appears to be unbeatable! □

# Learning Via Teleconference

*Richard Buhr*
*Community Information and Education Service Coordinator, CES*
*University of Illinois at Urbana-Champaign*
*and*
*Harvey J. Schweitzer*
*Assistant Director, CES*
*Community Resource Development and Public Policy*
*University of Illinois at Urbana-Champaign*


Shortly after the 1982 November elections, newly elected county board members from 28 counties stretching across 250 miles of central Illinois attended the same orientation program. But none had to drive more than 25 miles.

This orientation was the first in a series of educational teleconferences designed to enable local officials to exchange ideas on issues and problems while saving travel time and expenses. This series was conducted over the University of Illinois Cooperative Extension Service's TeleNet System.

The November orientation tied approximately 150 county board members to four county government experts speaking from the U. of I.'s Urbana-Champaign campus, Peoria, and Washington, D.C. Microphones and loudspeakers at each county Extension office allowed program participants to ask questions and to listen to other board members' comments from other locations. Topics discussed at this first teleconference included the duties and responsibilities of county board members, intergovernmental relationships, and national trends affecting state and local government.

"As a new board member, I really appreciated it," says Jerry Welch, Coles County Board. "Everyone I talked to was impressed with the program. It was definitely worth taking time for."

**Evaluation**

Participant evaluations rated the program highly and confirmed that teleconferencing is an acceptable medium for board members. Ninety-nine percent of them indicated that they would be willing to attend future teleconference programs on topics of mutual interest. In comparison, only two-thirds of the group said they would be willing to drive to larger cities such as Springfield or Chicago for similar programs.

Based upon the positive evaluations of the first program and suggestions from board members on specific topics they would like to discuss, two other programs were held in April 1983—21 counties participated in discussions on locating and stretching county dollars and the county board's role in law enforcement. Participant evaluations also rated these programs highly.

This educational teleconference series is being developed by the Community Information and Education Service (CIES), a cooperative project of the U. of I.'s Office of Continuing Education and Public Service and Cooperative Extension Service with five central Illinois community colleges. The colleges are Carl Sandburg College, Lake Land College, Lincoln Land Community College, Richland Community College and Spoon River College.

CIES began in 1980 with support from the W.K. Kellogg Foundation of Battle Creek, Michigan. The purpose of CIES is to provide local officials with opportunities to examine complex community issues and to assist them in locating and using available technical, educational, and governmental resources.

"In planning CIES programs, we work closely with local officials to determine the topics and program formats that are most useful to them," says Jeri Marxman, Cooperative Extension area adviser for community education. "These officials tell us that they want programs that are offered close to home—they just don't have the time to travel long distances, and money isn't available for travel and expensive registration fees."

Teleconferences meet the challenge of these limitations. Economical programs can be developed to reach a large, yet local audience.

**TeleNet System**

The U. of I's TeleNet system, developed in 1970 by the Cooperative Extension Service, is used statewide for staff development and program delivery to a variety of audiences through county and regional Extension offices.

"We decided that TeleNet was 'natural' resource for local government official programs in the CIES project as well," says Marxman.

Champaign County Board Chairman Gary Adams agrees. Adams, who was a speaker at the teleconference on the county board's role in law enforcement, says: "Teleconferencing is a good opportunity for board members to hear several different people talking about a topic and to have a lot of interaction without actually having to travel some place and sit down in one room. It's certainly a lot more convenient for people."

Adams adds that, in general, Illinois county board members have very few opportunities to participate in educational programs on county government. One Illinois county lobbying organization has recently begun to sponsor some panel discussions at its annual meeting, but Adams explains that "the problem is the travel and cost involved—the room, the meals, and everything else."

Melba Ripper, Fulton County Board chair, who participated in all three teleconference programs, says that teleconferences are "very beneficial in reaching people that we otherwise have no contact with—on the federal level, the state level, and others at the local level. I like the way it's accessible to peole locally," she says.

**Limitations**

Although the participants in the county board programs have been nearly unanimous in their enthusiasm for the convenience of teleconferencing, a few have also pointed out some of its limitations.

Sandra Hindelang, executive director of the Illinois County Problems Study Commission, was a teleconference speaker for the law enforcement program. She thinks teleconferencing is a "great medium," but some audience spontaneity is lost. She felt that without eye contact it was difficult at times to determine whether she had hit the mark in responding to people's questions.

Fulton County Board Chair Ripper emphasized the need for audience participation in teleconferences. "Unless you participate you can become very bored sitting there for a couple of hours. It becomes easy to lose the train of discussion and then you lose the valuable part of it," she explains.

**Planning**

CIES staff members have carefully listened to participant evaluations of past programs and have been studying other organizations' uses of teleconferencing. Extension communication and subject matter specialists who have used the system for years emphasize that careful planning is essential to successful teleconferences. Drawing upon various sources, Pat Rink, CIES professional development coordinator, has outlined several considerations in planning a teleconference program:

- Coordinators at each teleconference site must be knowledgeable about teleconferencing in general and about the equipment used. Technical difficulties are not unusual, and someone must be available to correct the problems.

- Participants must have some visuals to guide them through the program. Visuals may be photographic slides, flip charts, or merely printed handouts of the speakers' outlines. Photographs of the speakers are helpful in gaining audience rapport.

- Activities should be changed every 15-20 minutes to hold participants' interest. Presentations can be alternated with question-and-answer sessions, slide shows, role playing, and so forth.

- Audience participation is essential. Questions and comments should be encouraged. Participants should announce their names and locations before they speak, and conference coordinators should keep track of every person who speaks so that their names can be used by those responding. Active participation helps to alleviate the impersonal feeling that teleconferencing can sometimes create.

- Time must be carefully planned. Two hours is about the limit for maintaining interest in a teleconference program. Adequate time for breaks should also be planned—at least 10 minutes each hour.

Rink says that the Illinois Extension's TeleNet is nearly ideal for teleconference programming. Experienced Extension communications specialists and county advisers are on hand to assist participants in using the system and to correct technical problems.

Marxman adds that "we even use the system for program planning sessions. It conveniently allows U. of I. campus staff, county Extension advisers, community college staff, local officials, and program speakers to get together with a minimum of travel to develop efficient and coordinated programs."

**Program Participants**

With respect to speakers for local government official programs, CIES staff members have selected a mix of university faculty, state and federal agency personnel, and experienced local government officials for each program.

Although participants have evaluated the mix of speakers favorably, it is interesting to note that participants have found experienced local government officials to be the most helpful resources. As Macon County Board Member Mary Lee Brown explains: "I think the exchange of information among regular county board members is the most useful. The ones that really know the nitty-gritty. I'd rather talk to those. They know more about county government because they've gone through it all."

The first series of teleconference programs has been limited to central Illinois counties within the five CIES community college districts. Plans, however, are currently being developed to extend teleconference programming to local officials in a greater number of Illinois counties. □

# The Image Builder

*Bill Russell*
*Extension Communications Specialist*
*University of Arkansas, Little Rock*

Somewhere along my 14-year journey in the communications field, someone remarked: "It doesn't make any difference how many people you reach if you don't reach the right people!"

This struck me as a profoundly accurate judgment which all too often is overlooked in our zeal to produce larger numbers, especially when it comes to video communication. The production of 20-, 30-, and 60-second public service announcements (PSA's) promoting specific Extension work not only helps create a better awareness of Extension, but also stimulates a sense of organizational pride among our Extension personnel.

**A Positive Relationship**
The first step in this process is the obvious one of building a positive relationship with the Public Affairs office of each of the commercial television stations. Public Affairs directors usually move on to other positions after a couple of years in this capacity.

For this reason, most new directors have virtually no concept of what the Extension Service is about or how it can serve as a resource for consumer-oriented information.

Once directors are exposed they normally become interested, and they become even more excited when they realize you can produce and edit PSA's for their TV station and tailor spots for seasonal consumer needs.

In Arkansas, it is a practice to survey stations for needs each quarters of the calendar year. Some stations want 20-second or 60-second PSA's and occasionally a station will request some 10-second spots. The length of the spots tends to change as the year progresses but, for the most part, requests average 20 and 30 seconds.

**Checking With Program Areas**
Once the station needs are established, the marketing phase begins by checking with each of four major program areas (Agriculture, Home Economics, 4-H, and Community Development) for activities, projects, meetings, and seasonal recommendations for consumers and farmers which can be made into visual spot announcements.

These possible spots are ordered in accordance with major goals in the program areas. Next, the spots are targeted geographically—for instance, northwest Arkansas is labeled big beef cattle country while east and northeast Arkansas is tabbed for row crop production. This creates a positive relationship with the Public Affairs director. A source of tailored spots has been established for a particular geographic area.

**Methodology**
Plan to have a 3/4-inch tape video cassettee recording of the spot in the hands of the Public Affairs director at least 3 weeks ahead of the target broadcast period. In Arkansas, there is no in-house video-editing capability. Recordings are made with a Sony DXC 5000X camera and a Sony VO-4800 recorder. We deliver unedited spots 3 weeks ahead of time. Most states will have editing capability and will not need to be quite so sensitive to lead time.

In Arkansas, each spot is tagged with a message to "contact the county Extension office" and the "state office address." This dual tag is chosen because many rural citizens are unaware of the location of the county Extension office or prefer to write for information or a pamphlet. Tagging the spot also serves as feedback to determine the success or failure of each spot.

After 4 years gathering valuable tips of public service announcements, it has been hard to determine specific numbers as every county does not report PSA contacts. However, the following generalities have been observed:

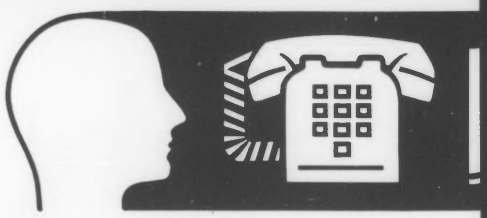
- *Farmers rarely request the information offered.* Farmers may already know the information. However, they do view the spots as promoting consumer awareness of agriculture and are generally very supportive.
- *Horticulture PSA's generate high response.* Two out of every three Arkansas families are engaged in backyard gardening, so a heavy gardening interest is to be expected. However, lawn care, shrub, and tree pruning also do extremely well.
- *Home-Economics-related PSA's generate the most consistent response.* People are interested in food and furniture and they remain popular topics whether it's a microwave cooking workshop or a furniture reupholstery session. Also, excellent results occur with spots that promote Extension homemaker clubs and money matters.
- *Meeting and Field Day PSA's increase attendance.* These need more visual emphasis but the public does react when the spots are "open to the public."
- *Energy conservation and 4-H PSA's do not generally stimulate strong response.* This may only be true in Arkansas; however, it appears that for whatever the reason, the public doesn't react strongly to either of these general messages.

**Renewed Pride**

Generic Extension PSA's have been effective in helping people to identify Extension. Agents and specialists verify this every day as they travel the state working work people. Also, Extension workers experience a renewed sense of pride when their organization receives video exposure. Call it a status symbol if you will, but the fact remains that for many people television exposure tends to automatically stimulate credibility.

In summary, Arkansas has learned that the television PSA's that are planned and structured as marketable Extension tools not only inform the public about Extension services but also stimulate employees' morale and foster pride and professional purpose. Extension also provides the media with its multiplicity of available resources and informs the public of Extension's diverse and information services. □

# Interactive Education—A Media Mix



*Arland R. Meade*
*Professor, Agricultural Publications*
*The University of Connecticut, Storrs*

When Elsie Fetterman initiated a request for a Title XX grant to train service providers in Connecticut government and private agencies, she didn't wait for far-out or innovative technology—she looked for ways to use existing technology, materials, relationships. Then, Fetterman blended these into an interactive teaching program that was far-reaching across the state.

Nothing was needed in technology more advanced than the telephone, a public television system, the printing press. But she integrated these into an interactive learning operation unprecedented in Connecticut.

The plan required 13 hours on the air on public television, 32 meeting facilities, telephone arrangements, about 80 guest experts, about 300 professional service providers assigned by their agencies, and cooperation of the Cooperative Extension Service, The University of Connecticut Extended and Continuing Education, and the state Department of Social Services. Later some "bonus" activities required a vote of the University Senate and of the School of Family Studies.

Many services, including guest experts' time, were free. The grant totaled $124,047 including $38,636 in state matching funds.

The authors presented the operation, with videotapes and commentary, twice at the New York Cooperative Extension Conference on January 12, 1984, at Grossinger's in New York. The conference theme was "Educating in the Electronic Age."

The gist, as stated in the program, was: "An electronic interactive procedure to teach Connecticut care providers—mostly professionals in state and private agencies—so they can better advise their clientele. Teaching was conducted through statewide interactive television and telephone. An innovative aspect was to determine how well this procedure could educate leaders and professionals while eliminating most travel by participants and presenters and without the typical repeated lecture presentations otherwise needed to cover the state."

**Programs Plan**

The principal learners were employees of state and private care agencies—plus anyone who wanted to listen to the 13 TV hours broadcast on public TV, and read printed matter.

Their objectives? To paraphrase slightly the project's brief description: The project will train Title XX agency personnel of Connecticut in the skills necessary to understand and better cope with money problems and consumer rights and responsibilities.

The contract was between the Connecticut Department of Social Services and the Title XX Agency for the state. The proposal was signed by E.J. Kersting, director of the Connecticut Cooperative Extension Service. Elsie Fetterman, consumer education specialist, became the principal investigator by contract.

Thirty-two agencies assigned 300 employees to the program. They were required to attend 13 sessions at 32 viewing centers, some being Extension field offices. Other participants came to the centers or viewed the programs on their own TV sets. One thousand notebooks contained supporting literature for the programs. Title XX guidelines required that at least half of the participants (social service providers) be from Title XX agencies—of which there were 600 in Connecticut.

Assisting Fetterman on camera were 80 professionals from federal, state, and local consumer agencies. The series had 13 topics, one for each week during the fall of 1978. The experts not only were on the air for 1-hour segments, but each donated another 6 hours to tutor the staff who would conduct the groups at the 32 listening centers. The experts met with Fetterman and the facilitators for a full-day training session during the summer for each of the 13-week interactive series. All sessions were held at a county Extension office.

Teachers manuals (for group leaders) explained procedures for conducting classes in some detail, as these were not professional teachers.

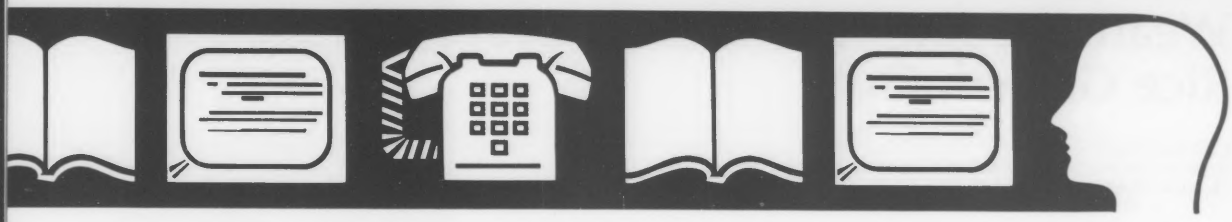
They did this so the group leaders (facilitators) would have specialized knowledge to impart to participants for 2 hours each week before the TV presentations. Those at home who tuned in received 13 hours of instruction; those in the viewing centers received those 13 plus 26 more hours of face-to-face instruction.

**Communications Component**

A communications hub was the Connecticut Public Television with its key station in Hartford and four satellite stations. The grant provided for $1,000 per program for studio, crew, and broadcasting.

The old but ever useful telephone was the other electronic component. The grant paid for toll calls from anywhere in Connecticut to the station during the broadcast and even some after the panel went off the air.

At the studio Fetterman and the panel of experts were on the air for each program from 12 noon to 1 p.m. Numbers on the panel varied from two to four. After the introductions, some educational presentations were made. These could be a film, videotape, or special comments by the panel. Some presentations were



dramatic skits done for earlier Extension consumer education teaching. These dramatizations depicted such problems as mail fraud, tenant-landlord relationships, warranties, door-to-door selling, and home repair. Fetterman recruited help from the university theater department to write and act these skits.

After the formal instruction, Fetterman invited viewers to phone in questions—and questions poured in. The experts provided unhurried and thorough answers.

**Question Call-In**

Phone-in procedures were important. So that the station did not air inappropriate words, the project coordinator, hired full time, received the calls. Often she could help the caller simplify, rephrase, or boil down the question. Then the coordinator would signal the studio and the caller's voice would then be heard in the studio and by everyone tuned in.

To avoid dead time on the air, Fetterman and the panel kept up the discussion, if there was a pause between calls. All 32 discussion leaders were contacted by phone each week for any problems they might have had at viewing centers.

**Additional Bonuses**

A bonus feature piggybacked on the Title XX grant was the opportunity to get 3 hours credit at the University of Connecticut. Fetterman received permission from the University Senate's curriculum committee and the School of Home Economics and Family Studies (now named School of Family Studies) to offer this as an experimental course for 3 hours of credit in consumer education. Some enrolled through continuing education procedures at their own cost.

To receive credit, "students" (care provider professionals) had to attend all the group sessions, prepare a report, take midterm and final examinations, and conduct a field project.

In addition the Title XX grant paid $10 per registrant from their agencies for Continuing Education unit credits. This was mandated by Title XX. Title XX funds provided professional evaluation of the results. They found that many participants declined to take pre- and post-tests, although assured they were anonymous. However, pre/post tests were given at each session and a major one for entire series. They also found that instruction in use of Digitek sheets for marking responses to the multiple choice and true-false questions and taking the tests, was a major time consumer.

However, analyses proved that learning was statistically significant.

A satisfication questionnaire of three parts was administered (including some Likert-type items). Thirty-five percent of participants rated the workshops overall as excellent; 54 percent rated them as good.

A small minority felt that use of TV in this educational series was not advantageous. However, 81 percent felt use of TV was good or better than good.

In an open end portion of the questionnaire, 32 wrote comments and these varied widely, and were sometimes contradictory.

**Spinoffs**

Spinoffs? Videotapes of the 13 hours of TV have been used in university classes with up to 110 students as well as at community colleges, Eastern Connecticut State University, and one private college. Participants have written letters of appreciation for the opportunity.

At St. Josephs College, 26 student teachers viewed tapes and then obtained information from sources referred to, or from any relevant booklets or other available material provided by various agencies. These student teachers used tapes and support material to develop teaching units for their home economics classes.

The project met Title XX needs in: (1) upgrading skills of interested personnel from Title XX agencies to meet client needs in financial decisionmaking and in exercising consumer rights and responsibilities; and (2) providing staff of Title XX personnel with specific skills to help clients in financial decisionmaking and exercising consumer rights and responsibilities.

The 13 topics were: What is Credit?, Your Credit File, Financial Problems, Door-to-Door Selling, Mail Order Fraud, Warranties, Tenant-Landlord Relations, Food Stamps, Food Issues, Patient's Medical Rights, Auto Repair, Funerals, Agencies.

An indication of agency approval of the concept is in a letter from Connecticut's largest city, Bridgeport, saying: "The City Welfare Department would send 20-25 persons, with a caseload of 125 each, to reach a potential of 3,000 clients in this city alone."

**Successful Mix**

The mix of media—electronic, face-to-face, and printed reference material—was successful. The electronic components of television and telephone were the center, but other media supported. And for the whole, a great deal of organization from the Cooperative Extension Service was indispensible. One must use the new in communications and education, but this does not negate some of the older methods. □

# Weather Data In—Rice Growth Out

*C. Richard Maples*
*Extension Specialist, Agricultural Communications*
*University of Arkansas, Little Rock*

Arkansas rice growers lead the Nation in rice production. One of the many tools they use to maintain that lead is DD50—a University of Arkansas Cooperative Extension Service computer program to help growers schedule crop production practices at proper times. Enrollment in the DD50 Program has grown from 540 rice producers in 1978 to 2,310, or over half the state's rice growers, in 1983.

**Terminology**
The DD50 computer program uses weather data to predict when plants in a rice field will reach specific growth states. A DD50 value is calculated by averaging the maximum daily high and low temperatures in degrees Fahrenheit and subtracting 50. The computer program has built-in limiters—a 94-degree daytime maximum high and a 70-degree maximum night-time low. These increase the accuracy of predicted DD50 values during years with extreme weather.

The rice-producing areas of southern and eastern Arkansas have been divided into four weather zones. A University of Arkansas experiment station in each zone serves as a weather data collection point where DD50 values are recorded every day starting early in the spring, usually on April 1.

**Thresholds**
Research had determined the number of DD50 units required by each variety of rice from the date of emergence to a specific growth stage, such as internode growth of one-half inch. Using the internode length and heading dates as "markers," researchers determined thresholds for other development stages for each variety.

The number of DD50 units needed to reach each of the critical growth stages of the rice plant are called thresholds. These thresholds are a permanent part of the computer program, along with a long-term weather database.

**Accurate Predictions**
Daily accumulations of DD50 units override the long-term average, thus increasing the accuracy of the date or stage being predicted. About May 1, growers receive a printout of predicted dates for each field. Staff members monitor research plots and study daily DD50 accumulations so they can make adjustments during the growing season.

If the accuracy of predictions can be improved by 2 or more days, the grower will receive an update. This provides a built-in safeguard against inaccuracy for an entire season. Usually, events being predicted are in the acceptable range of plus or minus 2 days.

**Strengths and Weaknesses**
The rice grower's initial DD50 printout provides predicted dates for 18 management practices; such as, advising when to apply nitrogen, herbicides, and fungicides, and when to drain a field for straighthead control. A weakness is that the program only considers the effects of weather, not the effects of delayed flooding or other cultural practices, on plant growth.

**Grower Acceptance**
Bobby A. Huey, an Extension agronomist who helped develop the DD50 computer program, says rice growers who have used the printout tell him they would be "lost without it."

All the grower has to do to enroll a field in the DD50 program is provide the county Extension agent with two bits of information—the variety name and the date of emergence. (Emergence is defined as the time when 10 germinating seedlings per square foot are barely visible above the soil surface and are less than 1 inch high.)

**Estimation Problem**
So why aren't all rice growers enrolled in the DD50 Program? Huey believes some growers find it difficult to establish a meaningful emergence date when emergence occurs over a long period of time. Extension specialists and county agents encourage rice growers not to be reluctant to estimate a date, because they believe no one should miss out on the benefits of the DD50 Program. □

# Food Marketing Info? Dial DIALCOM!

*Mary E. Mennes*
*Extension Food Management Specialist*
*Department of Food Science*
*University of Wisconsin, Madison*
*and*
*Leigh F. Gregg*
*Extension Information Specialist*
*Department of Agricultural Journalism*
*University of Wisconsin, Madison*

Extension home economists (EHE's) who were left without national food marketing information after budget cuts can now use a Wisconsin food management specialist's electronic newsletter to fill the void.

Mary Mennes, Wisconsin food management specialist, has made available her monthly computerized newsletter *Food Market News* to Extension in Washington to broadcast nationally on its DIALCOM computer network.

Mennes's newsletter, distributed to Wisconsin counties since 1981 by Wisplan, a statewide CES computer network, began its national distribution via DIALCOM in August 1983.

The DIALCOM version omits highly regional information and provides a "truly national food marketing information picture," Mennes says.

Despite an increased need for marketing information as food prices rose in the late 1970's, EHE's were left without a national source of food supply trend projections. After budget cuts, USDA-AMS discontinued its *Food Marketing Alert,* which was a monthly summary of supply projections.

**Requested Marketing Info**
In midsummer 1982, Rebecca Banis, an Extension home economist and unit chairman in Norfolk, Virginia called Extension-USDA. Her question: "Why can't I get food buying information over DIALCOM to help me with my weekly newspaper columns?"

New models staff (CES staff with state appointments who devote a portion of their time to federal leadership responsibilities) Georgia Lauritizen (Utah) and Dymple Cooksey (Texas) discussed the matter with Extension—USDA Home Economics and Human Nutrition and Information staffs; then they did a survey of states to see how they felt about the need for such information.

Fifty-one of the 59 specialists responding said they had used the *Food Marketing Alert* information in newsletters, radio programs, program delivery and television and in work with EFNEP's low-income families.

The survey group concluded that specialists' greatest information needs were about best buys, plentiful foods, food price trends, and national supply trends. After an examination of several state marketing information newsletters, Mennes's Wisconsin *Food Market News* was chosen for national distribution.

**Converted to DIALCOM**
Mennes gathers food marketing supply and price trends information by consulting other specialists and reviewing USDA and industry reports and projections. She develops the newsletter on the computer terminal in her office at the University of Wisconsin-Madison and broadcasts it to the counties through Wisplan's electronic mail. Then the information is converted for use on the DIALCOM system.

The electronic operation saves time getting the information distributed by the first week of the month, Mennes says.

Employing a format similar to *Food Marketing Alert,* Mennes regularly covers supply and price trends for three commodity groups: red meats and poultry, fresh fruits and vegetables, and processed fruits and vegetables.

"The only commodity that varies regionally or from state to state is fresh produce during the growing or harvest seasons," Mennes says.

**Evaluating Effectiveness**
It is too early to tell how other states use *Food Market News,* some states are just becoming aware of its availability through DIALCOM.

Mennes suggests several ways that other states can use *Food Market News.*

First, Extension home economists can localize the information. "This can be done easily with phone calls to state agricultural specialists," says Mennes.

Second, EHE's can incorporate food supply and price information into the direct teaching of clientele. Topics that lend themselves to this include: family food management strategies, getting more from the food dollar, and changing buying habits to accommodate price changes on certain foods.

**Allows Screening of Materials**
EHE's can also screen teaching materials to make them relevant to current market situations.

Up-to-date market information is especially important for EFNEP's low-income families, so EFNEP project assistants should use sources such as *Food Market News,* suggests Mennes.

The key is not only getting the food market information to professionals despite the governmental budget cuts, but also getting the information to the consumer fast, when it's most effective. That is where electronic technology plays its part. □

# Are Printed Publications Passé?

*Patricia Loudon*
*Public Affairs Specialist*
*Extension Service, USDA*

Will our future clientele learn how to can tomatoes by attending an Extension demonstration meeting where the facts are reinforced by a handout publication? Or will they use their home personal computer to tap into a database at the county Extension office or land-grant university?

Will this latest advance in communications technology—coupled with increased production costs and slow turnaround time—finally make printed publications passé in our educational programs?

The answers to these questions aren't simple. But, developments on several fronts indicate that communicators and specialists alike are exploring the use of databases and software decisionmaking packages as possible replacements for existing publications, or as additional methods for delivering and updating their program information. A few of these projects are outlined below.

**Full Text Transmission**
Transmission of the full text of published material is not new. Online access to the *Washington Post* and the *Wall Street Journal* has been available for some time to subscribers who would rather receive their daily dose of news events via computer.

David Hoyt, technical information officer at the USDA National Agricultural Library (NAL), believes that full-text databases might offer a viable alternative to the traditional print medium of communication.

"As an organization with responsibility for delivering such large quantities of printed information, NAL has an interest in and responsibility for alternative document acquisition and delivery mechanisms. Full-text databases might offer a viable alternative to the traditional print medium of communications," he says.

**NAL Project**
With a grant from Orville Bentley, Assistant Secretary for Research and Education, the National Agricultural Library contracted with BRS for a pilot project to develop, manage, maintain, support, and make available a private, online, fully searchable, and remotely accessible dial-up database. Hoyt is project coordinator for NAL and Ovid Bay and Patricia Loudon, Extension Service Information and Communications Staff, are cooperating with the project. First publication online will be the *Pork Industry Handbook*, a cooperative publication of the National Pork Producers Council and the state Cooperative Extension Services and coordinated by Purdue University.

"The *Pork Industry Handbook* is an authoritative publication with 100 fact sheets, each one describing a different aspect of swine production and needing frequent revision and updating," says Hoyt. "The file will be available for searching in the United States through communications capabilities of standard dial-up terminals and microcomputers with communications capability to also interact with the system."

Hoyt says that the new database will include not only the traditional indexing and cataloging, but also detailed bibliographic records for each fact sheet. "But in addition to these forms of entry," he says, "every word in the entire text will also appear in the database and be searchable by keyword."

This system of detailed indexing and immediate document delivery may revolutionize information retrieval and document delivery, according to Hoyt. The NAL system will also be accessible over the ITT DIALCOM electronic mail system. "An Extension agent or researcher in one place might search the *Pork Industry Handbook* to locate a piece of information, store this information in his or her electronic mailbox, and forward it to another local office across the country," says Hoyt. An evaluation team and report will also be put together for the project.

"Another heavier user of this system could be the pork producer via a personal computer," says Dixon Hubbard, staff leader, Livestock and Veterinary Sciences, Extension Service, USDA. "However", says Hubbard, "this method of information delivery will not replace the present system of updating and reprinting the Handbook . . . at least not in the near future. But, it offers us another avenue of making valuable, timely information available to producers when and where they need it."

Hubbard is also interested in full-text transmission via a system such as AGNET (a nationwide agriculture network database system that originated in Nebraska) for the popular Great Plains *Beef Cattle Handbook*. "Producers subscribing to that or a similar system could then access any or all of the handbook for application to their farm production systems. We in Extension need to explore and develop as many alternative methods for delivering this type of information to our clientele," he says.

**EXTPUBS—Another Full Text System**
On another front—and on a much smaller scale—the first USDA electronic publication—*How Weeds Affect Human Health*, EX-EP-1, will be electronically published this spring by Extension Service. The publication, developed by a team of state Extension Service specialists and ARS scientists, will be available for access by states through a database called EXTPUBS via the ITT DIALCOM electronic mail system.

Unlike the databases described above, there will be no preprinted or published copy available for distribution

from USDA. One copy of the typed manuscript will be cataloged and filed by the National Agricultural Library and indexed for reference in the library's bibliographic database system—AGRICOLA. Another will be retained on file by USDA's Office of Governmental and Public Affairs for information when receiving public inquiries. Publication to states will be only through the computer database.

States can search the EXPUBS file which will list title, author, key words, and a brief abstract of the publication. If they then decide to access the complete manuscript, they can call up the EXTMS file.

"Electronic publishing of selected documents offers us an excellent method of transmitting some types of publications quickly and economically to states," says Ovid Bay, director of information and communications for Extension Service. "This process will give states several options in their publications process. They can easily download the manuscript into a word processor or personal computer, eliminate any data that has no regional application, add localized information from their state specialist, store this information into their own database, print it as a state or regional publication or as a xeroxed fact sheet" he says.

The first publication, *How Weeds Affect Human Health*, is a natural for this type of transmission. It was developed at the recommendation of the Weed Science Ad-Hoc Publications Committee because of the lack of a definitive publication in this important area. The publication is organized as a compilation of complete fact sheets on weeds in four major areas. Not all weeds detailed occur in all parts of the country.

Author M. Coburn Williams, ARS research plant physiologist, and coauthors share with others a concern that the scientific community will be reluctant to recognize electronically published documents as really published.

"Cost of maintaining a full-text database such as EXTPUBS is minimal," says Jerry Paulsen, Extension information resources management specialist, who has worked closely with the Information and Communications Staff in setting up the system. "Cost to states to pull one manuscript off the system will be approximately $15 to $20. However, they will incur additional costs if they decide to print some or all of it.," he says.

An additional feature on the system will be the availability of color-slide illustrations for the weed publication through the USDA Photography Division. Instructions at the end of each electronic publication will notify users how to obtain copies and will also include a complete listing by number of these illustrations.

**Decision Packages**

At the Weed Science Society annual meeting in January 1984, several Extension specialists reported on computer technology application of information previously available only in publication format. Alexander Martin, Nebraska weeds specialist, reported on the decisionmaking computer program he developed to assist producers in making herbicide selections for crops.

The program is a melding of information contained in two Nebraska NebGuide fact sheets and is available to producers subscribing to the state-based AGNET computer system.

Martin says, "Our producers can just let their fingers do the walking to find the necessary information."

Farmers not subscribing to AGNET can visit the nearby county Extension office for easy access of the herbicide selection program.

**New Class of Publications**

Out on the West Coast, they call the newly developed California Computerized Pest Management Information System "a new class and method of publication." Michael Stimmann, University of California, and other Extension weed scientists at Davis see this new system as an eventual replacement for many existing pesticide publications. "We've recently begun charging for these publications," says Stimmann, "and it takes longer and longer to keep them updated and available through conventional printing procedures."

Pest management recommendations will soon be available to anyone who has access to a personal computer and telephone modum, Stimmann adds. He and his colleagues are putting finishing touches on the software needed to get the pesticide recommendations program up and running for state procedures. California recently installed a network of microcomputers in county offices where the program will also be easily available to users.

"It's the wave of the future," Stimmann concludes. "We not only can keep our pesticide recommendations up to date easier, but also make them immediately accessible to the public through the county offices. The number of future printed publications will be reduced, and those remaining will concentrate on fundamental information complete with illustrations, graphs, and charts."

**What Are You Doing?**

Is your state or county doing anything in the arena of electronic publishing? If so, please contact the author at Extension Service-USDA, Information and Communications Staff, Rm.3430-S, Washington, D.C. 20250/(202) 447-6133 or by electronic mail to AGS096. We'd like to share your ideas and projects with other USDA agencies and with states. □

# High Tech Farming Fair

*Jane Schuchardt*
*Extension Communication Specialist,*
*Home Economics*
*Iowa State University, Ames*


A high touch method communicated a high tech message to thousands of Iowa State University (ISU) Extension clients last fall:

"See a smart tractor! Get acquainted with Extension's Agricultural Infodata Service! Find out how to use the computer to make cattle marketing decisions! Test the quality of your corn or soybean harvest!"

They came in droves for 3 days in late September 1983, to farmland in east central Iowa from the rest of the United States, and as far away as Zimbabwe, Africa, to see the Farm Progress Show, an annual agricultural extravaganza that rotates among the states of Iowa, Illinois, and Indiana. In Iowa, the sponsor is *Wallaces Farmer* magazine. Some 400 suppliers of machinery, equipment, seeds, pesticides, and almost any other item used on the farm showed off their wares on 1,400 acres of exhibit area and surrounding field demonstration plots. Attendance topped 350,000.

ISU Extension used this opportunity to show the active level of its response to clients' changing needs in an electronic age. Other byproducts included building public awareness and giving a new educational twist to some old ideas. With Cedar Rapids Area Extension Director Russ Swenson at the helm, planning for ISU's involvement in the 1983 Farm Progress Show began almost a year and a half in advance. On the planning team were field staff, state staff, agriculturalists, home economists, administrators, and communicators.

**Computerized Models**
The results was a high-tech trek through 19 display areas in the 60-foot-square ISU tent and surrounding demonstration area and field plots. Professional Extension workers and 4-H members staffing


each display provided the proven-effective one-on-one contact with Farm Progress Show visitors.

Dallas McGinnis, ISU Extension's well-known radio announcer, broadcasted farm news and markets live. Also part of this display was an opportunity to get acquainted with Iowa Extension's Agricultural Infodata Service, a regularly updated source of farm and market news broadcast by Iowa public television.

Participants eyed two pens of beef cattle and tried to decide if marketing them now or later would be the most profitable. Then they watched a computerized marketing model help them make that decision by combining information on grade, cutability, pricing, production costs, and cattle type.

They tried their hand at operating Apple III microcomputers. They learned what software, available through ISU Extension, could help them with buying decisions in the home and on the farm.

**Grain Quality Tests**
Visitors put corn and soybean samples to the quality test. The Near Infrared Reflectance Analyzer measured the nutritive quality of grain, an important point when selecting cost-efficient rations for livestock. The Centrifugal Impact Machine measured grain brittleness, necessary information for preventing grain breakage.

They got acquainted with new machinery, especially a smart tractor computerized to report how efficiently it's running. Two new machines, specifically designed for conservation tillage farming, were demonstrated. The punch planter rolls right over residue, punches holes into the ground, and drops in seed. The point injector fertilizer applicator allows multiple application of fertilizer throughout the growing season with minimal root pruning.

**Human Health, Garden Growth**
Beyond the high-tech emphasis, several displays involved human health. Farm families could take a lifestyle checkup to answer the question, "Are you as healthy as your tractor?" People demonstrated aerobic exercises and trained 4-H'ers took blood pressure readings.

The longest line at any display was for a taste of the old-fashioned chocolate chip cookie made with a new recipe low in sugar, fat, and calories. About 4,800 people had a chance to taste the cookie and nearly 15,000 recipes were distributed.

Other displays included gardening, dressing for safety on the farm, soil testing, rural crime, corn maturity, and energy efficiency of hog pens.

Finally, a select number of Farm Progress Show visitors had an opportunity to find out more about high technology or any other topic of their choice if they won a "specialist for a day." Extension officials said the purpose of this offer was to demonstrate the commitment of Extension to helping Iowa people. □

# Take Two!

*James Booth*
*Extension Broadcast Coordinator*
*Michigan State University*
*Formerly of Mississippi State University*

If you can imagine a self-contained, 2-minute, question-and-answer audio segment lifted out of the popular television program, *Donahue*, you'll have a general idea of the format of *Take Two*. Each segment identifies a question or problem as posed by a member of the audience, then offers an answer or solution from a professional person.

*Take Two* has several advantages: The first is time. In the past, programs were usually 5 minutes in length. *Take Two*, as the name suggests, is only 2 minutes. Station programmers say the shorter format is much more likely to keep young listeners interested and tuned in. Also, the shorter version is easier to fit into today's complex program schedules. The second advantage is format. Earlier programs tended to be extended interviews—"talking heads." *Take Two*, much more dynamic, employs a quick tease supported with sound effects and music to introduce the subject. Next comes a greeting from the narrator who moves to more comments or to the response. Following the response, the narrator gives a quick one- or two-line summary, sound effects fade up, and a second narrator gives a 4-H and Extension sponsorship comment and a plug for the local Extension office.

**Location Interviews**

A third advantage is production technique. Earlier programs were almost always produced in one sitting in an audio booth as the 4-H specialist and a host followed an outline. *Take Two* goes on location. We interview people in all kinds of places, from the local Extension office to schools, meetings, and workshops—wherever they can be found. Once the questions have been selected through a review process, the professional persons are sought out and interviewed in their work environment.

So, *Take Two* is a response to both the specific information needs of the 4-H age group, and the needs of station programmers in terms of time, format, and production technique. □

# Minnesota Technology Videotape

*Betty Fleming*
*Program Leader, Information and Communications Staff*
*Extension Service, USDA*

"Innovation, Teamwork, and New Technology in Minnesota" is the topic for a new videogram that will be sent out by Extension Service-USDA Administrator Mary Nell Greenwood to all state Extension directors in May–June of 1984. The project is a joint venture between Extension-USDA and Minnesota. The Program Development, Evaluation and Management Systems Staff provided federal funding. Minnesota cost-shared the project.

The 20- to 25-minute internal communications videotape is designed to be a discussion piece for Extension directors and their staffs. It is targeted to all subject matter disciplines and presents one state's comprehensive approach to the use of all new technology, not just computers.

**Focus On New Technology**

The tape focuses on work being done with new technologies in two counties, one rural (Big Stone) and one urban (St. Louis). It also shows the area, experiment station and state backup provided.

Working on the project for Extension Service-USDA are Betty Fleming (Communications Staff) and Jerry Paulsen (PDEMS staff). On the Minnesota side, Gail McClure and Rich Reeder (Communication Resources) are part of the team effort. □

# Hard Times, Soft Disks

*Andy Duncan .*
*Editor*
*Oregon's Agricultural Progress Magazine*

Reprinted from a publication of
The Oregon Experiment Station,
Oregon State University, Corvallis.
Photo courtesy of Dave King.

More over, PAC-MAN. AGMAN's coming to Oregon!

That's the name, short for agricultural management, Experiment Station researchers have given to a statewide, computer-based information network they are developing and already are testing in Marion, Jackson, and Umatilla counties in cooperation with OSU Extension Service specialists and agents.

It's not a game. In the researchers' view, Oregon is lagging behind some states in using one of the most powerful new farming tools of the century, the computer. AGMAN and other farm management services under development may help the state catch up in computer-assisted farming—perhaps even surge into the lead.

Brian Croft, an Experiment Station entomologist, is a leader in the OSU push to help farmers take full advantage of the computer. The effort crisscrosses traditional campus boundaries, involving researchers and Extension specialists in most departments of OSU's College of Agricultural Sciences, county Extension agents, and personnel from other campus units like the Atmospheric Sciences Department and the Computer Center.

**Tying Into AGMAN**

It's nothing new to Croft. The entomologist came to OSU in 1982 from Michigan State University, where he was national director of a federally funded project developing computer models for apple crop management. The federal funding came to OSU with Croft and served as seed money for attracting additional public and private funds being used to develop the computer-based farm management systems.

The idea behind AGMAN is "networking"—gathering information from many sources, such as farmers in Oregon and other states, scientists and Extension personnel at OSU and other universities, the U.S. Department of Agriculture, and the U.S. Weather Service, and making all that data available to whoever wants it.

Eventually, through computer terminals at Extension offices in the state's 36 counties, and through home- and business-based microcomputers, people in Oregon's agriculture industry, and related businesses, will be able to "tie into" AGMAN and take out information ranging from market prices for beef, wheat, and other commodities, to the current life stages of crop pests in various parts of the state.

Croft, who is working on AGMAN with Kevin Currans, a computer specialist in OSU's entomology department, points to Integrated Pest Management, or IPM, as a good example of how AGMAN will help farmers.

**Economical Pest Control**

"IPM means using tactics to achieve pest control that are cost effective, minimize environmental side effects, and are compatible with society's goals," says Croft, explaining that an important part of the program involves monitoring insect life cycles so you can spray "bad" bugs only when they are apt to do significant crop damage and avoid killing "good" bugs that prey on pests.

Getting AGMAN "fully implemented"—so any farmer with access to a microcomputer can use the system—may take 10 years or more, says the scientist, but the service first will be available through county Extension offices. The initial steps for providing that service have already been taken.

The OSU Extension Service has been operating a pilot computer program in Jackson, Umatilla, and Marion counties for several months. It involves putting microcomputers in county offices so Extension agents can use them for office management and for sending and receiving information via the computer and telephone lines—a method that's called "electronic mail." Plans call for all Extension offices to be linked in a statewide computer system over the next 2 or 3 years.

AGMAN is part of the three-county pilot program, too.

"Through AGMAN, we have access to the latest market information, and we plan to use AGMAN in working with our fruit growers, livestock people, and other clients," says Ron Mobley, chairman of the Jackson County Extension Service in Medford.

**Irrigation Information**

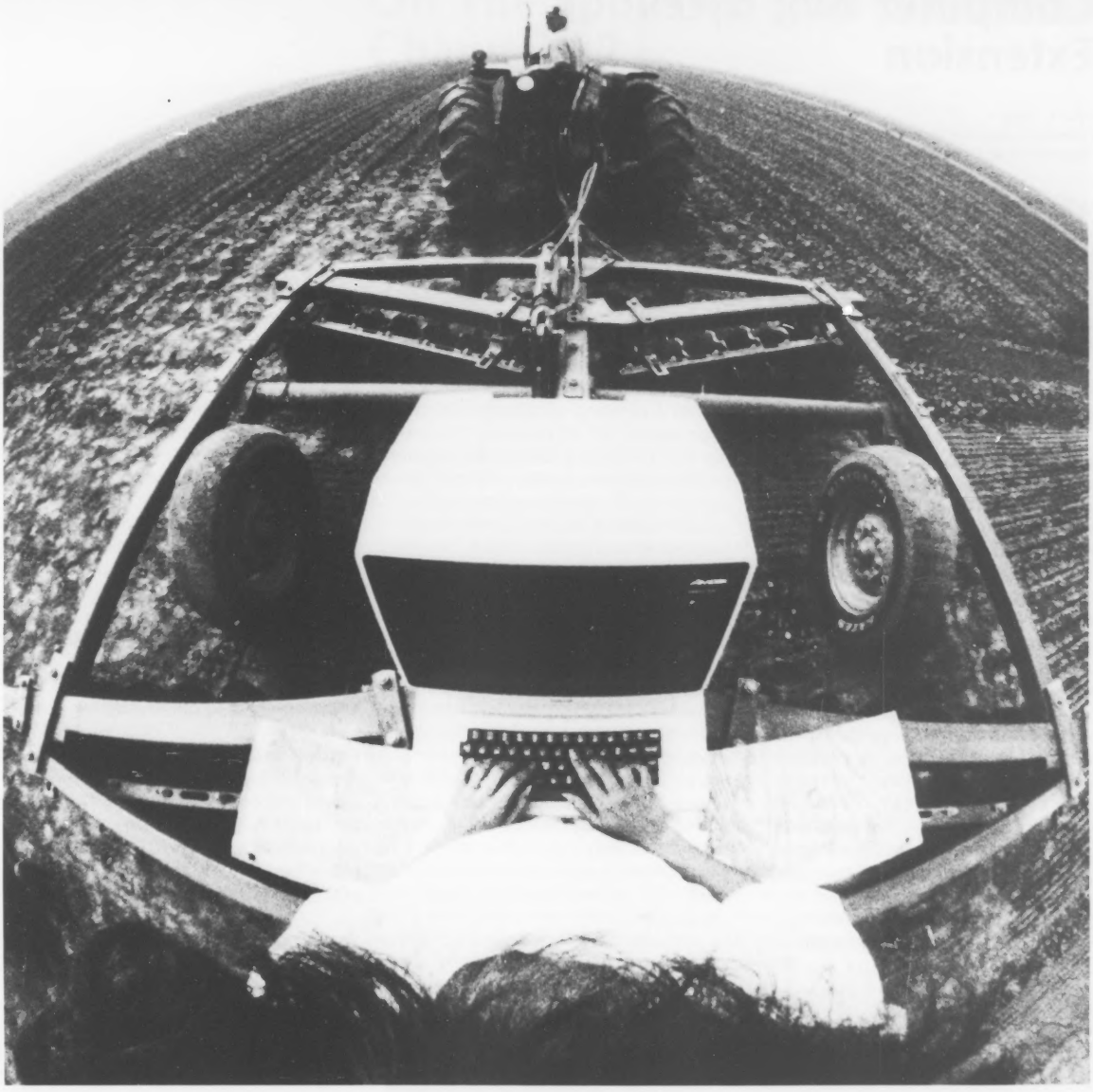
AGMAN shows great potential for quickly processing weather data for the semiarid region and calculating potential moisture loss for the day. Farmers could then feed that information into their own microcomputers, along with information about their particular crop conditions, and find out when and how much to irrigate.

**"Line 21"**

AGMAN isn't the only electronics-related innovation headed toward Oregon farmers. The OSU Extension Service plans to begin operating a new farm market information service in cooperation with the Oregon Public Broadcasting System.

The service will allow persons who buy a special decoding device to receive up-to-the-minute farm market news (in the form of writing on the television screen) on OPBS's four television stations. The market news will be on what's called "Line 21," a line on all television screens normally not seen by viewers.

The decoding devices, which cost $250 to $300, allow viewers to



expand the line so it is visible and covers the middle of the screen.

"We're looking at some new mass technology here via computer—AGMAN is where we'll get the market information—that will give people in agriculture access to current market information from 8 a.m. until 11 p.m.," said Carl O'Connor, an OSU agricultural economist who works for the Extension Service and the Experiment Station.

**Pushbutton Market News**

Conceivably, O'Connor said, Oregonians will be able to press a button on their decoder and get farm market news on the middle of their television screen while occasionally peeking at "Seasame Street," still playing on the outer edges.

Most states disseminate market news through their state agriculture departments, but Oregon law assigns the job to OSU, O'Connor noted. For years, OSU has transmitted marketing information to the public with a noon radio show and weekly, written summaries sent to electronic and print media.

"Soon, the Extension Service plans to begin advertising the Line 21 market news service in preparation for the January start-up," O'Connor says. "In 1984, the computer and AGMAN pilot program will expand to eight to 10 county Extension offices", he adds.

More over, Pac-Man. □

# Computer Bug Bytes Extension

*John F. Schar*
*Extension Computer Manager/Consultant*
*The Ohio State University, Columbus*

In less than 1 year, the Franklin County Cooperative Extension Office in Columbus, Ohio, went from a noncomputer office to a four computer office. Even with that, personnel frequently need to schedule the equipment for their use.

Recognizing the potential of the computer as an aid to Extension work County Chairman Tom McNutt has aggressively stepped into the information age with purchase of four different computer systems. McNutt also hired a computer manager/consultant.

**Mixing Hardware**
The varied mix of computer hardware and software, chosen for this process, increased office personnel awareness of the diversified computer market and better prepared them to deal with computer-related problems in their individual program areas.

Each computer system was purchased to handle specific tasks based on its capabilities. A DECmate II computer with letter-quality printer, used as an office management tool, performs as a word processor and electronic spreadsheet. A Digital Professional 350 computer, equipped with a hard disk, is used as a second word processor and to handle various record-keeping chores. These two systems serve as the internal office management computers for support staff.

The portability of the Radio Shack Model 4 personal computer was the main reason for its selection to handle 4-H records. A database program on this system was used during the county fair to rapidly update individual member records and to help prepare yearly reports. Bill Burmeister, county Extension agent, 4-H, is pleased with the computer's ability to quickly retrieve data for national reports and mailing lists.

The staff is also using an Apple IIe computer in conjunction with the Radio Shack computer to evaluate existing and program software for use in Extension program areas. We selected these brands because much of the existing agriculture-related software is programmed for them. Also farmers and homeowners are most likely to own and use these models.

**Office Management**
The planned installation of computer technology into our Extension environment was designed to be accomplished in several phases. The first phase of this process improved office management procedures. A more efficiently run office, we felt, would decrease the time agents needed for office work and increase time spent in direct contact with the public.

There hasn't been a problem in convincing staff members to use the computers. Computer use has only been a problem when there are more people wanting access than there are computers. Although the computers have been in place for less than a year, mailing lists are being easily changed and printed, form letters are personalized, and reports and forms stored and easily revised.

**Educational Uses**
A second area of emphasis is our use of the computer as a tool that the agent can use to better present information to the public. This phase began with a search for programs developed by outside sources.

These programs are primarily decision aids that will help a user calibrate a sprayer, choose between leasing and buying land, etc.

State Extension specialists at The Ohio State University are developing programs that are more localized and current.

**Exhibits**
Use of the computer as an attention-getting device at Extension exhibits has proved to be an interesting and worthwhile application. To increase the exposure of the Cooperative Extension Service and its activities, we've set up exhibits at local trade shows using computerized quizzes

# On The Spot On Channel 12

*Marsha Foerman*
*Extension Agent, Home Economics*
*The University of Arizona, Phoenix*

and garden planning programs with great success. Our computers draw the crowds and our programs help educate people as well as inform them about the services provided by Extension. These efforts give our staff an opportunity to meet many people who otherwise would not have come in contact with Extension. During a weekend in a home and garden show over 2,400 people used the garden planning program and nearly 2,000 took the quizzes.

Computer use in Extension offices is still a relatively new idea. There is little information to tell how it should be done, and the extreme diversity of computer products on the market today make computerization decisions difficult. The idea that computers will make the job easier and faster may be valid in the long run, but our experience illustrates that a lot of time and effort need to be spent to install, learn, and properly design a computer system.

Karon Dellinger, our administrative assistant, is really sold on the overall benefits from the computer. "They really are great, but the key to their success has been having a specialist who is knowledgeable in the area of computers." A great deal of time is needed to determine the most efficient methods to use, set up the hardware and software, and train the appropriate staff members. The time and expertise needed is usually outside the realm of existing staff members.

A serious commitment of time and money must be made at the start and followed by periods of trial and error, before a computerization process such as this can be successful. □

About 2 years ago, I began a 3 to 5 minute TV spot on KPNX-TV, Channel 12. It all started when I met the co-anchor of the morning news team for KPNX at an Extension-sponsored "Bread Fair." A few months later, she called the office once again, this time in need of an interview with me on inexpensive meals for people with tight budgets.

**Consumer Lifestyle Expert**

Several months later, I received a call from the co-anchor again. She had been promoted to news assignment editor and was selecting experts in several fields to be on the morning news program weekly to present an entertaining, informational spot. She thought of me for the consumer lifestyle segment, which would encompass all areas of consumer topics. She invited me to choose my day and to come in for a screen test with the news director. The following day I showed up for the meeting and test. The news director was impressed with my manner during my talk with him and suggested we skip the screen test and begin the consumer spot immediately. We did. And 1 year later, two of the four original "experts" in the experiment are still on the air. Since my spot, the TV staff members have asked me for suggestions for plant experts and I've managed to line up interviews for agriculture Extension agents too.

**Increases Extension Visibility**

How has this TV exposure affected the home economics Extension program in Maricopa County? First of all, we have heard more from the rural areas of the state than we did previously. The spot has given us free visibility. It reached people all over the state—not just in our county. Extension home economists in other counties have called to ask the name and the bulletin the people contacting their office are requesting. Clients say they saw an Extension person on TV that morning. Last month, our office received over 230 calls as a result of the TV exposure. If I offer a bulletin during the spot, we get more calls requesting the written information than we do if I do not refer to any written material.

When I asked them how many people watch my segment (for reporting purposes), NBC affiliate staff informed me that 20,000 viewers see the spot.

When preparing the spots, I keep them current and based on questions often asked at the Extension office. I've discussed everything from controlling pantry pests in the spring to removing common office stains. Generally speaking, the food spots are the most popular.

The telephone calls I receive from satisfied viewers are a true reward. Perhaps my brightest moment was when I walked into a discount store on my day off last week. On my way out the door, I was stopped by women who had been watching me from the check-out lane. "Aren't you Marsha Foerman?" she asked. "Yes," I said, wondering when we had met before.

"I'm here to select a food processor," the lady continued. "I've told the sales clerk all the points you told me to look for on your TV spot and the clerk didn't follow what I was saying. Could you answer a few questions I still have so I can make the right purchase?" I did. And, although I know she was pleased that she made a purchase about which she felt informed, I think I received the greatest bonus that day. There is no doubt in the mind of this Extension agent—TV gets results. □

# Welcome Back To Computers and 4-H

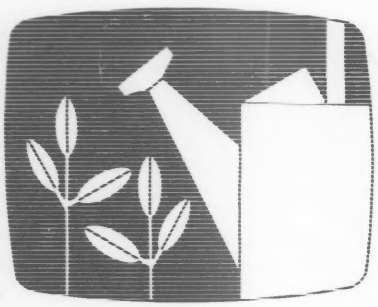
*Stu Sutherland*
*Public Affairs Specialist*
*Extension Service, USDA*

The 4-H Computer Project is growing by leaps and bounds. Seemingly, it was only "bound" as it started up by lack of equipment (hardware) and programs (software) to use in various kinds of computers.

The title provides you with a "welcome back" invitation as this will update an article in the summer 1982 *Extension Review* issue on Electronic Technology, pages 42-44. A part of that article dealt with Kentucky's Extension leadership in the development of member and leader educational materials which are now being pilot tested in a dozen states.

**Youth Want To Use Computers**

A few statistics will define the leaps and bounds being taken, using fiscal year 1980 as a base, when 4-H member computer enrollment nationwide was slightly over 3,000. That figure doubled by FY 81 to just over 6,700 members, then in FY 82 membership leaped to over 15,300—with some 13,000 of those members in the rapidly expanding Kentucky program. FY 1983 figures show a nationwide enrollment in computer projects at over 19,600, including a Kentucky increase to 14,642.



Nationwide 4-H members are learning first about computers, next about programming, and then how to use computers in other 4-H project areas such as animal genetics, crops, fashions, or gardening. Computer use takes work, and thought, and the members seem to love it.

Young people and computers could get along quicker and better with each other if they learned how to type sooner than they normally do now, as their access to computer programming is through a keyboard. In at least one state additional volunteers are teaching typing.

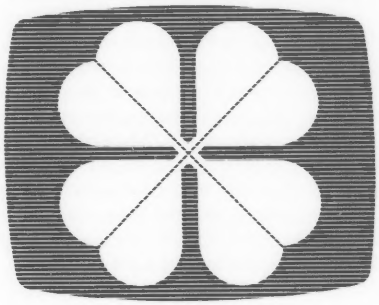
Most states wisely used a year or more on staff and volunteer computer training before taking the program to kids. That decision is paying big dividends in many counties where the two main 4-H uses of computers are for educational programming and program management —including computerized 4-H enrollment, publication distribution, and the preparation of award and recognition certificates and premium checks.

Kentucky, with their 14,642 member participation in FY 1983, reported that only a lack of computers kept them from having significantly higher numbers involved. They also noted that, "It is estimated that of the youth participants in the 75 counties reporting programs this year, that 99 percent completed the requirements."

**New Leadership Development**

New 4-H project areas outside usual activity areas, as the computer interest is, often involves Extension with new clientele and a different leadership cadre. Florida 4-H reports, "Teen leaders are becoming a primary source of volunteers to teach younger 4-H members the basics of computers."

The computer project also created the need to find new types of adult volunteers. In communities and cities these new volunteers are often people associated with banks and businesses, and often in rural areas it



would be farm families who already had and understood their own computers. These new 4-H adult volunteers might be a key to the project's rapid growth throughout the country.

Kentucky's introduction to their leader's guide states it this way. "The guidance provided by you as a volunteer leader is integral to the success of 4-H computer projects. There is no need for you to be a computer whiz, though some computer knowledge, of course, would be very helpful." And, "Familiarity with the computer projects (in the Guide and members' project books) will enable you to keep a step or two

ahead of 4-H members, to communicate easily and knowledgeably, and to identify difficulties with 4-H'ers. Relax and enjoy yourself as you introduce 4-H'ers to these exciting projects."

Kentucky also recognized that various makes and models of microcomputers would be available for 4-H instructional purposes, such as the variety found in rural farm homes, and so produced four instructional manuals which were based on manufacturers' information and specifications on as many different models of computers.

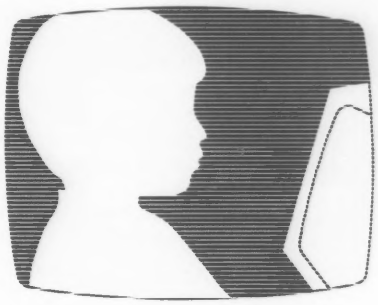
**A Multi-Computer 4-H Club**

In Harrison County, Mississippi, 4-H'ers have organized the first state 4-H club. At club meetings, 4-H'ers learn how to program not just one computer but a number of them. Most club members have their own computer systems, but not all have the same kind.

Volunteer leaders Maurice O'Keefe, a computer engineer for Speery, and Jim DeBower, a Navy officer at Naval Ocean Graphic, teach the youth how to write programs for their own computers. Then the 4-H'ers learn how to program other members' computers.

"If I wanted a program another member had, I would have to rewrite every line before it would work with my computer. Every system has a different language so I have to know both languages to translate," Patty Commiskey, 14, said.

"Learning a computer language is just like learning another spoken



language. Once you learn two, the third one is very easy," O'Keefe said. "Computer languages are the same way. Once you learn the basics, it is easy to apply what you already know to something new. By doing work on a computer, the members actually learn two things at once—how to program a computer and the information they are putting into it."

4-H'er Hisson Brennan spends hours a day playing with his computer. He writes original games, sometimes taking up to 2 weeks perfecting them. He spent 2 days programming the computer to draw a four-leaf clover. Since his computer did not have a memory capacity, Brennan wired a tape recorder to it. He stores his information on cassette tapes so he will not have to re-type the program each time he wishes to use it.

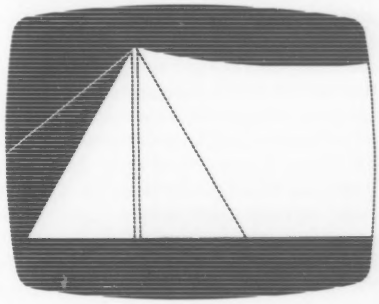
"These 4-H members will probably be using computers in college and in their careers. Not all colleges use the same computers with the same languages. By using different computers in the 4-H meetings, they are learning to adapt and change from one language to another quickly," O'Keefe said.

**Project Materials Pilot Underway**

As stated, the Kentucky computer materials are being further tested in other states using Extension Services, special needs funding. A July 1983 workshop trained representatives from 10 of 11 selected states and 5 counties in further testing projects and programs. Evaluations from these pilot studies, now underway, will lead to any needed revisions and improvements—with subsequent nationwide distribution to all states in the summer of 1984.

Meanwhile, Kentucky cannot furnish copies to counties throughout the country as there are no funds to do so. However, they have supplied 2 sets of their materials to each state 4-H office.

Florida is one of those pilot states, and the Florida Cooperative Extension Service has provided aggressive leadership in the purchase of computer hardware to enable Extension faculty at county and state levels to link with the rest of their university's computer network. Florida staff believe that available software is the



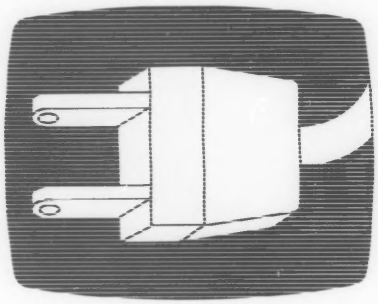
primary limiting factor in introducing and using the microcomputer in their 4-H program for both educational as well as program management areas.

**Computer Camps**
Michigan is also a pilot state for the Kentucky materials. In 1983, Michigan offered—for the first time—a week-long computer camp to 4-H'ers, aged 12-16, with no previous computer experience. Thirty campers used 15 microcomputers to ensure hands-on experience for all computer instruction. These 4-H'ers learned basic computer programming and were able to write their own programs by the end of the week. Michigan specialists, graduate students, and others have been active, too, in the development of software for 4-H'ers.

The need to teach typing at an earlier age (mentioned above) was a spinoff of the 34-member club activity in Presque Isle County—a club conducted by two volunteers involving a local computer dealer. Two additional persons are now volunteering there to teach typing.

Camp situations have been popular settings for computer learning in other states. Georgia, as one example, held two camps, one geared to the 5th-7th grade level where campers learned some very basic knowledge about how a computer functions. A second camp for youth in grades 9-12 was designed as a more indepth approach.

To assure that older campers had the opportunity to practice what they learned, the camp fee included the cost of a minicomputer for take-home use. The learning of basic skills, by the 40 older campers, and



understanding of terminology and programming capability was outstanding. Over 1,700 Georgia 4-H'ers attended the two camp programs.

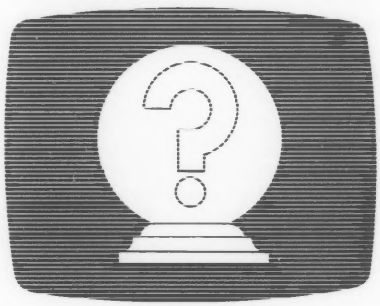
South Carolina state staff trained over 400 4-H youth in computer programming in county 4-H clubs and during the weeklong Amp Camp as part of the Electric Energy Program. In addition, project materials were used by county staff and schools to reach an undetermined number of 4-H and non-4-H youth.

In Alaska, a 10-day camp for 32 youth emphasized computer literacy and the development of "a comfortable working knowledge of computers." This statewide camp had three age group tracts of 8-12, 12-18, and 18 and older. The 18 and older campers also can receive credit from Mat-Su Community College, and part of that age group are employed by native corporations in villages. Instruction included basic language and programming, word processing, graphics, calculation, and use of file systems.

Camp managers, such as those at the Eastern Nebraska 4-H Center, are noticing an increase in campers' numbers due, in part, to the popularity of project or special activity camps. Youth are indicating a strong interest in attending a camp for a specific reason, and find in-depth learning appealing to them.

A growing number of states, including Florida, indicate that some limited work in computer training is being done with 4-H parents as well as with volunteers. Florida (as noted above) had also reported that teen leaders are becoming a primary source of volunteers to teach younger 4-H members the basics of computers.

**What's Ahead?**
Recently, a Texas A&M computer authority said he thought millions of Americans would have access to computer networks by the year 1990. The highly successful completion level of nearly 20,000 4-H members nationwide in FY 1983, in-



dicates that young people will want to put computers to work as tools for their future.

If the year 1990 has some special meaning to computers and 4-H, perhaps we will welcome you back again then. That is, unless our computers show us some new, exciting developments during these next 6 years. □

# Cost Control Through Metered Mail

*David W. Dik*
*Assistant Director for Field Operations*
*Cornell Cooperative Extension Service*
*Ithaca, New York*

For nearly 70 years, the Cornell Cooperative Extension Service used official "penalty mail" to communicate with public. Last October, we converted all of our offices statewide to the metered mail "direct accountability" system.

Expectations are that the new system will cut mailing costs by about 30 percent—$208,000—in the first year alone. In addition, this conversion has led to many ways to improve mail processing and reduce costs.

We now weigh each piece of mail and dispense the exact amount of required postage with Pitney Bowes mailing equipment. This system replaces indicia mail and sampling, where estimated charges made by the U.S. Postal Service (USPS) were often three times the true cost of a piece being mailed.

**Need for Accountability**
Direct accountability is not a new concept for federal agencies. The U.S. Air Force has been using this concept since 1973, and since then has held its postage costs down. Results of recent study by the Veterans Administration, in 1982, indicated that use of the metered mailing system would reduce that Agency's postage costs by more than 21 percent.

Why did we change to metered mail direct accountability to distribute over 1.5 million pieces of First Class and Third Class mail a year? The U.S. Department of Agriculture (USDA) had mandated that within 2 years we shift to a totally accountable postage system to monitor expenses. Responsibility for using the postage allocated to each meter rests with county Extension agents and area specialists. Guidance was needed to go to a manageable system.

**Prior Sampling System**
Before the installation of postage meters at Cooperative Extension offices, the problem was controlling costs. Postage costs were determined from a sampling that the USPS required us to submit.

The loose sampling system for penalty mail resulted in a lack of accurate accountability of usage. This was especially true with Third Class Bulk Penalty Mail. We had an excess charge in this category of $150,000. Based on the sample, the cost was $62,000, which the USPS multiplied by four for billing. There was no way that we could have spent $248,000 on Third Class Bulk Mail. We canceled our Bulk Third Class permit and went to a cash basis.

To provide an analysis of equipment needs for an entire operational system, we conducted an analysis with the help of a Pitney Bowes senior area sales representative.

**Fact-Finding Procedures**
The process began with a "fact finder" survey and took about 6 months. The survey was the key move toward implementation. It identified, by county and region, the mailings that were done according to classification, size, and volume. The information on each site was the basis for recommending, selecting, and ordering proper equipment.

Among the equipment ordered were electronic mail processing systems, folding machines, and inserters. About 75 percent of the counties and regional offices decided on the electronic mailing machines.

**Techniques Changed**
Training was part of the conversion to electronic mail systems and other equipment.

For large mailings at Cornell University, we have gone to centralized production facilities within a mailing center, where a mailing can be ordered according to volume and designated mailing lists, processed and sent.

Our mailings are done more efficiently now, because people trained to do mailing handle the entire process.

**Benefits**
Now, mailing activity is monitored centrally from our offices at Cornell University to better manage allocations. Cost information is completely accurate. Information is available on who is spending postage, when they are spending it, and what they are sending by mail classification.

The greatest benefit of changing to official meter mail from penalty mail was the opportunity to examine and improve entire communications procedures and control over written materials. We foresee this continuing over the next 2 years as equipment and procedures are upgraded and management controls are improved.

Mail awareness and positive accountability are parts of communications redesign. We expect that within a year some counties will obtain upgraded, specialized equipment, not only for their own use but also to serve other, surrounding counties whose needs for such equipment is of insufficient volume to be a justified expense.

Our mandate for accountability set the scene for converting to official metered mail. We have achieved the savings and management control that we were seeking. Along with those goals, we have vastly improved the efficiency of our total mailing and communication operations. □

# Camping With Computers

*Judy Sorton*
*Extension Information Specialist, News*
*Department of Agricultural Communication*
*Purdue University, Indiana*

The youngsters whispered, joked, and jostled each other as they passed through the quiet confines of the Math Sciences Building at Purdue University—just like any set of 11- and 12-year-olds might during a field trip on a hot, muggy day.

Yet, the jokes and whispers were not about sports, swimming and mischief, but reflected a more serious interest—computers. Not just any computers, but their own computers and those they were using and seeing during the 4-H computer camp sponsored by the 4-H Department at Purdue.

The 10 campers were visiting the Computing Center at Purdue as a part of their camping experience. Some 40 youngsters ages 11 to 15 attended the camp which was held during July at the A-Frame building of the Hoosier 4-H Leadership Center. This is the second year for the camp.

As programmers and systems analysts introduced them to the wonders of a large-scale computing system, one youngster compared his personal computer to those supplied by the workshop sponsors, and another challenged a new friend to write a better program than he could.

**Where Do They All Go?**
What impressed the young minds was not that the Cyber 205 had 1 million words (8 million bytes) of memory, nor that the center has four other large systems, any one of which could handle the needs of a small business. Rather, they were fascinated with the open door to the "innards" of the Cyber which displayed an orderly maze of wires.

***Endlessly curious and completely fascinated, 10 youngsters inspected every cranny of the Computer Center at Purdue during a 4-H sponsored computer camp. They blinked at high-speed printers, peered into program mailboxes, and even checked out the noisy wiring under the floorboards.***

"Where do they all go?" they wondered to each other. One girl, who said she wanted to be an electronic technician, tried to figure out how anyone could assemble hundreds of thousands of apparently identical wires and still have everything where it was supposed to go.

"The wires are color-coded for easy identification," tour leader, Daniel E. Hartley, manager of Business Systems, Purdue University Computer Center, explains. However, that didn't help the man who originally assembled the prototype. After he had worked for several years assembling the machine without a mistake, he made one small error and it was discovered that he was color blind.

Strange sounds came from the floor, said one youngster, as Hartley explained that the Cyber was one of the most powerful computing tools available. "What's under there?" the camper questioned as he explored the floorboards with his bared toe. An observant youngster found the answer by peering beneath a removable floor panel. Wiring and cooling coils for the center had been laid on concrete floors. Then walking floors had been built over the wires and cables—causing a strange sound as the sneakered feet plodded over them.

**Learning Fundamentals**

Programs and other materials are printed out in a semi-sterile area in the center where only a chosen few are allowed access, the campers learned. Work is returned to the owner via a mailbox system. Each mailbox, to the great interest of some campers, has a clear, plexiglass front. Two campers, in the rear, were attempting to critique one program through the plexiglass.

The campers spent the week learning the fundamentals of computer programming and operation. "The camp," says Helene Baouendi, statistical computer analyst and 4-H state specialist and camp director, "stimulates interest in computers through hands-on-experience and gives campers an opportunity to demonstrate their creatively and to share mutual interests with friends."

Is a camp planned for the summer of 1984? Certainly! Back in 1982 registration was slow. But, almost as soon as the 1983 camp was announced, enrollment was filled. Youngsters find it's fascinating to camp with computers! □

# Computerizing The Peach State

*Melba G. Cooper*
*Extension Community Development Specialist*
*The University of Georgia, Athens*
*and*
*David B. Adams*
*Extension Entomologist, Pest Management*
*The University of Georgia*
*Rural Development Center*
*Tifton, Georgia*

We knew we faced a real challenge with Georgia Extension Director Tad DuVall asked us to "do something with computers."

DuVall wanted computer training at our biennial state conference, and it was up to our committee to produce it. That's when we realize that hardly any of us "spoke" computer.

After recovering from this initial shock, we plunged in, to learn about terminals, modems, floppy disks, and the like. The computer language was tough but our real test was to plan a computer workshop that:

- included a professional staff of about 700 county agents and state staff;
- offered something for the computer experienced, as well as the inexperienced;
- crossed the four program areas of agriculture, home economics, 4-H, and community and rural development;
- squeezed into available facilities;
- fit in between seven other non-computer workshops; and, most importantly,
- fostered a positive attitude toward computers and their application.

**Plan Unfolds**
A pre-conference survey of Extension people brought in an 83-percent return rate statewide. Almost without exception, everyone was interested in some phase of computers.

Armed with this information, we began working with the seven-member staff of the newly formed Computer Services Department. We had limited time for a workshop (we finally allotted 1 hour of hands-on training for everyone at the conference) and we had to include a representative sampling of software from all four program areas: "BestCrop" for Agriculture, "Budget Planner" for Home Economics, "ES237" for 4-H, and "Solid Waste Analysis" for Community and Rural Development. Along with samplings from program areas, we selected varied machine applications, from graphics to spread sheets, decisionmaking to file management. We also enlisted four program specialists to be responsible for the selected software.

**Training the Trainers**
Our task was broad: to offer a meaningful workshop to 700 people in a day's time. Altogether, we needed 50 instructors with computer skills, certainly, but also with communications skills. And we needed to obtain trainers from county, district, and state levels, making sure no geographic or program area was left out.

The Computer Services Department developed a detailed training package for each trainer. This "care package" contained computer disks, an outline of key points with a suggested step-by-step instructional script confined to a 60-minute time frame, and supplemental materials and printouts of the four software programs. Three weeks before the conference, we mailed this training package to the trainers for their review.

**Hardware Requirements**
We set up 20 work stations to accommodate 6 people and 1 trainer each in a large exhibit hall, making it possible to serve 120 people per hour.

Ten IBM and ten Apple microcomputers, each with two disk drives, checked for software compatibility, represented the hardware requirements.

Also, complete county hardware packages for IBM and Apple were on display. County agents could see firsthand the approved hardware package available for purchase.

**Promoting Computer Awareness**
To avoid mass confusion, we gave workshop participants a numbered ticket corresponding to the 20 work stations when they entered the exhibit hall. We also had to schedule 50 trainers for only 20 work stations.

The trainers understood the importance of starting and stopping each session on time. The Computer Services Department staff monitored each station's progress and assisted with all technical problems during each workshop. All work stations were stocked with supplemental handouts and printouts to accompany each session. Also available to everyone was a copy of the updated Georgia Extension Computer Software Directory.

**Other Pluses**
To assure that everyone arrived at the conference with the right (computer) frame of reference, computerized message centers welcomed them at the motel lobbies. The Computer Services Department staff developed a program containing personal messages for everyone—dignitaries, guests, newcomers, and retirees.

Computer exhibits provided a highly successful complement to the computer workshop. As a matter of fact, the exhibits almost paralleled the

popularity of the food lines, according to John Bentley, Extension communications department head at Fort Valley State college, who chaired the Exhibits Committee. The time designated for exhibits had to be extended by several hours. Bentley recalls a statement made by Director Tad DuVall that, in the history of the state's Extension conferences, he had never seen so much participation and interest in exhibits. Some correlation may have existed between popularity of the exhibits and the fact that some lucky colleague won a home computer for completing the step-by-step exposure they offered!

To qualify for the computer drawing, each person had to present proof of actually having run four of the eight available programs. A staffer at each exhibit signed the participant's registration card upon completion of each program. The eight computer instructional programs included employee fringe benefits, 4-H tutorial packages, cloverleaf training on table setting, lifestyles, vegetable gardening, food costs, soil testing results, and computer graphics.

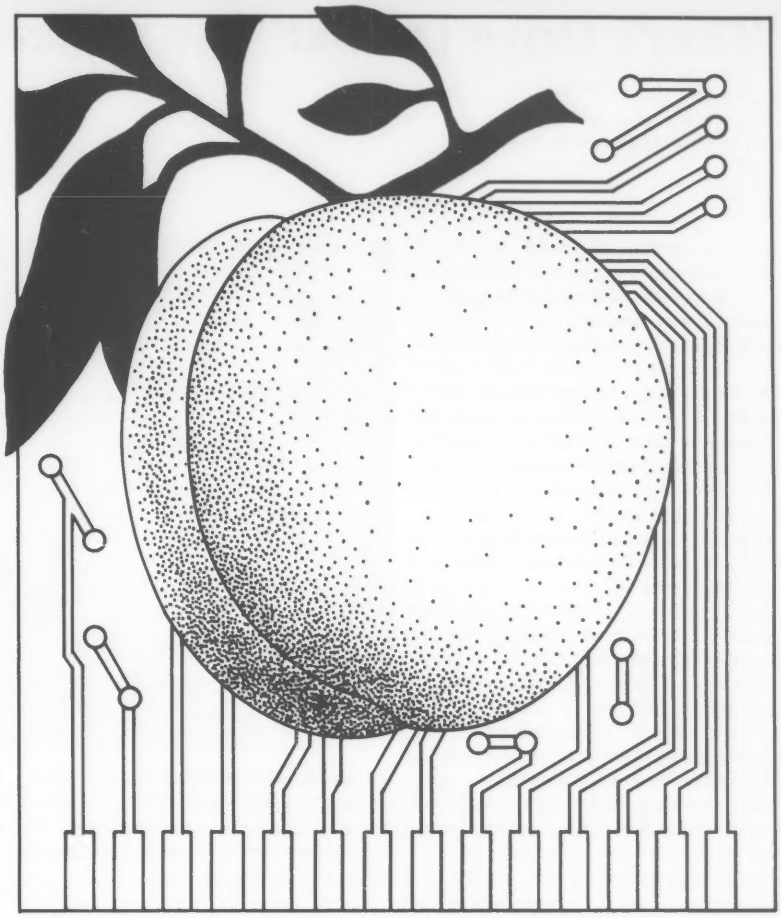
**The Bottom Line**

Remember the statement about heroes or outcasts? Well, all those who put in the long hours in this computer venture were well rewarded by their peers. On a scale of 1 to 5, the statewide evaluation ranked 4.3 on relevancy and usefulness for the computer workshop. Some of the remarks taken from the evaluation forms were:

"Need more in '85."

"Best and most practical session ever at a conference."

"Great interchange with agents and specialists."



"Excited about computers—finally!"

"Impressed with extent of computer knowledge among our ranks."

Director DuVall states: "I was proud and enthusiastically satisfied with the response of our colleagues to the computer awareness session at the Extension Conference. This response reflects not only the degree to which the committee was on target with the manner and method chosen to present this topic, but the dedicated effort of all those co-workers directly involved in this creation of computer awareness and building of attitudes."

**Ripple Effects**

Dr. Walt Wilson, assistant director for management operations, monitors financial impact and use of computers within Georgia Extension. He observes, "The potential of the microcomputer as an educational tool for Extension was fully realized for the first time by literally hundreds of Extension workers. The interest and excitement generated by the computer workshop at the Extension Conference produced positive action by several county directors. Within 7 weeks following the conference, 16 additional counties decided to purchase microcomputers. This brings our total to 53 for county Extension offices and 30 for state staff offices." According to Wilson, Georgia Extension has spent $384,500 for microcomputers for the first 6 months of this fiscal year.

So, in 1983, the Georgia Extension Service State Conference proved to be the place for many of us to learn what a challenge and what a help the computer can be. □

# "Don't Drive Drunk!"

*Bud Gavitt*
*Extension News Editor*
*The University of Connecticut, Storrs*

Members of the A.P.P.L.E.S. 4-H Club gave their parents and other motorists a special gift last Christmas—a public service announcement on the potential dangers of drinking and driving.

The Waterford, Connecticut, youth wanted to get involved in an issue that was meaningful to them, according to their volunteer leader, Martha McMahon. "We wanted to live up to the letters of our club which stand for 'Awareness to Promote Peace, Life, Environment and Self,'" says McMahon.

So the six 9- to 11-year-olds decided to give their parents a Christmas present via a powerful message on drinking and driving—a problem which claims 28,000 lives in the United States each year. As 4-H'ers Melissa and Bethany McMahon, Meridith Doyle, Becky Grew, and David I and his sister, Shiao-Lan, put it, "We wanted our parents to be here for Christmas."

To finance their project, the 4-H'ers grew pumpkins and gourds in McMahon's backyard. The pumpkin plants died, but the gourds flourished. Members harvested the gourds, piled them in a wheelbarrow, and sold them door to door.

**4-H'ers Get Helping Hand**

Armed with their hard-earned money and a crusading desire to compose a life-saving message, McMahon went to Troop E of the State Police Barracks in nearby Montville to enlist a trooper for the production. She and Lt. Robert O'Shaughnessy, the commanding officer, ultimately agreed on a 30-second public service announcement.

Impressed with the club's initiative and concern, O'Shaughnessy requested the assistance of Beverly and John Reilly of Connecticut Video Productions in taping the spot. The

video crew, an ambulance service, Connecticut College, a church, hairdresser, state police, and others volunteered time, professional services, and facilities.

The 4-H'ers developed the format for the entire message and even acted in the public service announcement, with help from the state police and the Reillys.

All agreed that the spot should feature an illusion of emptiness without using dialogue. Scenes include a sad-eyed child skating alone, a child rolling cooking dough alone, a trooper who picks up the liquor bottle at an accident scene, and a trooper who brings unhappy news of a parent's death to a girl at home. The spot concludes with these words on the screen: "To: Grownups. From: The Kids. *Don't Drive Drunk*."

**Message Exceeds Expectations**

The message, originally intended to be shown to the members' parents and at 4-H fairs, exceeded the club's expectations.

Reporters publicized the club's intense concern about drunk driving in the *Norwich Bulletin*, a morning newspaper; *The Day*, (New London), an afternoon paper; and the *Niantic News*, a weekly paper.

In addition, the spot was shown on television stations WTNH, New Haven, during a 6 p.m. newscast; WVIT, New Britain, in its "Good News Break"; and WTXX, Waterbury, on its public affairs program. The children were interviewed on WTXX's weekday "live" program for young people on how and why they made this videotape.

Nationally, the spot attracted inquiries from the "Good Morning America" and the "Phil Donahue" television shows.

How much did the public service announcement cost to produce? The Connecticut Video Productions charged the club $43.20—the money they earned selling the gourds—to make the spot. The remaining expenses were considered a gift by the video company to the motorists of Connecticut. □

# Send Them Software

*Dick Levins*
*Extension Farm Management Specialist*
*Institute of Food and Agricultural Sciences*
*University of Florida, Gainesville*

The land grant university system has traditionally been a supplier of high-quality publications on subjects within its mission. The introduction of the microcomputer has raised the question of whether computer software (programs) should also be distributed as part of our efforts to meet our client's information needs. Some universities such as Mississippi State and Texas A&M have acted positively to provide for software distribution, but many land-grant schools have yet to do so.

Computer programs written at the University of Florida's Institute of Food and Agricultural Sciences (IFAS) have been distributed to the general public on a pilot basis for the last 8 months. During this period, over 100 orders have been filled.

**Choosing Software Topics**
Software handled by the distribution unit is intended for the use of clientele in commercial agriculture, 4-H, and home economics. Software submitted for distribution must therefore be of some interest and usefulness to at least one of these clientele groups.

The question of which subjects are best suited to software development cannot be answered except on a case-by-case basis. Generally, software should not directly compete with programs developed.

So far, some of the software topics are: grain marketing strategies, nursery business analysis, new citrus grove feasibility, and trickle irrigation design. Under development are programs in home economics and 4-H.

**Recognition for Writing Software**
If a software distribution unit is to succeed, the question of professional recognition must be adequate addressed. With IFAS Extension, no recognition is currently provided for writing software.

There is, however, a clearly established method for recognizing the production of a manual to describe software. This manual, or "documentation," can be published through normal channels and treated the same as any other publication for professional recognition.

Under no circumstances is software distributed which does not have a published manual. The manual covers what the program does, how to use the programs, and gives some indication of the methodology.

The manual must be published through recognized channels and reviewed and signed off in the normal ways followed by the professional's unit of IFAS.

**Hardware and Software Standards**
IFAS does not endorse one brand of microcomputer over another for applications likely to interest the distribution unit. Therefore, software is accepted for a variety of computers.

Different brands of computers typically use different operating systems. (For example, Radio Shack uses TRSDOS, Apple II computers use DOS 3.3, and IBM computers use PC-DOS.) The unit now supports programs in whatever operating system the authors choose for development.

So far, the programs in distribution have all been written in BASIC. BASIC is relatively easy to learn and is well supported on all common microcomputers. Authors are encouraged to experiment with other computer languages or to use certain applications development packages such as spread sheet programs or data base management programs. However, their language choice must be one which can be technically supported by the distribution unit.

**Handling of Orders**
Orders are processed through a central unit at the main campus in Gainesville. An order form can be obtained through any county Extension office. The order form, along with a check for $15 per program ordered, is returned directly to Gainesville. It is not necessary to send a diskette with order requests. Inhouse and educational orders are currently filled at no charge, and out-of-state orders are handled under the same procedures as in-state orders.

IFAS copyrights its software to ensure that others do not infringe on its right to distribute its own software. IFAS does not, however, in any way try to prevent copying or other third party use of its programs so long as IFAS is proper credited.

**Continuing Support**
The distribution unit operates in such a way as to minimize the program author's involvement in routine distribution tasks.

A customer data base is maintained by the distribution unit so that everyone who has ordered a particular program can be advised of updates.

"Unofficial" distribution of programs, that is, copying programs by faculty for direct distribution to individuals, is not strictly prohibited.

**Linking Policies**
Technology changes, and so must we if new challenges are to be met. Distribution policies for microcomputer programs must remain flexible. The approach of closely linking software to more conventional publications policies appears to be promising.

Those desiring further information or sample order forms may write:

Farm Computer Support Group
c/o Dean John T. Woeste
Florida Cooperative Extension Service
1038 McCarty Hall
University of Florida
Gainesville, FL 32611 □

# Invite A Computer Home

*Margaret P. Ezell*
*Extension Family Resource Management Specialist*
*The Pennsylvania State University, University Park*

As technology continues to invade the office, the use of computers for office management, communication, and education is bound to carry over into the professional's home. Pennsylvania Extension is currently in the midst of an effort to place computers in every county office. The state legislature is being asked for a one-time $2 million appropriation to provide computers for each county, state specialist, and administration. The bill also includes funds for a computer communications network to link all offices and for the purchase and development of software programs. Several counties have already purchased their own Apple II or IIe microcomputers, being unwilling to wait until the legislature acts.

Kathy Hostetler, county Extension home economist, works in one such county. The Cambria County Extension office purchased its computer a little over a year ago. Because the office purchased the computer, changes have taken place in Kathy's family life as well as in her job.

Hostetler has been an Extension home economist for the past 16 years. She and her husband, Ron, and their two children, Sandy, age 8, and Allen, age 5, live in Ebensburg, Pennsylvania. Ron Hostetler is a county agricultural agent, who has worked for Extension the past 19 years.

When the Apple IIe arrived in February 1983, most of the staff steered clear of it, hoping they wouldn't display their ignorance in front of others. Kathy Hostetler decided the only way she was going to learn how to use the microcomputer was to steal time away from other things. Hostetler chose to take the office computer home three times while she was learning to use it. While the computer was in her home, she taught her children, then ages 7 and 4½, to use it too.

**Computer of Their Own**

The Hostetler family's interest in the computer increased to an extent that they decided to purchase one for their home in April 1983. They found it best to plan the purchase of such an expensive item. Thanks to a policy that allows all staff to obtain the University's discount price, the Hostetler family didn't pay full price.

As they planned their purchase, the Hostetlers decided that many of the software packages they needed for work-related tasks would be available from the office. They also decided that a printer was unnecessary since they could use the office's, but within a month, it became apparent that they did, in fact, need their own printer and more software programs.

The computer has given the entire family an opportunity to learn and explore together. Kathy Hostetler comments that "it may be a disadvantage for the family when adults are not exposed to the computer but the children are. Adults may develop a complex about using the computer, in some way forcing a generation gap."

**Automated Ancestors**

As she worked with the computer at home she found it an intricate puzzle that she wanted to master. During one nightly session, Hostetler found that the computer was perfect for producing a genealogy newsletter to update everyone on current family happenings. This use gave her a reason to master the word processing program to write the letter, the data base program to produce a birthday calendar, and the mailing list program to manage all family addresses.

As her work with the computer proceeded, uses for it grew. She developed a recipe book for her family and the livestock sale catalog for the county fair.

At first, the family member using the computer encouraged other family members to join them. The space set up for the computer had to be enlarged so that more than one person could participate.

**Children Use Computer Too**

The children love the computer. Sandy is aware that she knows something that most other children don't, and she gets a shy satisfaction from having this additional knowledge. Kathy and Ron Hostetler have not yet noticed their children playing one-upmanship with their computer knowledge. Kathy Hostetler learned in a class she took on the family that it is common for older children to want to keep their computer knowledge to themselves.

Last spring, Kathy Hostetler took the family computer to Sandy's first grade classroom. The school had the computer for a week, and two classes made extensive use of it during that time. The Hostetler's computer was the only computer the school had access to last year, and Sandy and her classmates are already asking when the computer will come to school again.

**Helping the Folks**

Sandy and Allen are not learning to program but they are using educa-

*Computer education often continues at home! Kathy Hostetler, Extension home economist in Cambria County, Pennsylvania, purchased a unit for home use after her office received one, and then encouraged her entire family to participate in the world of "bits" and "bytes."*

tional programs. Allen quickly learned that when the program Mom or Dad was using bombed, they got upset, then pressed the reset button. Allen started coming over to press reset for his parents. Since that time he has learned to use the computer. Even though he can't read yet, he can tell which disks he can't use by the Mr. Yuk (poison warning) stickers on them.

Ron Hostetler may not have initiated the purchase of the family's microcomputer if Kathy Hostetler had not been so intrigued by it. He uses it to set up spreadsheets for farm analyses, and he learned about these in Extension in-service training.

**Training the Staff**

Since the office obtained its computer, Kathy Hostetler has been conducting educational awareness workshops for 4-H and the public on both the regional and county levels. The workshops have focused on helping families decide if they want or need a home computer and what to look for if they decided to make a purchase.

In her subject matter areas, she has been using a spreadsheet program to teach clientele about credit and loan amortization. Recently she was selected as one of 10 county agents to participate in 20 days of intensive training to become a regional computer support agent. The training was initiated by Penn State Extension's computer program staff, and was designed to train key personnel in each region who could train other staff to use the computer in their programming.

Hostetler notes the reactions of other staff members as they interact with the computer. Many who are resistant at first later come around to see the computer as a tool for promoting Extension's message, and they are willing to learn to use it. In this case agents and administrators are learning to be proactive.

**Computer Tips**

- *Usage:* Extension staff have little time in their schedules to learn to use a computer. They should not be made to feel as if they are goofing off if they use office time just to experiment. Allowing staff to take the computer home lets them learn to use it at their own pace and to involve their family as well.

- *Office Software:* Office software should include games and educational programs as well as office management programs. They allow the user to learn the basics about the machine and to gain some mastery of the computer before becoming overwhelmed by the intricacies of the more difficult office management software.

- *Office Hardware:* More than one computer per county office will be needed. As staff become competent at using the computer, they will find more uses, and competition for the hardware will be a problem. One computer should be available for office management, a second for educational use (workshops, preparation of educational materials, etc.). One computer per Extension staff member is ideal.

- *Training:* Training for staff members should cover general use of the computer, then specific software. During the first year, Extension staff need to plan to reduce their program load. Trying to learn to use the computer and to carry on the same level of programming can be frustrating.

- *Personal Purchase:* If possible, arrange a good discount policy for employees to purchase compatible computers. The discount plans should also be available for software purchases.

- *Changes In Work Patterns:* In a short time many staff members will have purchased their own computer and Toffler's forecast of the electronic cottage, people working from their home, will be fact instead of fiction.

- *Technical Support:* Provide immediate support for any questions or problems. Regional consultants are helpful when travel distances are great, but they need to be well trained so they can answer questions or they will never be asked again. The agent will prefer to contact the state computer support staff directly.

- *Applications:* Give staff time to develop applications that will be useful in their day-to-day work. Many applications should be developed statewide and distributed to all offices. Most Extension agents will never be programmers, just users. They need time to learn to use general-purpose software such as word processors, spreadsheet programs, and data base management programs in their particular subject matter area, along with subject-matter specific programs. □

# Newsletters—Consolidating Cuts Costs

*Gwil Evans*
*Director of Agricultural Communications*
*College of Agricultural Sciences*
*Oregon State University, Corvallis*

Extension staff in seven Oregon counties have switched to consolidated newsletters, beginning with Linn County in May 1982.

Agents in these counties report much interest from colleagues contemplating similar change. Linn staff chair Hugh Hickerson says he has had requests for information from as far away as Michigan. Lincoln County staff chair Evelyn Brookhyser states inquiries were so numerous she wrote, "One County's Experience with a Consolidated Newsletter."

"I didn't have time to respond individually when other agents asked for information," Brookhyser continues. Her summary describes not only the newsletter itself, but equipment she found necessary to produce it.

**Counties Stimulate Change**

The move to unified letters in Linn and Lane Counties brought change in other counties.

"We liked what Linn and Lane were doing and decided a unified newsletter would give us a better image—at no additional cost," explains Marvin Young, staff chair in Deschutes County. "In Lincoln County, the impetus came from our Extension Advisory Council chairman," explains Evelyn Brookhyser. "He learned about Lane County's newsletter from a member of the Lane advisory council." She and her colleagues in the Lincoln County office think their new *Coast Ranger* newsletter is doing a good job, but they're interested in doing a more formal survey.

Young says the Deschutes Extension Newsletter is accomplishing its purpose—and then some. The newsletter is set in type at the Redmond newspaper. "We think we have better readership," Young says, "They read more of what we write and read more about all facets of Extension."

## Focus of Future Issues

Production schedules and focus on future issues of Extension Review are listed below:
SUMMER 1984, "Food and Fitness," article deadline June 1.
FALL 1984, "Agricultural Production," article deadline August 15.
WINTER 1984, "Local Government," article deadline November 1, 1984.
SPRING 1985, "Marketing," article deadline February 1.
SUMMER 1985, "Linkages with Other Agencies," article deadline May 1.

Jackson County's first issue of *The Extender* appeared February 1, 1984. But already Ron Mobley staff chair, says he is pleased. The newsletter replaces six others, it does so without increasing costs, and it promotes better coordination among staff members than ever before!

**Assignments Treated Differently**
Counties assign newsletter responsibility differently. Editorial duties rotate among agents in Jackson and Deschutes. In Linn, whe Hickerson and Betty Wallace are the only agents, they share responsibility for every issue. In Lincoln, 4-H Agent Susan Roy edits every issue.

In Jackson, pages are allocated by program agrea: one each to 4-H youth, home economics, energy, forestry; two for agriculture; the back page is reserved for a calendar of Extension events. The editor makes decisions about front page content, with advice from colleagues. In Deschutes, each staff member has a page from program information, and the back page is a calendar.

***Consolidated newsletters are a recent Extension trend in seven Oregon counties. Here, Linn County Extension staffers prepare final newsletter copy and work with the local typesetter choosing formats and overseeing makeup.***

**Adaptable To Special Situations**
Faced with a vacant staff position—and possibly a blank page or two—Young enlisted help from Malheur County Agent Helen Conner and Human Development Specialist Marcelle Straatman. They reduced elements of Straatman's course on stress to articles to appear monthly during the vacancy period.

Hugh Hickerson agrees that the newsletter is an effective medium for educational messages. He says it has helped fill the program void created when budget cuts translated to severe staff cuts. "We rely on the newsletter as a vehicle for educational information."

**Production Costs Vary**
As production and printing techniques vary, so do costs. In Deschutes, secretaries type copy into the Redmond newspaper's typesetter. Printing costs run from $150 to $175 monthly for about 1,500 copies—depending on the amount of art and the number of photos used.

Lincoln County has opted for typed, camera-ready copy. They purchased a Xerox Memowriter typewriter to produce finished text; their production costs run about $160 monthly, including photos and headlines (2,000 copies).

In Jefferson County, regular monthly press runs of 1,500 copies cost about $400. Twice-yearly mailings (annual report issue in January and prefair issues in July) go to all post office boxholders and rural routes. That boosts the press run to 5,000 copies, but the printing bill goes up only $30.

In Linn County, a small print shop provides copyediting, headline writing, and layout services, and charges run about $450 per issue (2,600 copies). Total cost is less than when the county was producing several newsletters.

In Jackson County, 6,000 copies cost about $470 for typesetting, art, and printing.

All agents with experience with unified newsletters say they recommend this approach to other counties considering one.

Mobley says it is too early to assess the Jackson County experience, but he points out that after the first issue people were calling to be sure their names and addresses were on the list for future copies.

Brookhyser is enthusiastic about Lincoln County's experience with the *Coast Ranger*, but cautions other staffs considering the move: "It is a county staff decision. If you're going to do a unified newsletter, then you have to do it well. That means a total staff commitment. Without it, you simply can't make such a newsletter succeed." □

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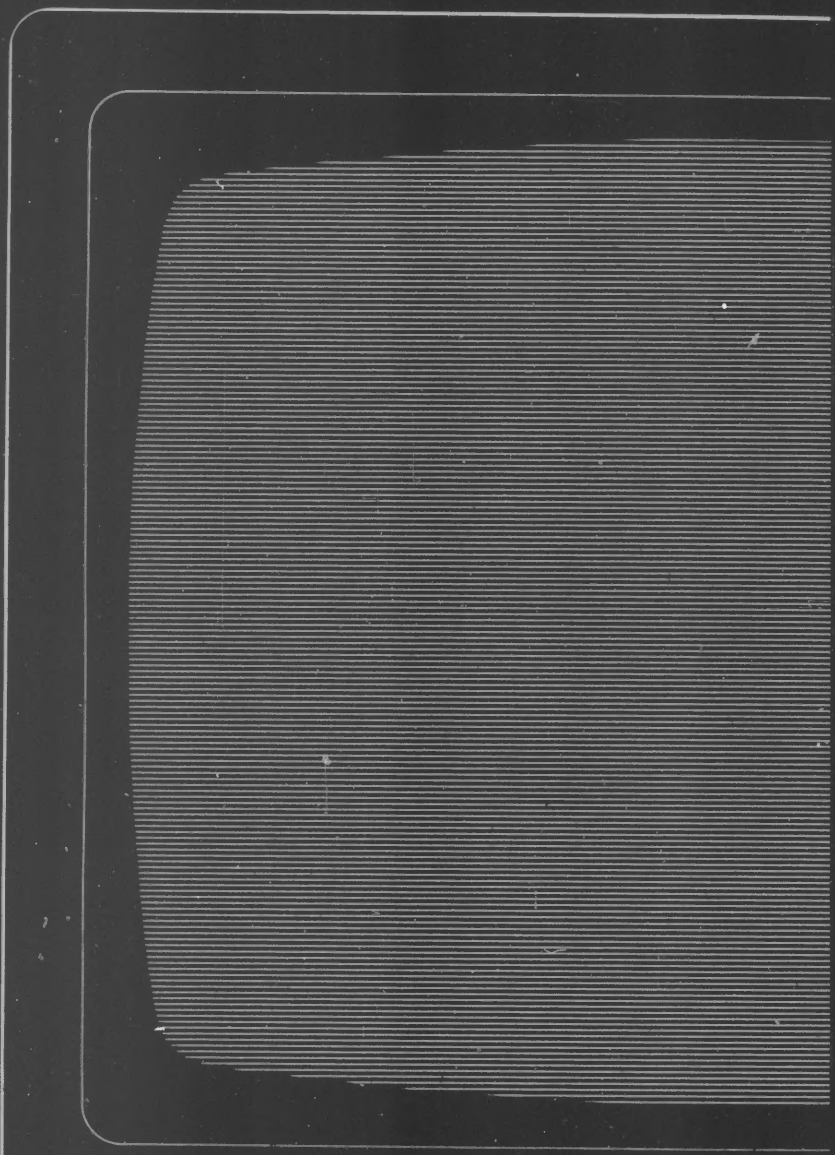

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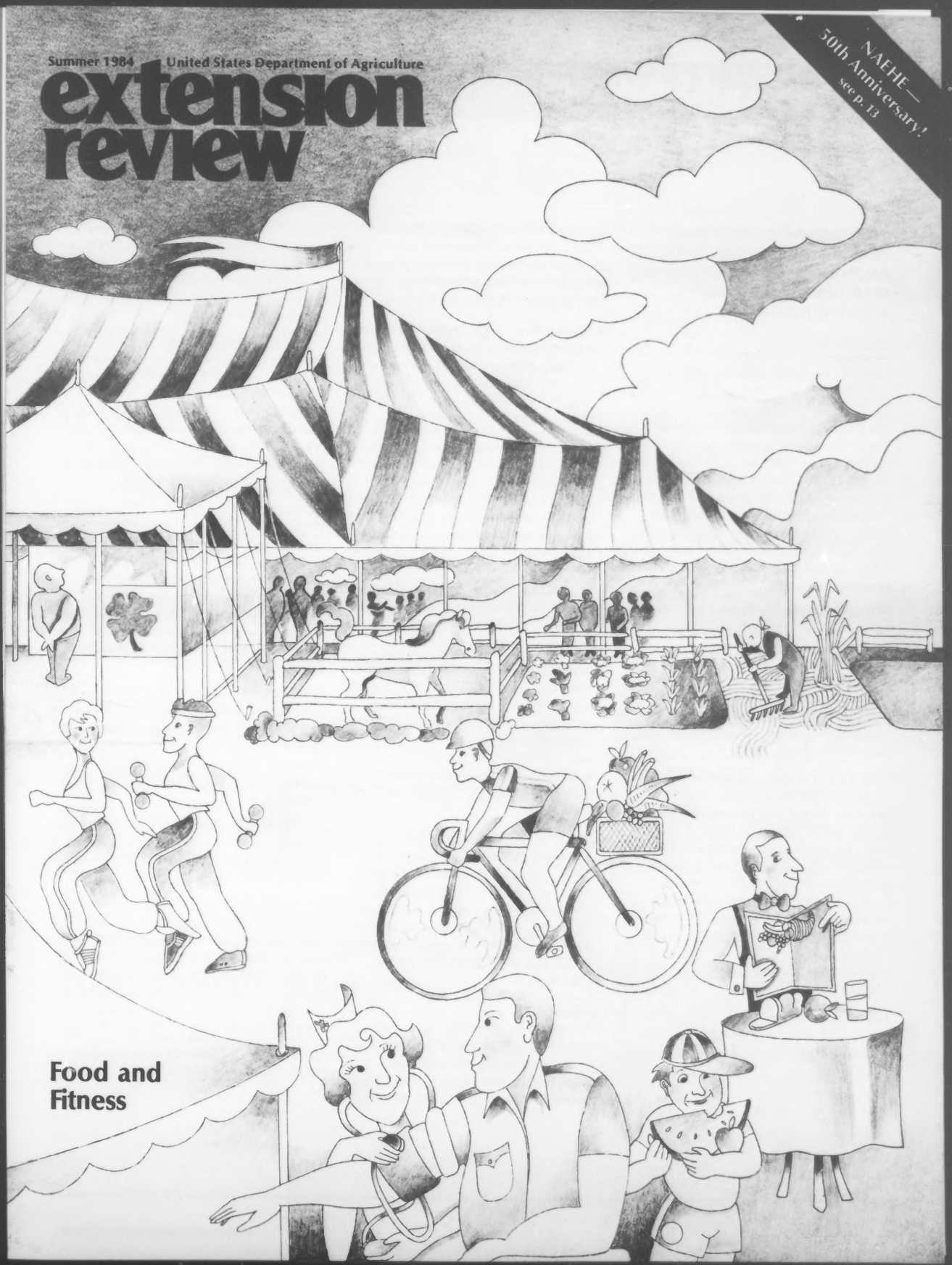
# extension review

NAEHE—50th Anniversary!
see p. 13



## Food and Fitness

# Happy Golden Anniversary . . . NAEHE!

***The National Association of Extension Home Economists celebrates a half-century of professional growth and achievement.***

Charlotte Young
President
National Association of Extension Home Economists
Cedar Rapids, Iowa

The National Association of Extension Home Economists is celebrating its 50th anniversary in New York City, September 10 to 13, 1984, with the theme—"Reflect and Reach Out." The program will focus on building upon strengths of the past, linking research to reality, and utilizing new educational methodology. More than 1,800 members, guests, and exhibitors are expected to attend.

Fifty years ago, at the first national meeting on June 27, 1934, in New York City, 41 people attended representing 13 states. Back in those days the organization was known as The Home Demonstration Agents National Association with dues of 25 cents per member. In 1964 our name became the National Association of Extension Home Economists.

Today, NAEHE has 3,600 active members, 95 associate members, and 300 honorary members throughout the United States, Guam, Puerto Rico, and East Carolina Island. The purpose of NAEHE is to promote professional growth and development by:

- providing for and recognizing leadership and achievement;
- awarding financial support for professional study; and
- exchanging ideas on effective educational programming.

**Awards and Honors**

In 1984, 43 home economists-teams will receive $21,550 in awards for professional improvement and program achievement. Another 85 home economists will be honored for their leadership and distinguished service in Extension programming. Some special projects for our 50th year are:

- **"Reach Out" projects.** Members give their time, beyond job responsibilities, to special community programs and projects. Total involvement across the country will be calculated and reported at the national meeting.
- **The 50th Anniversary Research Project.** After a survey of members for their perceptions of the major concerns of families in the '80's, findings will be reported at the Press Conference preceeding the national meeting. Reporters from all facets of the media will be invited, not only to hear the results, but to better understand the role of Extension home economics educators and observe unique and innovative programming efforts.
- **The Special 50th Award Fund Promotion.** Last year, the NAEHE Board made a commitment to raise $50,000 from members and friends of Extension in recognition of our 50th anniversary. Interest accrued from the $50,000 will be used to expand and enhance the NAEHE professional improvement program.
- **The first annual NAEHE leadership forum on public policy,** March 3-6, 1985, in Washington, D.C. State presidents will be invited to a workshop on understanding the national public policy decisionmaking process, analyzing public issues, and implementing public policy education programs in local communities.

**Trailblazers**

Extension home economists have indeed been trail-blazers and pioneers for the past 50 years. They're the "movers" and "shakers" that make things happen! They also represent the link between academic scholars, research, and field practitioners. They are future oriented. They are always on the firing line, managing the planned and unplanned programs. They initiate action and involvement in others. They help people help themselves!

Extension home economists today do not make mattresses or dress forms as they did 50 years ago, nor do they use feedsacks for clothing construction. We aren't "stewers" and "stitchers" in the 80's! In 3,000 counties across the country, as Extension home economists we work our hearts out to upgrade the well-being of individuals and families.

We are involved with radio, TV, newspapers, and newsletters. We work with the elderly, the young, and the disadvantaged; counsel the family with money problems; and help people start home businesses. Extension home economists camp out with teenagers at diet camps. We design and run computer programs, conduct food purchase research, and evaluate efficient furnaces.

**Achievement**

Extension home economists are creative and ingenious and our drive and initiative goes far beyond financial compensation. However, there is a special satisfaction from hearing clientele say, "Thanks, I needed that!"

This quote was written with Extension home economists in mind: "Don't follow where the path may lead, but go instead, where there is no path and leave a trail!"

I am very proud of all Extension home economists across the country for their educational contributions and expertise. I'm also proud of the rich heritage, the esprit de corps, and inspiration provided by our professional organization, the National Association of Extension Home Economists, over the past 50 years.

May the next 50 years be as productive, beneficial, and successful!

**extension review**

Vol. 55, No 3
Summer 1984





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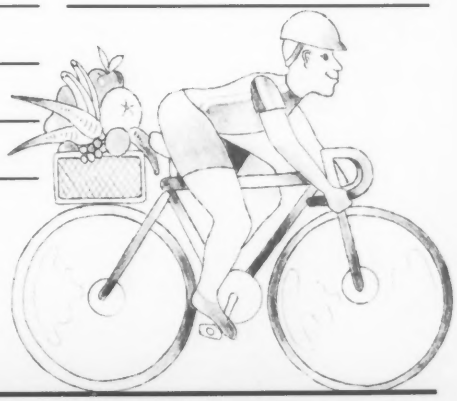


# The Alaskan Television 'Taste Test'

*Kathy Kollodge*
*Extension Editorial Specialist*
*and*
*Marguerite Stetson*
*Extension Nutrition Specialist*
*USDA & Sea Grant Cooperating*
*University of Alaska, Fairbanks*

Alaskans are being put to the "taste test" by the Cooperative Extension Service this year via a new television series on nutrition and health, called "Taste."

Based on the dietary guidelines developed by USDA and other agencies, the eight 30-minute television programs stress the particular problems Alaskans may encounter in following each guideline.

The series exemplifies the unique way in which Extension delivers informal education by cooperating with federal and state governments and the University of Alaska, as well as a large number of volunteers to extend current, relevant information to the people of Alaska.

The series was partially funded under the Continuing Education Project Grant Program of the Alaska Commission on Postsecondary Education. KUAC-TV, Fairbanks, the public broadcasting station for interior Alaska, provided production support.

**Concept and Format**

The original concept for "Taste" came from an Extension employee, Kathy Kollodge, who was taking an Advanced Television Production class through the University of Alaska-Fairbanks Journalism Department. The class produced a pilot program with assistance from Marguerite Stetson, Extension Nutrition Specialist. Pleased with results, KUAC-TV expressed an interest in broadcasting a series.

Program production was in a magazine-style format with all segments videotaped on location. Each show features a cooking segment with well-known Alaskans preparing favorite dishes using the dietary guidelines. One featured cook is U.S. Senator Ted Stevens, offering his recipes for bouilabaisse and beer bread.

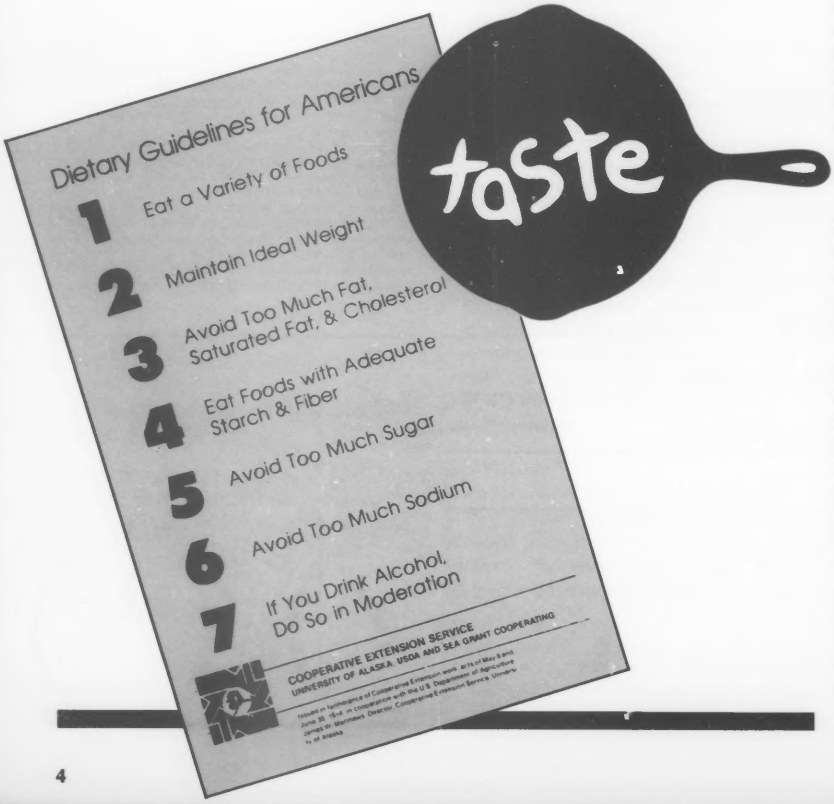
The program also features discussions about health and nutrition with experts in the field, including Joan Pelto, nutritionist, Alaska Department of Health and Social Services; Betsy Nobmann, chief nutritionist, Alaska Area Native Health Service; and medical specialists in the Fairbanks area.

**Active Participation**

In one segment—MISSION NUTRITION—a detective examines food labels in a grocery store. She receives her assignment each week at a telephone booth. A voice says, "Your mission, if you choose to accept it, is to stake out a grocery store . . . find out what's wrong with the foods people are eating. . ." With that, she enters the store to observe what people are buying and examines the labels with her magnifying glass. What she finds is that people need to change some of their buying habits and that they need education in order to do this.

Each show has a commercial for ordinary, good foods—like potatoes, oranges, and brown rice; special recipes and publications are also offered.

Over 80 people volunteered their time to the "Taste" series, including expert guests from state and federal agencies and private practice; cooks from all walks of life, and "extras" from the community and the Fairbanks Drama Association. Many local businesses donated the use of their "location" and their merchandise. In addition, many of the Extension staff at Fairbanks participated as "extras," an added benefit of increased interest and understanding of the shows.




*Top: Strength through better nutrition! That's what young Wayne Horine demonstrates by flexing his muscles on the first of the eight "Taste" TV programs on nutrition and health developed by Extension. Bottom: A detective scrutinizes liquor bottles to determine their alcohol content in the seventh episode of the "Taste" TV series, "Mission Nutrition."*

The "Taste" series began broadcasting to public TV stations and networks across the state in March 1984. Extension will also use the set of videotapes extensively in the next 3 years in workshops and educational meetings. The show videotapes are also available for loan.

**Evaluation Methods**
Built into this project are some innovative evaluation methods. Several rural stores are assisting in evaluating the effectiveness of the project. They have been sent posters and announcements of the program showings on Learn/Alaska schedule. Learn/Alaska is a satellite television system funded by the state of Alaska and transmitted to many rural communities within the state. To encourage greater program participation, local storekeepers receive free aprons imprinted with the Dietary Guidelines. The apron is also offered for sale during the last show of the series.

Because of the reluctance of many rural Alaskans to write or phone for further information, the free recipes offered on the "Taste" series are also provided to storekeepers as handouts. Storekeepers are asked to let Extension know how many handouts are picked up and any response that they hear about the shows by completing a small postcard. They can also call collect for additional materials.

In several locations with small audiences, including Cooperative Extension Service staff, we have conducted pre- and post-tests on individual shows from the series.

**Gains In Knowledge**
The knowledge increase based on these measures has proven to be significant—up to 50 percent knowledge gain. The show addressing the guideline: Eat Foods with Adequate Starch and Fiber, showed real gain of new information. The subtle repetition from a medical doctor, the nutritionist, and the detective in Mission: Nutrition, insured that the message about fiber and its importance in the diet was understood. Viewers also picked up the underlying message that Alaskans, and Americans in general, should reduce their consumption of refined foods.

Extension district offices throughout the states also cooperated in the project. For the first time in Alaska, Extension has designed and implemented statewide a major educational effort in nutrition education. This package includes the videos, recipe handouts, aprons, broadcast schedules, news releases that advertise and/or support the videos, black-and-white photos, paid publications that the public can order, and evaluation methods. The evaluation methods include the informal responses from storekeepers, the pre- and post-assessments of small groups, and a tally of all requests generated from the shows. □

*U.S. Senator Ted Stevens of Alaska cooks his nutritional specialty, bouilabaisse, on the third "Taste" TV program, "Avoid Too Much Fat, Saturated Fat, and Cholesterol."*

# Fish Wastes: Low-Cost Feed for Livestock?

*Joe Cone*
*Science Writer*
*Sea Grant College Program*
*Oregon State University, Corvallis*

Turning fish wastes into feed could prove to be a new source of low cost local food supply for livestock producers. An enterprising farmer, on the move from eastern Montana to the Oregon coast, is demonstrating this by feeding his hogs wastes from the local fisheries plant. The farmer, Lorin Dixson of Bandon, Oregon, calls his project, "a prime example of matching up local resources with needs."

Dixson was having problems with his idea for feeding fish wastes to hogs. He was using a process that ground the wastes and mixed them with formic acid to stabilize them. "I used a process I found in a magazine and everything worked right by the book," he says, "except the hogs wouldn't eat it!"

That's when Dixson called for advice from the Coos County agricultural agent of the Oregon State University Extension Service. The agent, Lynn Cannon, knew about some research being done by Richard Kellems of OSU. The Sea Grant researcher has been perfecting an innovative process for converting fish wste into a liquid protein supplement. Cannon brought the two together recently for a field trial; Bandon Fisheries supplied several hundred pounds of fish carcasses.

In Kellems' process, the solid fish wastes are mixed with an enzyme in a large vat. Steam is injected, and the heat breaks the fish down into a coarse liquid. Then the liquid is stabilized with phosphoric acid, and preservatives are added.

**Trial Run**

Dixson and Kellems worked side by side during the trial run at Bandon fish plant, taking turns operating the machine. The hog farmer said he was "pretty happy" when the afternoon's work netted about 100 gallons of fish soup. More importantly, Dixson's 100 hogs ate the soup right up. "They liked it hot real well," the farmer observes, though there wasn't enough left over for further taste comparisons.

Now Dixson is hoping to repeat the taste tests with his brood stock over a period of several months. An agreement between Bandon Fisheries, OSU's Kellems, Dixson and the West Coast Fisheries Development Foundation, based in Portland, is currently being hammered out to develop a demonstration project.

**Worthwhile Effort**

Dixson believes strongly that such an effort is worthwhile. "You're talking about $70 per ton for the fish liquid, which is about 20 percent dry matter." The cost per pound of protein shows the fish waste to be about 25 percent less expensive than soybean meal—about 30 cents per pound for the fish protein versus 40 cents per pound for soybeans.

On the Oregon coast, raising hogs is a marginal business. A hog farmer has to compete with hogs raised on soybeans in Iowa, but those soybeans in Oregon cost considerably more because of shipping. Approximately $70 of the $375-per-ton retail cost of soybean meal delivered at Coos Bay is freight expense.

**Process May Prove Beneficial**

Researcher Kellems is optimistic that a demonstration project could prove many benefits. "Fish processors ought to benefit by recovering a portion of their costs that they would have to incur to get rid of their wastes. And livestock producers will benefit from the lower cost of their feed sources," he says.

Dixson thinks that he could add to his herd if the liquified fish feed continues to prove palatable to the hogs and the supply is steady.

Beyond these, Kellems sees an ultimate beneficiary. "The consumer will actually get the final benefit by paying less for a finished product, grown here in Oregon, that uses local resources to advantage." □

# Formula = Learning + Fun

*Mark Claesgens*
*Extension Information Specialist*
*Washington State University, Pullman*

Youngsters in Pasco, Washington, are learning about food and fitness in a new way, and enjoying it.

About 50 youth attended the second annual "Fitness Formula" workshop in early April where they were led through a nonstop series of health-related activities. The 3-day event for low-income youth, ages 8 to 11, was sponsored by a Washington State 4-H Foundation grant.

**New Approach**
Washington Extension agent Holly Berry and Carolyn Olson-Beck created the workshop and obtained the grant. They used a different approach from other youth-related programs by involving 4-H Ambassadors and teen leaders.

This new approach gave these teen 4-H leaders practical experience in addition to their leadership training. Berry and Olson-Beck also sought the help, energy, and stamina these young adults could bring to the workshop. A new group of at least four ambassadors or teen leaders participated each day.

Not wanting to "reinvent the wheel," the agents contacted the Salvation Army for assistance in recruiting children for the program.

Because the workshop was scheduled to be held during a week-long spring break from school, "Fitness Formula" became an additional and worthwhile alternative for that leisure-time period. Not only did the Salvation Army recruit the children, but they provided bus transportation to and from the sessions. The workshop also coincided with the U.S. Department of Agriculture's current attention to food and fitness.

**Formula Is Real Equation**
What *is* the "Fitness Formula"? The two agents use the term to describe this equation: "Proper nutrition + Proper exercise = Good health." In application, though, the workshop was much more than a series of lessons on vitamins.

For example, youngsters practiced sensory deprivation exercises. They experienced the relationships among the senses and how other faculties have to take over when one is missing.

**Exercise for the Senses**
Blindfolded, they attempted to pour water from a pitcher and fill a cup. Listening to a tape recorder, the children tried to identify familiar and unusual sounds. Reaching into a box, they had to identify objects by feel alone. By taste and smell alone, they had to identify foods.

Health professionals also instructed the children. Kids practiced brushing their teeth, flossing, and taking their own temperatures. One health professional took everyone's blood pressure—a fascinating new activity for most of the youngsters.

Another activity with a high interest level was "clone art," an activity in which the children made life-size models of themselves to enhance their self-image. First, they outlined their bodies on double layers of paper, and then painted clothes and faces on with watercolors. The leaders completed the "clones" by stapling the layers together, stuffing them with newspaper, and then hanging them up for viewing.

Participants made nutritious snacks, watched health-care movies, played games, and exercised.

Noise often reached ear-piercing levels, and group dynamics changed from day to day. The quiet group one day was the noisy one the next and vice versa. Many who came with apprehension, later expressed desire to return. The break dancers established their sovereignty the opening day and then settled down to work. The 4-H leaders gained first-hand skills learning when to be patient, when to scold, when to comfort, and when to encourage play.

**Workshop Goals**

Out of this 3-day whirl of activities, Agents Berry and Olson-Beck did not expect long-term learning from the children, but an ability to demonstrate fitness habits.

"Long-term learning is not the goal," Olson-Beck says. "We don't know how much of this will last, but what we can measure now is their ability to demonstrate these health practices."

**New and Improved**

The major change from the first Fitness Formula, the agent said, was the involvement of the 4-H Ambassadors and teen leaders. For this year's program, the agents began by recruiting the 4-H'ers over a 2-month period, selecting projects, and training the leaders. Next the leaders practiced their activities at 4-H club meetings. With this method, everyone involved not only gained a sense of timing, but also a preview from other youth on which activities would be more popular and effective.

Another significant improvement, according to the agents, was dividing the children into groups of four to six and rotating those groups from station to station at specific time intervals. By contrast, all the participants were a single group the previous year, and the activities were not as effective.

Positive feedback from the youngsters, the agents, and the 4-H'ers indicates that Fitness Formula will become a regular spring break event for the low-income youth of Pasco. □

# WVMR—Where Volunteers Make Radio

*Betty Rae Weiford*
*Extension Home Economist*
*and*
*Bob Keller*
*Extension County Agent*
*West Virginia University*

West Virginia Mountain Radio (WVMR)—"the only radio station in the world that belongs to you"—has special meaning to the many volunteers who make nonprofit community radio possible in Pocahontas County.

The $50,000 annual budget needed to operate the station comes from listeners, business underwriting, clubs and organizations. A station manager, a news and public affairs director, and a part-time operations director/part-time school teacher are the total employed staff of WVMR.

On-the-job training opportunities arranged through the Green Thumb Program, Veterans Administration, Vocational Rehabilitation, and the Governor's summer youth employment program intermittently provide the station with part-time paid staff. But, it's that host of volunteers, including the paid staff, that make it possible for WVMR to stay on the air. In a rural county with a population density of 10 persons to the square mile, this isn't easy.

**Beginnings**
WVMR began broadcasting from dawn to dusk in November 1981. The 2,500 watt AM station is located in a rural area near the geographic center of the 942 square miles that make up mountainous Pocahontas County.

The station is housed in a new energy-efficient, earth-sheltered, passive solar structure—all financed with grants from the Appalachian Regional Commission (ARC), the Department of Commerce, National Telecommunications and Information Administration (NTIA), the Corporation for Public Broadcasting (CPB), the Benedum Foundation and the Pocahontas County Commission. Land near the county high school was made available by the Board of Education.

At WVMR, volunteers do community surveys, provide programs, seek funding, catalog records, care for the building and grounds, do office work, service equipment, and perform many other necessary tasks. In 1983, volunteers donated more than 5,000 hours to the station.

**Extension Volunteers**
The most demanding volunteer job is that of on-air operator, or "DJ." On WVMR, you can hear teenagers, senior citizens, married couples, ministers, or even county Extension agents.

These volunteer DJ's must spend many hours in training and pass an extensive test covering technical operation and programming before they are licensed by WVMR.

County Agent Bob Keller—a pioneer DJ volunteer—runs the early morning show on Wednesday and Saturday.

The early morning air shift includes cleaning and preparing equipment; reading meters; selecting and cueing records; recording and airing local and national news; reporting local activities, weather, and hospital news; airing public service announcements and station promotions; recognizing underwriters; answering the phone; receiving visitors; and handling any emergencies that come up.

**Incentive**
Extension Home Economist Betty Rae Weiford might never have tried to become a DJ if the National Association of Extension Home Economists (NAEHE) 50th Anniversary "Reach Out" project hadn't provided her with an incentive to take on a new volunteer effort.

Once a licensed volunteer DJ, Betty Rae hopes to use this skill in hosting a weekly mid-morning "Reach Out" program as Extension home economist by bringing information to families, accepting live telephone comments and questions, and providing entertaining music.

**Chance to Reach Larger Audience**
Other agencies also take advantage of this opportunity to reach larger audiences through live in-person programs or have become proficient in production skills and produce their own programs.

For example, Public Health Nurse Jane Hamed stops by the station on her way to the office on Tuesday mornings to discuss timely health


subjects or current health-related problems; Nurse Lois Quinn with the Home Health Agency stops in on Friday mornings to discuss problems of the elderly.

Norris Long, Soil Conservation Service (SCS) technician, produces public service announcements for his agency. Norris is also a volunteer DJ. Nurse Hamed was on the WVMR Board of Directors and Nurse Quinn volunteers her vocal talent for live gospel programs.

**Programming**

Extension Agents Keller and Weiford also provide the station with live and taped ready-to-air educational programs on many subjects.

During 1982 and 1983, 300 "County Agents Corner" 5-minute programs, produced by Agent Keller, were aired on a three-per-week, three-time-per-week rotation. These included timely subject master interviews with specialists and on-the-farm reports. Extension Agent Austin Shepherd from adjoining Highland County, Virginia, also generated some of these programs. During 1984, "County Agent Corner" will concentrate on lawns and gardens.

Keller also recorded more than 400 30- to 60-second recorded messages on a wide spectrum of subjects.

Home Economist Weiford developed a series of food and fitness programs (5 to 7 minutes in length) for airing every Monday morning in 1982.

**Experienced Host**

Weiford has also hosted hour-long, live discussion programs with call-ins on: Education at the Crossroads, Alcohol and the Law, Your Tax Dollars, Child Care, Domestic Violence/Child Abuse, Consumer Protection, Safety, Landowner Rights/Responsibilities, Care and Protection of Children, and Solid Waste Management.

She's also produced several 1- to 3-minute messages for airing at random on resource management, food preservation, food safety, consumer tips, health, safety, family living, and consumer protection.

Marketing Extension, reaching new audiences, and doing more with less, are common themes to Extension agents everywhere. Certainly few Extension staffs have had more radio opportunity than Pocahontas County in the past 3 years.

**Think Radio**

Thinking radio is a key. When the wool pool sells—call in a news report. When a 4-H'er achieves honors—call in a report. 4-H camp is taking place—have 4-H campers call in reports on camp. Having an educational meeting—bring the specialist or resource person in early to do a live show on the subject to reach more people and stimulate attendance.

For Pocahontas County the increased exposure means new clientele, new perceptions of Cooperative Extension, and increased requests for information.

In return, Agents Keller and Weiford volunteer much time and energy beginning with the planning and grant writing through the sometimes tedious journey of developing the democratic philosophy under which the station continues to operate. The county Extension office served as the base of operations when WVMR was still a dream. Both Agents also have served as president of the WVMR Board of Directors.

Communication and the opportunity for educational programming have taken on new meaning in the county Extension office, and the staff is in debt to those volunteers who get up in the wee hours of the morning, give up their weekends, provide their own transportation to make WVMR possible, a radio station *Where Volunteers Make Radio.* □

# Motion For Life

*Mary Ann Spruill*
*Extension 4-H Nutrition Specialist*
*North Carolina State University, Raleigh*

"Motion for Life" is helping youth in North Carolina improve themselves physically while boosting their self-esteem. A new Extension 4-H program, "Motion for Life" features 12 1-hour lessons in aerobic exercise, nutrition, grooming, and human development. Over 2,000 youth and 400 volunteers have participated in the program since it was introduced in May 1983.

**Heart of Program**
The heart of "Motion for Life" is aerobic exercise—vigorous exercises and activities that improve the organs and systems of the body involved in carrying oxygen—the heart, lungs, and blood vessels. Sessions emphasize the importance of running, walking briskly, jogging, bicycle riding, and swimming. These exercises help the lungs process more air with less effort, which, in turn, strengthens the heart and increases endurance. Half of each lesson is devoted to dancercise routines, especially designed for the program, providing an enjoyable way to strengthen the heart while, at the same time, burning extra calories and toning muscles.

Through the program's food and nutrition lessons, participants learn to calculate the number of calories needed each day to maintain, gain, or lose weight. Youth review the values and attitudes that influence eating habits, discuss fad diets, explore the relationship between diet and physical fitness, discuss the pros and cons of fast foods, and identify ways to reduce sugar intake.

**Computer Analysis**
Participants can analyze a 24-hour food recall on a computer and compare their results with the 1980 Recommended Dietary Allowances of various nutrients.

Other activities, such as making wise decisions and evaluating personal strong points, are designed to improve one's self-esteem. The grooming section of the program stresses the importance of grooming, posture, and body language in forming first impressions.

"Motion for Life" is sponsored by the North Carolina Agricultural Extension Service and North Carolina Commodities. The 12 lessons included in the series are as follows:

- Are you in an Energy Crisis? (Weight Control)
- Understanding Your Eating Habits
- Fad Diets
- The Fitness Formula (Physical Fitness)
- Feasting on Fast Food
- Sugar, Sugar Everywhere
- What's Your Message?
- Clothes Talk
- Body Language
- I Can Make Wise Decisions
- I Can Do Things Well
- My Declaration of Self-Esteem

**Program Developed**
The development of "Motion for Life" began in the spring of 1983 with a planning committee meeting to design the format and subject-matter content of the program.

Subject-matter specialists wrote the lessons, which were then compiled and edited, and printed as a 4-H leader's guide. Extension also developed radio scripts, news articles, and a public relations tipsheet to promote the packaged program.

**Training Workshops**
At a statewide workshop in May 1983, Extension taught teams of county agents, volunteer leaders, and 4-H'ers how to conduct the "Motion for Life" sessions. Extension also reached representatives in 20 additional counties at a training session held in November at state conference.

North Carolina has introduced the program to 4-H leaders on national and state levels; to other leaders in churches, scouts, county, and recreation departments; and to public school teachers.

**Plans to Expand**
"Motion for Life" is currently available in over half of the counties in the state. Plans are underway to provide training for remaining counties later this year. Extension is encouraging home economics agents, particularly those with food and nutrition responsibility, to recruit and train volunteer leaders to bring "Motion for Life" into more neighborhoods, and in doing so, increase visibility for home economics and 4-H in North Carolina. □

*Celebrate 50 Years of Professional Growth and Achievement...*

## With the National Association of Extension Home Economists

*Today's Photo:*
Charlotte Young, current NAEHE president, started her Extension home economics career in 1954, took ten years off to start a family, and returned in 1964 as an Iowa county home economist; then later as an area consumer and management specialist. Currently, she's based in Cedar Rapids.

*Photo from the Past:*
Virginia McLuckie retired in 1976 after 30 years of Extension home economics work in Maryland at state and county levels. A proud member of NAEHE in the early days, Virginia's an "old hand" at having her photo in *Extension Review*. This picture (note the *Extension Review* under her arm) appeared on a cover; so did another showing her demonstrating how to make some clothing alterations. Virginia now lives in Cumberland, Maryland.

50 naehe
1984 - Anniversary Year

# Extension Home Economists Help *You* Put Knowledge to Work

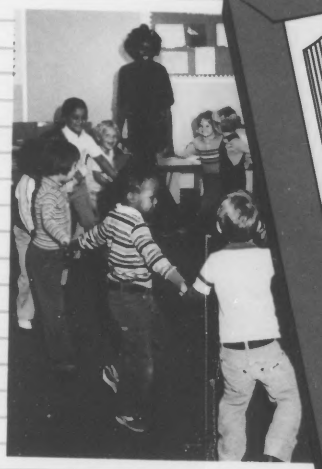
**The Cooperative Extension Service officially began in 1914 when the Smith-Lever Act established it. In 1934, the National Association of Extension Home Economists was formed. As a result, Extension home economists across the nation now meet together, exchange ideas, and promote professional growth.**

**In their role as professional educators, Extension home economists deliver out-of-school information to help families learn new skills and obtain new knowledge for better living. The next few pages will show you their areas of teaching concern and some of the methods they use to teach.**

**This year marks the 50th anniversary of NAEHE. With this photo album of new and old photos, EXTENSION REVIEW magazine, Extension coworkers and friends of Extension everywhere salute NAEHE and its outstanding achievements.**

## *Food, Nutrition And Health*


Mass media methods such as TV help Extension home economists deliver food preservation and food safety information to large audiences. They also teach people about the attitudes and behavior that affect dietary patterns. Fitness and nutrition programs are provided face-to-face in group situations, through correspondence courses, or other ways. Extension home economists hire, train and supervise paraprofessional aides in Extension's Expanded Food and Nutrition Education Program (EFNEP) designed to teach low-income, young homemakers how to feed their families nutritious meals on a budget. Computers are another method now being used by Extension to teach people how to analyze and improve their diets. Sometimes, Extension home economists teach wise food buying by training volunteers to provide information, on-site, at supermarkets. Health promotion (stay-well programs) is also an important area of concern to Extension home economists.

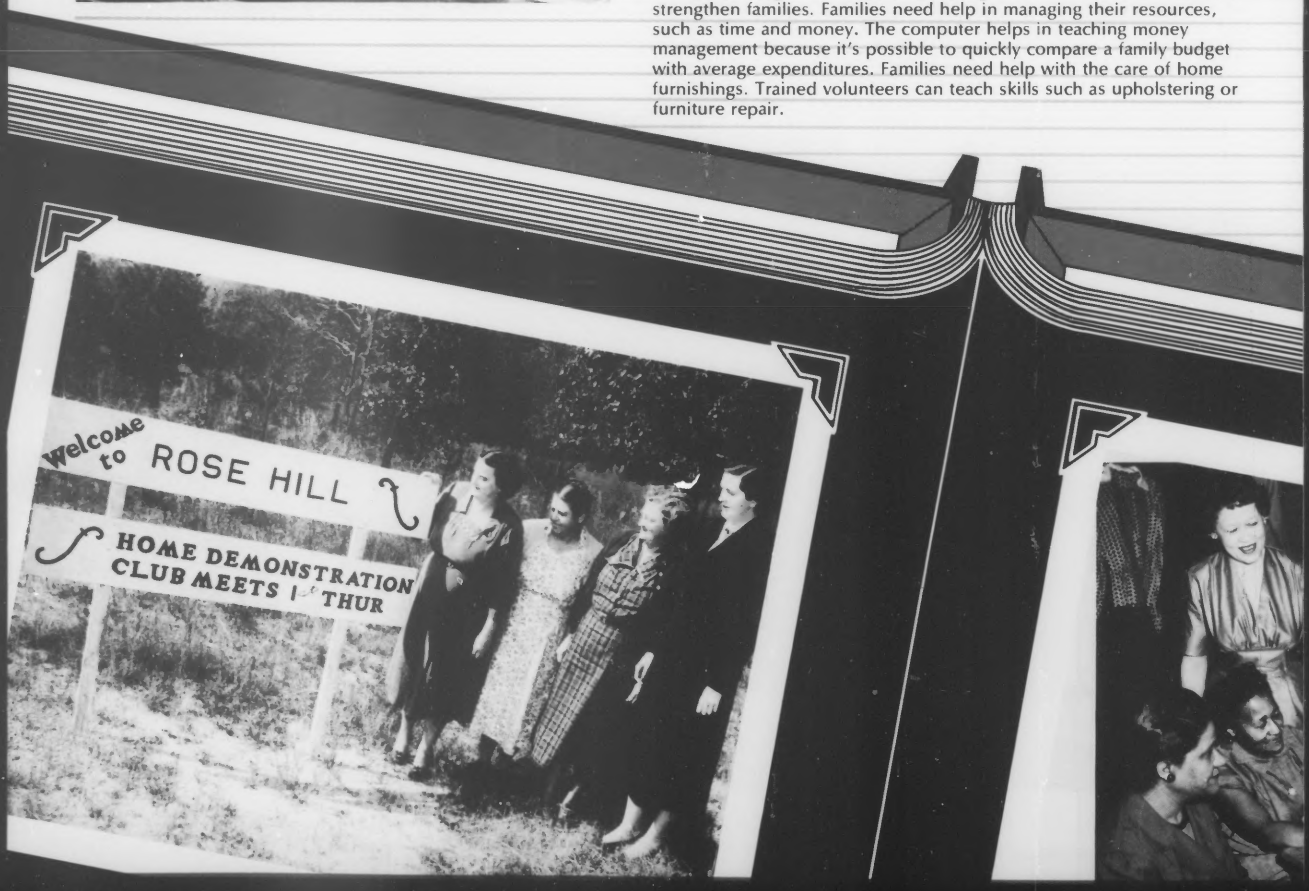




Early Extension home economists worked with Extension Homemakers and others, teaching them practical ideas about food preservation, sewing, home sanitation, home maintenance, money management, and other topics.

# Family Strengths and Social Environment

Today's families live in a complex society that has resulted in new needs, especially in the family life area. Single parent households, "latch-key" children of working parents, two and three generation households are becoming common. Stress is felt by many families. Extension home economists target their educational programs to meet these needs and strengthen families. Families need help in managing their resources, such as time and money. The computer helps in teaching money management because it's possible to quickly compare a family budget with average expenditures. Families need help with the care of home furnishings. Trained volunteers can teach skills such as upholstering or furniture repair.



# Family Economic Stability and Security


From the earliest days, Extension home economists worked with Extension Homemakers and other special interest groups, bringing research-based information from USDA and the state land grant universities to those who could then share that information with others.

# Energy and Environment


Extension home economists help families learn to manage today's housing and energy costs and make wise purchases of equipment and home furnishings. They teach practical skills such as simple home repairs, sewing, and food preservation to volunteers who teach others. Sometimes they train 4-H leaders who teach youngsters how to conserve energy. Special efforts are made, sometimes through volunteers, to reach the handicapped and the elderly. Volunteers, for example, may simulate what it is to be sightless so they can better help those with vision problems.

Even in early days, Extension Homemakers trained by Extension home economists used radio to get their educational messages to other families.

# Volunteers and Leadership Development

# Newcomers Learn New Ways

*Patricia K. Conner*
*Assistant County Extension Agent*
*The Ohio State University, Columbus*


In 1975, the Khmer Rouge (Cambodian Communists) took over Cambodia. Soldiers forced city dwellers to leave their homes and go into the countryside. Many died of starvation or disease. Others were killed by the Khmer Rouge. In a country with a total population of 7 million, 3 million died.

Annie's family was one of those that suffered at the hands of the Khmer Rouge. Her husband was shot in their home; her father left for work one day and never returned. Annie fled with her son and daughter. By 1977, her daughter was dead of malnutrition. Her son had been taken away.

In 1979, Annie was reunited with her son and niece. The three lived in refugee camps in Thailand until 1981, when they resettled in the United States. Annie now lives in Columbus, Ohio, and is a valued staff member of the Franklin County Cooperative Extension Service.

**Adjusting to New Lifestyle**

For refugees, such as Annie, problems do not end when they reach the United States. They must learn to survive in a society that speaks a different language and has strange customs, complicated laws, and confusing medical practices. Even buying, storing, and cooking food is difficult for refugees. In their country, they shop daily in open air markets where prices are negotiable. Although America's grocery stores offer thousands of different items, many

native Indochinese foods are either unavailable or expensive.

**Franklin County Offers Assistance**
The Franklin County Cooperative Extension Service first became involved in helping refugees in 1982, when Tracey Shively, a nutrition aide, enrolled several Laotians in EFNEP. She arranged for refugee volunteers to translate instructional materials into their own language.

Enrollment grew so quickly that volunteers could no longer meet the demand. Two interpreters, Annie and Saykham Sopraseuth, a Laotian, were hired. Within 3 months, 16 Cambodian groups of 43 families (258 individuals) and 10 Laotian groups of 34 families (159 individuals) were organized.

Approximately 2,400 Laotians and Cambodians currently live in Franklin County. A referral system established with the Ohio Department of Health Refugee Program allows new arrivals to be identified quickly. About 18 additional Laotians and Cambodians resettle in the Columbus area monthly.

**Common Food Problems**
A lack of food storage skills is probably the most common problem of Indochinese, according to staff members. Many refugees lived in rural areas and had never seen a refrigerator before they arrived in the United States. Many don't know which foods to refrigerate. Aides routinely check freezers, refrigerators, and cabinets to see where food is stored.

Shively says she was shocked when she opened one homemaker's freezer and found "a cow's tail—fur and all." Kerr told of visiting a Cambodian home: "They had unopened jars of baby food in the refrigerator, but I found the eggs and milk in the cupboard." Extension is currently developing fact sheets on proper storage techniques for the refugees.

Most Indochinese refugees are unfamiliar with ranges—ovens in particular. Most don't understand how to safely use gas appliances and are often afraid of them. Jackie LaMuth, home economics agent, is currently developing fact sheets showing how to use and clean gas and electric ranges.

Recent refugees to the United States have been eating subsistence diets for years; consequently, anemia and malnutrition are common.

EFNEP aides stress the importance of a balanced diet and emphasize the need to increase iron and calcium consumption. Liver stir-fry, liver French fries, rice pudding, and pudding popsicles are popular with the Indochinese.

**Learn Cooking Terms**
Refugees often reject cheese because "it smells" and canned fruits and vegetables because they are "too mushy." The Indochinese consistently rank pizza and spaghetti as their favorite "American" foods! Refugees are eager to learn English. As aides demonstrate a recipe, they carefully repeat the name of each ingredient. Refugees then repeat the word several times. The meaning of common cooking terms, such as "ounce," "tablespoon," and "grated" also must be taught.

Finding food items in the grocery store can be a problem for the Indochinese. By showing them the actual container or product label of each food item, their shopping becomes easier.

**Cultural Differences**
The extreme politeness of the Indochinese can be frustrating at times. Refugees truly appreciate attempts to help them and refuse to criticize any effort. Their politeness is wonderful, but it makes lesson planning and evaluation difficult.

When asked if they like or understand anything, the Indochinese always answer "Yes." They might shame or embarrass the speaker if they say "No." To help gauge understanding, aides ask refugees to explain the information just taught.

Strict customs dictate the diets of Indochinese mothers and their infants for the first few months after giving birth. Dietary customs vary widely, but are followed religiously. Prenatal dietary instruction is socially acceptable, but postnatal is not.

**Working With Interpreters**
To be effective, translators must be respected by their countrymen. Interpreters who are not respected are unsuccessful in enrolling families. Also, Indochinese women are very shy and often too embarrassed to speak frankly through a male interpreter. Cambodians and Laotians speak two completely different languages; few are fluent in both.

Translating recipes is difficult even for skilled interpreters. Most are unfamiliar with the U.S. measuring system, cooking terms, foods, and spices. To find errors in translation, interpreters read back into English materials that they have previously translated into their own language.

Being on time is highly valued in American society, but not in Indochinese culture. When training an Indochinese interpreter, punctuality must be stressed. Indochinese are hard workers and highly motivated, but they need constant reassurance that employers are pleased with their work.

Rewards of working with the Indochinese are great. They are a courteous, hard-working, proud people, who are highly motivated students—eager to learn about their new country. □

# They're On The Move In Iowa!

*Diane Nelson*
*Extension Communication Specialist, Home Economics*
*Iowa State University, Ames*

For many Iowans, fitness and nutrition have changed from being a fad to being part of life. Cooperative Extension can take credit for at least part of that change. Showing that food, fitness, and exercise affect the health and well-being of individuals has been a key in Iowa Extension home economics programs for many years," says Elizabeth Elliott, associate dean and state leader for home economics Extension programs at Iowa State University.

**On the Move**
By combining physical fitness sessions with nutrition mini-lessons, "On the Move" promotes a healthier lifestyle. Three counties tested the program in the spring of 1983 and it has been used statewide since then.

The *total* program is designed to last 4 weeks, at three meetings, a week. Each lesson includes pre- and post-testing.

"The shorter 8-lesson series has been popular with senior adults and teenagers," says developer Rhonda Dale Terry, Extension nutritionist. "One group of Linn County seniors enjoyed themselves so much they talked their program leader into extending the program for an additional week."

Most adults and teens report joining to increase physical activity and learn more about nutrition. Senior adults mentioned socializing with others as another reason.

**Breaking Patterns**
One group of junior high students lost 27 pounds through the program. Their leader, Linn County Extension Aide Betty Johnson, says, "The teaching methods succeeded in breaking the restless patterns typically found with these students. The card games were most effective in really getting certain points across without extensive and boring reading assignments."

One card game is used to teach calorie awareness for the lesson on weight control. Another focuses on sodium and its relation to hypertension.

All age groups receive lessons on nutrient needs specific to their age, heart disease, and adult-onset diabetes. Other topics in the teen series include pregnancy and nutrition, alcohol, and caffeine.

**Discuss Nutrition Myths**
Adults learn how to evaluate the nutrition information printed in magazines and discuss nutritional supplements and myths. Older adults also look at fiber. The nutrition segment of each session, 20 minutes long, is taught by Extension personnel with formal nutrition education.

Exercises are designed specifically for each age goup. Teens and young adults get fast-paced aerobic routines. Low-intensity aerobic exercises are suggested for older adults, and slow-mobility exercises are recommended for the elderly.

Each meeting involves about 35 minutes of exercise and a 5-minute break. Medical release forms are requested.

"So many people live on low or fixed incomes, that it is unrealistic to expect them to have a complete physical before beginning the program," Terry says. "We request approval slips because we want physicians to know who is participating, as well as the nature and pace of the exercises, the length and frequency of the sessions, and the name of the person leading the session."

**Safety First**
Program leaders must follow certain safety requirements, such as having a well-defined emergency plan to use in case of accident and making sure either the exercise leader or someone in the group is trained in Cardio-Pulmonary Resuscitation (CPR). A local medical professional must be readily available during each exercise program.

**Eating Trim**
This adaptation of a Missouri program has been popular in many parts of Iowa. For example, in West Pottawattamie County, Extension Home Economist Pat Anderson found herself forced to offer four classes instead of just one, after constant phone calls kept their three phone lines and two secretaries busy. A report that 300 people attended one of her meetings so impressed the editor of the Council Bluffs *Nonpareil* that he devoted a lead editorial to the Eating Trim program.

**FOODCOMP**
Food intake as well as recipes can be analyzed with the FOODCOMP computer program. The data base includes information on 18 nutrients for more than 820 single and combination foods. County Extension home economists use the program with participants of weight control programs, and as a drawing card at shopping mall displays.

**Farm Progress Show**
An estimated 70,000 people viewed exhibits showing the risk factors of heart disease and stress management. 4-H'ers demonstrated aerobic exercise and did blood pressure tests.

**Other Programs**
Overweight youth ages 13 to 16 can participate in the week-long "Camp I Can" offered in some parts of the state. The camp involves aerobic exercises and other recreational activities, and information on basic nutrition and portion control. More than 20,000 Iowa youth have participated in "Fit It All Together," a nutrition and fitness project.

"Heart Disease—You Can Do Something About It" is an independent study program focusing on the risk factors of heart disease. The slide/tape format is designed for use in group settings by community organizations. A Leaders' Guide, handouts, and activity sheets are included.

"Nutrition Concerns and Controversies" is a home study program for persons with some nutrition background. The series of eight lessons is sent by county Extension home economists who collect a worksheet from each participant before sending the next lesson. Over 3,000 people have enrolled and attended the followup general discussions.

"Nutrition for Teen Athletes," an umbrella title, includes a slide/tape set, publication, and videotape designed to be used singly or as a package by coaches, parents, community groups, and athletes.

"Total Wellness" is a one- to four-part series which looks at the interrelationships of nutrition, physical fitness, and stress. Iowans have many opportunities for food and fitness these days. □


# The Migrant-Extension Connection

*Patrick Livingston*
*Extension 4-H Youth Agent*
*and*
*Dawn Harris*
*Extension Home Economist*
*Michigan State University*

Over the past decade, Extension agents initiated and conducted educational programs for thousands of migrant and Hispanic families living throughout Sanilac County in Michigan's Thumb.

These include training in aspects of health, nutrition, agriculture, and 4-H youth projects with particular emphasis given hands-on participation. Isabel Sanchez, director of the county-based Migrant Ministry says, "Through the years, I have watched individuals improve their self-help abilities and outlook on life through these Extension programs."

The Migrant-Extension connection began in 1972 when Sanchez and Extension Agent Lynn Harvey met to plan a community service project involving Hispanics. The process of that program led to Sanchez working with other Extension agents to develop additional programs and self-help opportunities.

Last year is illustrative of these successful combined efforts. Although in 1983 the employment perspective for the county's 179 migrant families—ranging from 2 to 16 members was bright, many people expressed concern about the side effects from federal and state health and school program cutbacks.

Extension and the Migrant Ministry once again joined forces to benefit the community.

**Health Care Clinics**
"Health care clinics were one of the first programs ever sponsored by the Migrant Ministry because illness is a serious problem for migrant families," says Sanchez. "They put off seeing the doctor too long, and the situation gets very bad before they seek help."

This year, as in past years, the Cooperative Extension Service helped the Migrant Ministry implement mobile health care clinics near the migrant camp staffed with Spanish-speaking volunteers. These clinics, held in five different locations throughout the county, served approximately 400 people.

The medical community also supports the clinics. Through financial assistance from the Presbyterian Church and the Synod of the Covenent, over a dozen health care professionals run these clinics each year.

Very comprehensive, the clinics offer migrant families everything from glaucoma examinations to testing for high blood sugar and high blood pressure. Other services include a free computer program analyzing dietary intake and individual physical examinations by a physician.

**Education Program**
The Migrant Education Program provides children of migrant workers an opportunity to overcome the geographical and calendar barriers to education. Migrant children routinely encounter these barriers when transferring between school districts and states in the midst of a school year.

This spring, the 4-H and Migrant Education staffs at Brown City and Croswell planned a summer program for the hundreds of migrant youth already arriving with their families.

These programs began in late June and early July, and ran for 6 weeks. 4-H involvement at both sites included weekly programs conducted by local 4-H volunteer leaders and members on a variety of topics. Participants learned about dairy goats, sheep, leader dogs, and entomology. Students at Brown City also were treated to a lesson in Japanese when a 4-H exchange visited their site.

**Escorted Tours**
Other 4-H volunteers presented workshops to help migrant youth prepare exhibits for the Croswell Fair and the Sanilac County 4-H Fair. When these youth visited the fairs, other 4-H'ers escorted them on guided tours.

In all, about 400 students attended the two programs. Most of these youth exhibited articles for judging—receiving many ribbons and premiums for their efforts.

**Valuable Contribution**
Brown City Program Superintendent Joseph Furst says, "The sharing of 4-H projects is a valuable contribution to the experience of my students. The opportunity to enter projects at the Sanilac County Fair helps migrant children understand pride in one's work. The children's faces reflect their excitement when they see their projects with ribbons." Migrant Ministry Director Sanchez adds, "This is the only opportunity migrant youth have to be involved with their community on a start-to-finish program."

In addition to continuing endeavors with the health and school programs, Extension works with the Migrant Ministry to develop programs to meet the changing needs of migrants as well as the estimated 1,000 Hispanic families permanently residing in Sanilac County.

Included in this effort are proposals to renew a popular nutrition program and to initiate a market garden project. Ideally, these two projects could be combined to incorporate the family living, agriculture, and 4-H components of Extension.

"The people and their needs are here," says 4-H Agent Patrick Livingston. "It is our challenge to provide them with self-made tools necessary to meet their needs." □

# Weight Control by Mail

*Carmen R. Walgrave*
*Extension Adviser, Home Economics*
*University of Illinois, Urbana*

No public weigh-ins, no weekly meetings, and no exorbitant costs. These are some advantages of a new weight control correspondence course offered in Whiteside County, Illinois.

So far, Extension has offered six courses—one for a small group already working together on weight reduction, another for 45 persons, and four additional courses, each averaging 120 persons. Reports from the three courses now ended show that over 80 percent of participants finished the entire 8-week session. Each person averaged a weight loss of 1 pound per week, a total of 8 pounds.

**Course Features**
The course is designed for men, women, and youth, and offers the following features:

- A correspondence course designed to accommodate persons not wanting to attend weekly weight control meetings or check-ins;
- Behavior modification, nutrition, and exercise information;
- A planned 6-week and 6-month followup report; and
- Mailings on topics requested by participants on their course evaluations.

Previous behavior modification programs have failed early in the program primarily because participants didn't want to be bothered with the time-consuming and tedious task of keeping records, including listing everything they eat, when, where, how they felt at the time, and who they were with. Without an understanding of its value, they didn't really see the need.

Whiteside promoted their program as having three requirements:

- A homework assignment (the above eating record) to be completed prior to enrollment;
- A small fee to cover postage; and
- Attendance at a meeting to introduce the materials.

These give the course a headstart toward success.

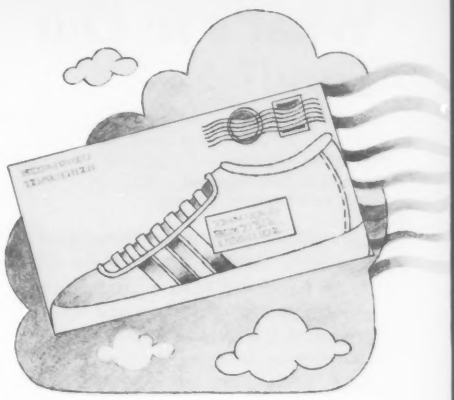
**Commitment To Change**
The initial meeting provides a method of going over the packet of materials; explaining the course; and discussing the concepts of behavior modification, exercise, and nutrition.

Participants weigh themselves at home, then record their weight at the first meeting for the office records. To ensure confidentiality, Extension assigns each person a number to use when reporting.

Once a week, Extension mails information to participants on behavior modification, exercise, and foods and nutrition. Each mailing is color coded. A foods change assignment is included for that week, such as no second helpings, limit fried foods to three per week, or cut soft drink consumption in half.

Individuals plan their own behavior change, determined by poor food habits pinpointed in their food diary. They also commit themselves to an exercise change suitable for their own physical condition.

Thus, each week, participants make three small changes—a food change, a behavior change, and an exercise change. The next week's commitments are added to the current week's changes. Participants also mail Extension a weekly report-back form, which indicates their weight change and the coming week's new behavior and exercise commitments.



**Positive Feedback**
Course evaluations have been very positive. Nearly every person has indicated that the initial meeting was important to them. Also, weekly mailings, behavior modification information, and ideas for behavior and exercise changes are valuable aids. Participants are pleased that there is a 6-week and 6-month followup to spur them to continue their own program of changes.

The majority of respondents ask for continued mailings of educational information on weight control. Some report starting the course over on their own using their packet of Extension materials.

Comments on the course include; "In a few words, this is a sensible plan."

"This was the most successful weight loss program I've ever tried; the best part was what I learned about permanent weight loss."

"I'm thrilled and plan to continue my changed behavior."

Some say correspondence courses aren't completed; others say people get too much mail. But when the materials are based on research and meet the needs of clientele, without weekly meetings and embarrassing weigh-ins, a weight control course by mail can work. □

# What's In Our Food?

*Oleane C. Zenoble*
*Extension Food Specialist*
*Auburn University, Alabama*

Last fall when Secretary of Agriculture John Block announced the National Food and Fitness program, we in Alabama felt we were one step ahead. We already had a Fitness 7 program in progress, along with a series of "What's in Our Food?" multicounty meetings planned with agents. These meetings were to begin in January 1984. So when our Alabama Food and Fitness planning team met last August, we had the foundation laid.

**Food and Fitness Programs**
The "What's in Our Food?" programs, held in nine locations throughout Alabama, featured a discussion of food additives and food safety. These programs, publicized in each area by the local home economists, attracted 670 participants: college students, high school home economics teachers, homemakers, retired persons, and the media.

Attendance ranged from 40 to 140 during the 4-hour programs.

Questions and answers proved to be a valuable part. Since knowledge is key in understanding food additives and food safety, I wanted to answer consumers' questions at length, more than to adhere to a set schedule. Many participants commented that they did not realize the Extension Service offered this kind of information.

Handouts developed for agents to use in followup included material on: food additives, sweeteners, ethylene dibromide, preservatives, caffeine, diet and cancer, food ingredients, food labeling, health and organic foods and vitamin myths. County home economists offered these to the public in newsletters, news articles, radio programs, and exhibits. To date, Alabamians have asked for more than 20,000 of these information shets.

**Cosponsors Program**
Cooking schools always seem to draw large crowds, so Sandra Coffey, DeKalb County home economist, decided to take advantage of this to promote food and fitness. She was asked to cosponsor a night program with the local newspaper and merchants.

Coffey demonstrated recipes and gave information about food preparation to comply with the dietary guidelines, and about food and fitness relationships in general. An exhibit prepared by the state visual arts staff emphasized the idea of eating right and keeping fit at this program.

**Popular Meetings**
Ninety-five percent of all counties in Alabama conducted one or more programs using the food and fitness theme. More than 22,000 men and women attended nearly 800 meetings. Extension Homemaker Clubs were encouraged to adopt Food and Fitness as a project. A program emphasized Food and Fitness at the Alabama Extension Homemaker Clubs' state meeting in Auburn this summer. County leader training programs also used this theme numerous times.

**News Media**
Agents received weekly information packets from Auburn with food and fitness articles, and special packets and information sheets on food safety and food additives from the food and nutrition staff. Counties reported using 467 news articles on food and fitness this year. Forty-two county home economists performed on 550 radio programs or radio spots and 30 television programs were aired on the food and fitness theme. Topics included food additives, diet and cancer, altering recipes for health, nutrition and athletes, and food facts and fallacies.

**Newsletters**
Most county home economists include food and fitness information in their newsletters. Jackie McDonald, Jefferson county agent, started a monthly Food and Fitness Newsletter mailed to more than 1,500 persons. McDonald says, "When the information on Food and Fitness came, especially the packet, there was just so much good information it was difficult to decide what to leave out. Since this was a national program, I wanted to draw attention to it in Birmingham and this is one area people are really interested in."

**Exhibits**
Health fair exhibits were combined with health screening and innovative methods by the county agents to get the food and fitness message across. Anne Church, Lee County agent, dressed like a clown for the theme "Don't Clown Around with Your Health, Eat Right to Keep Fit."

During March of this year we participated in a Food and Nutrition Expo in Birmingham, sponsored by Food World, a local grocery chain. Jefferson and Shelby County home economists, Extension staff and I staffed an exhibit using the Food and Fitness theme.


We handed out information sheets at the exhibit in response to specific questions. With more than 25,000 visitors, our goal was to inform the public about the Alabama Cooperative Extension Service and our wealth of information in the areas of foods, nutrition, and health. We had developed food and fitness information coupons listing 10 publications on this topic, plus information on how to get publications from a local Extension office.

**"Instant" Exhibits**
This exhibit, made available to all counties, has been used at health fairs, county programs such as the one in DeKalb County, and college days. It has gone to many county fairs and to the state fair. Its three 4-by 8-foot panels made it hard to transport, so, six smaller "instant" exhibits were built at state headquarters for loan to the counties. They have been used statewide in a variety of ways. Twenty-five counties built 45 exhibits using the food and fitness theme. More than 110,500 persons have viewed the exhibits at malls, office buildings, senior citizen sites, and fairs.

**Special Activities**
Over 1,000 contacts with new clientele wee made through physical education professionals who had received material on food and fitness from county agents. States Marilee Tankersley, Elmore county agent: "The county school coaches are now using the Extension Service as a resource and were surprised I could offer such information. I was asked to speak on Food and Fitness to all the P.E. classes and the athletic teams."

**Interest Is High**
Elaine Shields, Marengo county agent, reports, "we are currently conducting two 5-week Fitness Dancerobics Programs with a total of 42 people enrolled. A volunteer is serving as the teacher. Interest is so high in these groups, another series is planned."

County agent Gail Regan is working with a local university to teach volunteers to conduct exercise classes. Her series of programs contains an agent's guide, slide sets, suggested exercises, and participant handouts.

Peggy Bracken and Evelyn Waites of Escambia and Covington counties cosponsored a 3-day weight reduction/fitness camp called "Food, Fitness, and Fashion." They emphasized dietary guidelines, exercise, motivation, and appearance. Lifelong commitments to changes in dietary and exercise habits were stressed.

Bracken, a veteran Extension agent, reports, "I have never had a program that was so enthusiastically received! We still have 100-percent participation in the followup program. One woman drives 30 miles each week for these meetings."

**Program Impact**
To measure the impact of our campaign in Alabama, I developed questionnaires for evaluation and sent them to the county home economists at 4-month intervals. We tallied results, which came from 64 of the 67 counties in Alabama. Agent vacancies prevented a 100-percent response rate. The evaluations, requests for more information, and many requests from the media for information on food and fitness show that our campaign was timely and on target. □

# You're Never Too Old For Nutrition!

*Barbara H. Drake*
*County Extension Agent,*
*Home Economics*
*The Ohio State University*

Can Extension assist senior citizens to improve their eating habits? The Geauga County Cooperative Extension Service endeavored to find out during an intensive 9-month educational effort called, "You're Never Too Old For Nutrition."

To educate senior citizens, lessons were wrapped around three major topics: sound nutrition practices; food shopping and preparation; and the importance of a balanced diet.

**Weekly Lessons**
The lessons were conducted once a week, from September 1981 to May 1982, through the Department on Aging's Congregate Meals Program. This program provides noon meals to senior citizens at two locations or "sites" in Geauga County.

The program was open to all citizens in the county. A newsletter describing the program was sent to over 2600 seniors. News releases in local papers welcomed all who were interested.

There is no public transportation in the county. Vans were used to pick up those persons who did not have transportation.

**Pre-Lunch Lesson**
At each meeting, the home economics agent presented the 30-minute nutrition lesson and then a box lunch was served.

The lesson consisted of a short lecture, a food preparation demonstration, a tasting session, and a question-and-answer period. The topics were: You're Never Too Old For Nutrition; Cooking and Shopping For One or Two; Turkey For Two; Blender Beverages; Master Mixes; Bread Snacks; Meatballs; Omelets; and Vegetable Cookery.

**New Ideas**
Each lesson stressed the importance of nutrition to health. Emphasis was on easy food preparation methods for one or two persons.

Fact sheets were given to participants at each lesson. These fact sheets briefly summarized key concepts and provided participants with one or two serving recipes demonstrated in the lesson. News releases and newsletters extended the information to county seniors who could not attend the lessons.

The "You're Never Too Old For Nutrition" programs reached 114 senior citizens with an average of 43 persons attending each lecture/demonstration. To evaluate the program, 20 persons were selected for interviews. The 20 individuals who were willing and available to be interviewed participated in the first two lessons on basic nutrition, food preparation, and shopping, plus three other lessons. The mean age of the sample was 72; 4 were men, 16 were women.

Two nutrition site coordinators and I conducted the interviews in May 1982.

**Change Is Possible**
The interviews revealed that senior citizens can—and do—change their eating habits. Before the sessions, 60 percent (12 persons) of the sample did not consume the recommended two or more servings from the milk group. At interview time, 50 percent of those 12 persons had increased their milk consumption.

Forty-five percent (9 persons) of the sample stated that, before the sessions they ate less than the recommended two servings per day from the meat group. At interview time, 22 percent of these individuals had increased protein consumption.

Before the nutrition program, 40 percent (8 persons) of the sample did not eat a vitamin A rich fruit or vegetable each day. After the sessions, 50 percent had increased their consumption of vitamin A rich fruits and vegetables.

**Ready for Something New**
Senior citizens are also ready to try new recipes and new foods. Nineteen of the 20 persons interviewed had prepared at least one of the foods demonstrated at the lessons.

Comments from those interviewed also revealed that senior citizens are receptive to new ideas and willing to change. Eighty-three percent of those sampled said the nutrition programs were worthwhile.

**Some Implications**
Those sampled did improve their nutrition practices, especially as they relate to milk and vitamin A rich fruits and vegetables. These senior citizens were willing to try new recipes and food preparation methods. They were enthusiastic and receptive to the program.

Home economics agents may need to take a close look at the dietary problems of senior citizens within their communities. It was determined that the great majority of the sample of Geauga County seniors were not eating adequate servings from the bread and cereal group. Additional education will need to be conducted on this subject.

This program demonstrated that Extension does have a role in assisting senior citizens in improving their eating habits. □

# Adult Sitters Available

*Diane G. Smathers*
*Extension State Program Leader, Human Environment*
*The University of Georgia, Athens*

Two priority issues identified in Extension Service are Family Strengths and Social Environment, and Family Economics Stability and Security. Georgia's Adult Sitter program is addressing both issues by providing respite care for citizens, particularly the elderly, and a source of income for "sitters," primarily older persons on low or fixed salaries.

**County Need Realized**
The need for an adult sitter program surfaced when Douglas County Extension Home Economist Joan Douglas met with county hospital personnel in May 1981 to discuss the problem of hospital overcrowding. Many hospital beds were occupied by convalescing elderly who could return to their home only if they had someone to look after them. Douglas has heard of a program called *Adult Sitter,* developed by Texas Extension in the late 1970's. State Program Leader Diane Smathers subsequently contacted Judy Warren, Texas family life education-aging specialist, and asked her to share their materials. Using the Texas program as a guide, Douglas and Smathers along with the educational director at the Douglas General Hospital planned the first Adult Sitter program in Georgia.

**Program Outline**
Georgia's Adult Sitter program consists of a 3-day clinic, offering approximately 20 hours of instruction. Participants learn:

- Human relationship skills (5 hours);
- Physical care of the patient (9 hours);
- Home management skills (2 hours); and
- Role and responsibilities (3 hours).

County home economists and local health care personnel provide most of the instruction while ministers, social workers, attorneys, recreation specialists, pharmacists, and others serve as resource persons.

Due to the technical medical information presented, cosponsorship by the county hospital, a visiting nurse association, a vocational nursing school, or other medical staff is essential.

**Growing Trend**
Since the pilot effort in Douglas County, eight counties have conducted 12 clinics. Over 250 persons have been trained as "Adult Sitters." An additional 43 Georgia counties have requested the program. Because of the increased demand, Extension has prepared a training manual, *Adult Sitter Clinic Workbook,* to provide agents with step-by-step instructions on conducting a clinic.

**Adult Sitter Defined**
An adult sitter is a companion or caretaker who provides care, on a short-term basis, for a person unable to function independently. Adult sitters assist families in caring for their dependent members, particularly the elderly. Sitters are paid, nonprofessional individuals who offer respite care in homes, nursing homes, and hospitals.

Many sitters are older persons living on fixed incomes, and/or in need of employment. For this reason, the objectives of Georgia's Adult Sitter program are threefold:

(1) to teach skills and techniques that help mature adults become effective sitters;

(2) to offer an opportunity to persons in need of employment; and

(3) to respond to a social need by cooperatively providing a source of assistance to families and the community.

**Participants' Profile**
Participants who complete the clinic are tested and awarded a Certificate of Completion. Many request their names be made available to persons who may wish to hire them.

A 6-month followup evaluation indicates that over half of the clinic participants are actively working as a sitter either full- or part-time or are caring for a family member or friend. Of these persons, over 25 percent list adult sitting as their sole source of income.

Seventy percent of all participants had never before attended an Extension activity. In an attempt to keep in touch with participants, Georgia has started a quarterly newsletter, *The Helping Hand.*

**Extension's Responsibility**
Georgia Extension home economists are excited about this program and believe it to be one that will assist families and the community. As the population continues to grow older, the care and support of our elderly become a major concern. No longer can we expect families or government agencies to assume lone responsibility for the Nation's older generations. It is imperative that the family, the community, and our government team together to address this priority issue. As the Adult Sitter program has demonstrated in Georgia, Extension Service can facilitate such an effort. □

# The Home-And-Work Balancing Act

*Rosemary Good*
*Extension Nutrition Education Specialist*

*Joseph A. Weber*
*Extension Human Development Specialist*

*Donna Cadwalader*
*Extension Leadership Development Specialist*
*Oklahoma State University, Stillwater*

Work and family commitments of employed persons make it more and more essential for educational programs to reach them at their work site. Further, employers are increasingly interested in meeting employees' educational and personal needs related to work performance. They are also more aware than before of how life stresses affect employees' satisfaction, work performance, and absenteeism rate.

In Oklahoma, the fastest growing segment of the work force is mothers of children under 18. Generally, husband and wife are employed outside the home. Dual-career couples with children under 18 constitute over half of Oklahoma families. About 20 percent of households with children are headed by only one adult.

**Balancing Home and Work**

Oklahoma State University Cooperative Extension Service developed and pilot tested an educational program to help employed men and women balance their work and home demands. We used a seminar format to help employees learn skills and insights to:

- Reduce job stress associated with home and work concerns.
- Have a channel of communication within the company.

Seminars were planned to benefit the employer by promoting a supportive atmosphere among employees, reducing absenteeism, and increasing productivity, and creating a sense of loyalty toward the company.

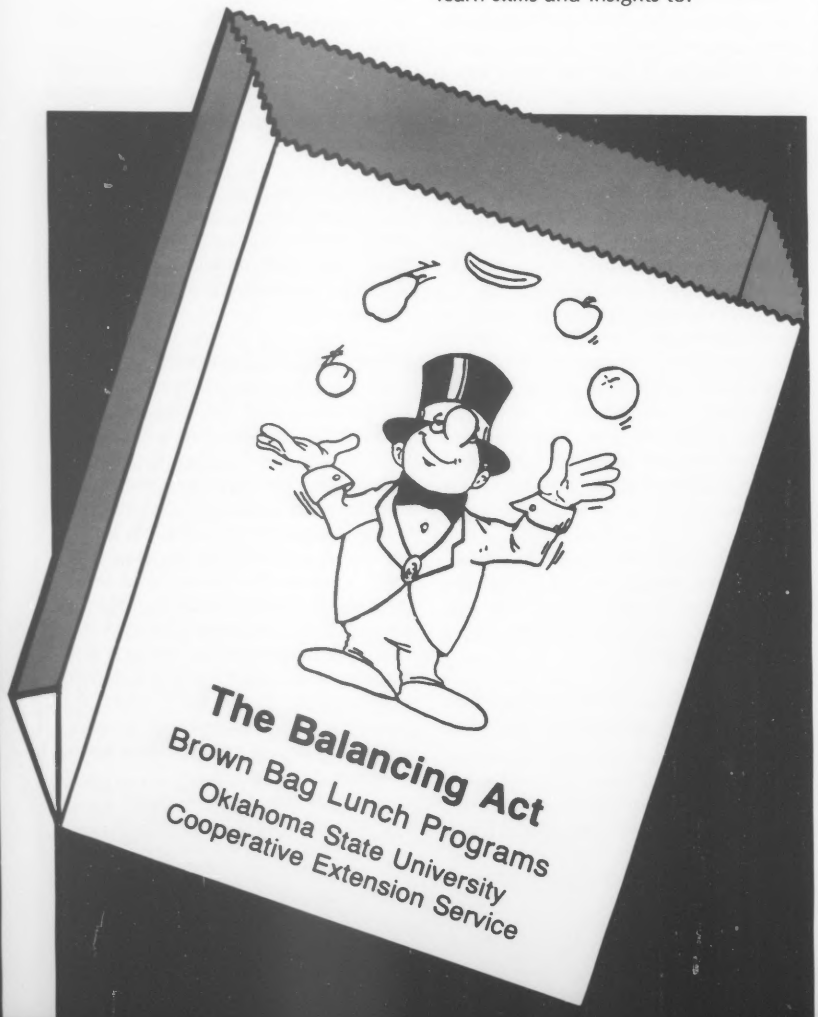
With these goals in mind, the developmental team worked with an advisory committee of employers; home economists in research, Extension, and business; and representatives from labor. This advisory committee generated ideas and critiqued proposals for seminar topics.

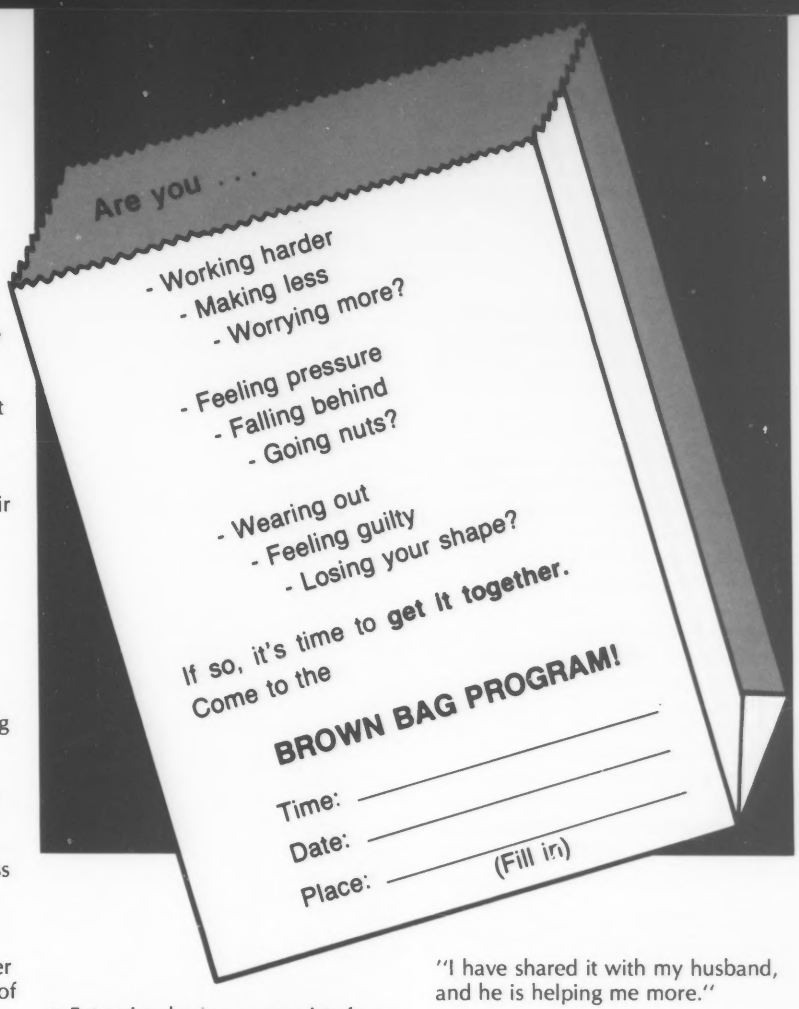
**Survey**

To determine needs of the target audience and topics for the seminars, the team surveyed various types of employees. High-ranking topics included time, stress, and money management; child rearing; nutrition and fitness; fast food preparation; feeling good physically and emotionally; housework; and dressing for the job.

We establish a time and task table to develop materials, test the content, deliver the material, and evaluate it. State home economics specialists with responsibility for the selected topics were asked to develop a series of three to five 15- to 30 minute sessions. Six county Extension home economists became part of the pilot test, based on county location, size, industry, economic base, and willingness to participate.

The home economists received promotional guidelines and materials including seminar posters, brochures, and flyers, seminar outlines, transparencies, scripts, and evaluation.






**The Seminars**
The seminars were offered under the title of "The Balancing Act—Home and Work." A logo and magician character were designed to represent each of eight topics. The seminars, generally consisting of three to five sessions for each topic, were held weekly. To tailor the program to their needs, managers of the worksites chose from the following seminar topics:

How to Be Fit, Not Fat; The Time and Stress Connection; Feeling Good; Meals In Minutes; Raising your Kids; Dollars and Sense; The Home and Work Hassle; and Making Your Wardrobe Work.

The "Balancing Act" seminars were presented as luncheon programs in six counties in the fall of 1983. We reached 5,800 employees in business and industry groups, including the Oklahoma City Western Electric Company and the Oklahoma City Library, a local courthouse, Chamber of Commerce, YWCA, Department of Human Services, Business and Professional Women's group, and a radio station.

**Useful for Workers and Employers**
The overall reception of the pilot project was extremely positive. One Extension home economist claims it was "the best thing Extension has come up with in 20 years."

**Advantages:**

- Sessions were well received by participants.
- Participants found information useful and helpful.
- New audiences were reached which had not received educational programs before from Cooperative Extension Service.
- Extension-related materials went to new audiences.
- Extension home economists from the six pilot counties support the program and recommended that it be made available to all 77 counties in Oklahoma.

**Limitations:**

- Management may be hesitant about accepting such a program.
- Home economists need more training in marketing and promotional skills.
- Displays may be more effective in reaching a large number of employees in large businesses or industries.

**Implications for Extension**
Cooperative Extension can provide a link between home and work. Comments made by participants indicate implications:

"I have shared it with my husband, and he is helping me more."

"Anything that makes things quicker and easier I like."

"Well presented, good program; the need is great."

"I would like to see some discussion from people who are experiencing parent-child conflicts. It would be helpful to see how they are coping with these specific problems."

**Future Plans**
Next, we will incorporate changes and duplicate, and distribute the program statewide. Home economists will receive training in ways to market and conduct the "Balancing Act" program.

Obtaining evaluation from employees and employers will be part of the home economist's commitment in using the program. □

# Dining At The Nutrition Café

*Jerry H. Reyburn*
*4-H Youth Extension Specialist*
*The Pennsylvania State University, University Park*

At the Nutrition Café, diners select nutritious foods not just for one meal, but for an entire day. And they have a choice of four menus.

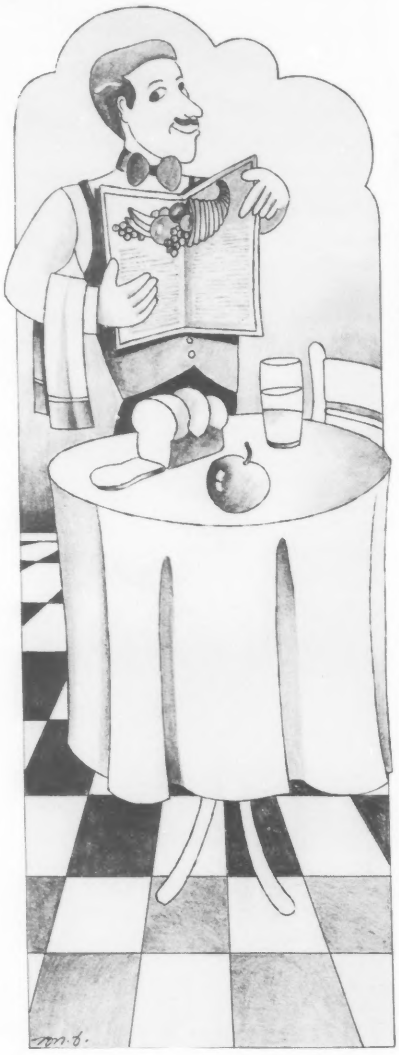
The Café isn't a real restaurant, however, and diners don't eat the foods they choose. The Nutrition Café is an exhibit used at fairs and other events throughout Pennsylvania to promote good nutrition through precise meal planning.

**How the Exhibit Works**
The Nutrition Café is quite simple. Extension staff set up four tables, each displaying a full day's menu—breakfast, lunch, dinner, and snack. Centered on each table is a number, from one to four, along with a printed menu of the foods. The audience studies the four menus, then ranks them from the most nutritious to the least.

A person dressed as a waiter or waitress answers nutrition-related questions from the audience and coaches them in how to rank the menus correctly. In some cases, a "maitre d'hotel," dressed in a tuxedo, is available to add style and to answer questions as well.

Pennsylvania tailors the Café for different age groups by simply changing the food items or quantities, such as the amount of milk or green leafy vegetables. Also, caloric and cholesterol levels can be adjusted as needed.

**First Impressions**
Upon entering the Café, most people see four tables set with delicious foods, but completely uncovered. Often they say, "Hey, that's not sanitary. How does the health board let you get away with this?" At first people don't notice that most of the food is fake. In an outdoor area, the only thing that seems strange to some is that there are no flies.



They tentatively poke the mashed potatoes, then pick up the hot dog and bend it. "Hey, this food is rubber!" They usually grab the pork chop by the bone and rap it on the table a couple times.

Some real foods are used. Raisins and peanuts are used for snacks, and corn flakes are used for breakfast. Real milk is not used. Instead, empty cartons are marked with different colors—green for skim milk and blue for whole milk.

**Outgrowth of Fitness Programs**
The Nutrition Café is an outgrowth of the Pennsylvania 4-H Fitness program, a part of the health project. Previously the health project lacked the glamour of the beef and horse projects with their show rings, and the fashion revue with its stage. Then, 14 years ago, 4-H added some excitement by implementing a modified track meet, featuring distance running, sprints, sit-ups, pull-ups, and team relays.

Since peak performance requires precise meal planning, Extension added nutrition. 4-H presents menus to participants in a simple paper-and-pencil quiz in sets of four, just like in livestock judging where a pen of four animals of the same species is standard. Scores are even decided with a livestock slide rule.

Originally 4-H wanted a worthwhile project for young people without added expense—a project that requires only time and energy. One goal is to mainstream 4-H health youth into 4-H judging with the nutrition menus. Another goal is to teach youth cooperation through the team relay competition while, at the same time, pushing them farther than they think they can go in distance running.

Today, the Nutrition Café is similar to a model of the paper-and-pencil nutrition quizzes directed at youth in the 4-H Fitness program. The difference is that Pennsylvania's Nutrition Café is spreading nutrition information to adults as well as to 4-H youth. □

# Extension Agent—A Media Regular

*Jacqueline McGrath*
*Extension Editor*
***In Touch***
Bi-monthly Tabloid
College of Resource Development
University of Rhode Island, Kingston

Some Extension agents will admit privately that they are intimidated by the lights and equipment of the broadcast media. Even the harmless spongy microphone that looms before them in a one-on-one radio interview is regarded as menacing enough, they say, to dry a salivated throat.

But if broadcast jitters are common, they aren't shared by Linda Sebelia, a nutritionist with the University of Rhode Island Cooperative Extension. Sebelia acknowledges that she feels comfortable on either side of the mike in an interview situation. And it's evident that her relaxed confidence appeals to media programmers; she regularly appears on Rhode Island's major TV stations, and, for the past 2 years, has conducted her own award-winning radio show, presently carried by 13 stations in southern New England.

**Radio Show Hostess**

The radio show, "Today in Health," is heard daily by an estimated 600,000 listeners. A cooperative venture between the University of Rhode Island and Brown University, the program varies its focus from general family health to specific medical problems. The topics Sebelia discusses with guest professionals from both universities may range from new treatments for cardiac disease to the latest dental health findings to the social and medical implications of aging in America. Invariably, the emphasis is on nutrition.

All of the subjects, Sebelia says, supplement her professional interests. A registered dietitian, her current assignment for Extension is to coordinate the Expanded Food and Nutrition Educational Program (EFNEP) for Rhode Island's low income families.

Once a week in the photo and television services studio at the university, the 10-year Extension veteran tapes five 2½-minute radio segments for regional syndication. She also prepares five 60-second segments for station preferring a shorter format.

Last year, Sebelia traveled to Washington, D.C., to accept an award for public affairs programming in a radio competition sponsored by the Association of American Medical Colleges.

**TV Nutritionist**

On a monthly basis, the Extension specialist does nutrition spots on subjects of her choice for WJAR-TV's (Providence) noon news.

Occasionally, on the station's evening news she is asked to report on, let's say, health food store products or what football players should eat. Her television services are not exclusively WJAR's; other Rhode Island stations, she says, request her appearance on the tube three or four times a year.

Recently, Sebelia took on an extra job as resident nutritionist for the monthly television show, "These Are The Days," a program for senior citizens. Here, she talks about what the elderly should eat and demonstrates how to prepare appealing, nutritional recipes.

Sebelia laughs when she recalls her "brash beginning" with Extension. "I was a home economics agent in northern Rhode Island for about 1 month when I wrote to local TV talk show hostess Sarah Wye suggesting that she have me on her show." Wye like the idea and, apparently, other programmers liked what they saw. Shortly after that, the Extension staffer began appearing with other broadcast media reporters in spot interviews.

**Print Media Contributor**

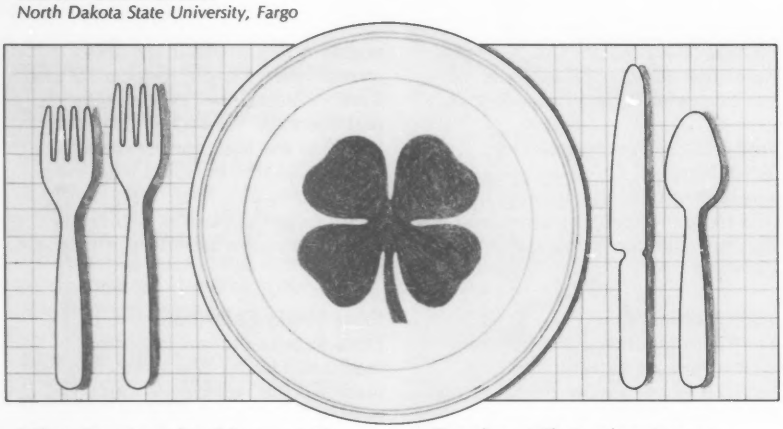
Does Sebelia eschew the print medium? Hardly. She writes two columns for the *Providence Journal's* weekly food section, which boasts a circulation of 225,000. One column, called "Crop of the Week" highlights native foods and vegetables in season and is done in cooperation with the Rhode Island Division of Agriculture and Marketing. The other piece briefly discusses low-calorie cooking and features a day's meal plan.

Sebelia is also a contributor to *In Touch*, a bi-monthly informational tabloid for the general public published by University of Rhode Island's Resource Development. And in her spare time? Sebelia is putting the finishing touches on a vegetable cookbook. □

***During a radio interview, taped at the University of Rhode Island, Linda Sebelia (right), Extension agent and EFNEP coordinator, discusses diabetes with Marjorie Caldwell of the university's food science department.***

# 4-H Food and Nutrition Guidelines Available

*Sharon D. Anderson*
*Extension District Director*
*North Dakota State University, Fargo*



What direction should your 4-H Food and Nutrition Program go? Where are the strengths and voids in your projects and activities?

A new publication, "The Changing Food Scene—4-H Food and Nutrition Guidelines," is available to help state and county Extension staffs evaluate their present programs and set priority areas for the future.

Planning for "The Changing Food Scene" began in 1980 when the deputy administrator for 4-H and youth, Extension Service, USDA, appointed a National 4-H Food and Nutrition Committee to study the food and nutrition curriculum area and offer guidelines to better manage program directions. Food and nutrition is one of the most popular project areas for 4-H youth, so the assignment was considered high priority.

The curriculum guidelines are based on the following six goals identified by the committee:

4-H Members will:

- Take responsibility for making healthful food choices and establish a fitness plan based on the knowledge of one's nutritional needs, lifestyle, and physical condition;
- Develop skills in planning, selecting, preparing, serving, and storing food;
- Gain Knowledge and understanding of psychological, social, economic, and cultural influences of food choices;
- Recognize how national and worldwide policies relate to: food availability, personal food choices, and nutritional status of populations;
- Acquire knowledge and skills of career opportunities in food and nutrition; and
- Gain personal development skills for benefit of self and others.

Eleven component areas in the guidelines provide an overview of subject-matter and personal development needs of youth. These components are: Daily Food Needs, Nutrition and Fitness, Food Experiences, Science Whys, Food Preservation, Food Safety, Food Economics and Consumer Education, Ecology of Food and Eating, Food Issues, Life Skills, and Careers. Each component identifies objectives for 4-H'ers; major concepts that should be taught; specific behavioral outcomes; and examples of learning experiences for beginning, intermediate, and advanced levels.

**How Can the Guide Be Used?**
"The Changing Food Scene" is designed to be used by state and county Extension staff with advisory councils, development committees, support groups, and leaders. By studying the guidelines and comparing them with the present program, future direction can be planned. Or, staff may want to take one concept area and determine all the ways that concept can be a part of their food and nutrition program. The guidelines can be used in a brainstorming session with leaders to add new life to a program. The guide can also be a means for justifying program directions and time spent in food and nutrition. "The Changing Food Scene" offers suggestions, but allows for flexibility on the part of the user.

**Training Session Planned**
Would you like to know more about the *4-H Food and Nutrition Curriculum Guide*? A special staff development and training session is planned at the National 4-H Center, September 10-14, 1984, to acquaint staff with the guidelines and provide other nutrition updates. States are encouraged to send teams of 4-H staff, nutritionists, and others to the session. Copies of the guidelines have been distributed to state 4-H offices.

Members of the national committee who developed the guidelines are Bernadine Alexander, Hawaii; Caroline Anderson, Mississippi; Joanne Ikeda, California; Martha Mapes, New York; James Marquand (retired), Ohio; Jeanne Nolan, Missouri; Michael Tate, Michigan; and Sharon Anderson, North Dakota. Jean Cogburn of the National 4-H Council and Evelyn Johnson (retired) and Eleanor Wilson, both of USDA, coordinated and advised the committee. □

# 1984 Food and Fitness Essay Contest Winners

Three national first-place winners, ages 13 to 18, of the 1984 Food and Fitness Essay Contest sponsored by the Extension Service, received their awards at the Food and Fitness Fair in Washington, D.C. on August 16. All wrote 500-word essays on the theme "Food: America's Growth Industry."

The three national first-place winners were awarded a trophy, a $200 U.S. Savings Bond (provided by Mid-American Dairymen, Inc.) and a trip to Washington, D.C.

At the Fair's opening ceremony, Secretary of Agriculture John R. Block personally congratulated them. Thirty-one states had submitted essays for national judging. Local, county, and state winners were also chosen.

Judges of the essay contest selected the first-place winners after evaluating entries based on originality, accuracy, style, and content. The judges represented such agricultural organizations as the American Farm Bureau Federation, Future Farmers of America, and the National 4-H Foundation.

National winners are: (13-14 year age bracket) first place, Lydia Bevin, Shelburne, New Hampshire, second place, Melinda Johnson, Monticello, Utah, and third place, Barclay Black, Sylvania, Georgia; (15-16 year age bracket) first place, Timothy Carter, Seymour, Indiana, second place, Mary K. Lewis, Highland, Illinois, and third place, Drene Williams, South Carolina; (17-18 year age bracket) first place, Janet Fisher, Mount Carmel, Illinois, second place, Carter Clay, Carrollton, Georgia, and third place, Richard Buchholz, Waverly, Iowa.

In the 13-14 year age bracket, first place winner Lydia Bevin states in her essay, "America's expanding and successful food industry is a shining example of what freedom can do. If this message could be made plain to other countries of the world as well, our food industry would be performing another wonderful service indeed."

In the 15-16 year age bracket, first place winner Timothy Carter wrote: "Americans are extremely intelligent. They have learned to breed, raise, and feed animals so they give more milk and produce healthier meat. Humans enrich their lands to render them more productive. They are transforming empty wastelands into farmlands."

In the 17-18 year age bracket, first place winner Janet Fisher concludes: "As the earth's population grows even the vast food-growing potential of the United States wouldn't be able to assume the burden of feeding billions of hungry people. America's farms are a source of power, a means to profit, and a weapon for peace. We must consider the best and wisest ways to use this power to prompt development in other nations, to encourage cooperation, and discourage aggression."

**The Fair On The Mall**

The Food and Fitness Fair, held on the Mall in Washington, D.C. from August 16-18, drew thousands of interested spectators. The Fair was jointly sponsored by USDA and the President's Council on Physical Fitness and Sports.

On opening day, Secretary Block made award presentations for the Extension Essay Contest, described above, and a FSIS Poster Contest. Seven Cooperative Extension exhibits were included at the Fair on the Mall and the states offered many interesting exhibits on the importance of physical fitness and facts about proper nutrition.

A highlight of the Fair was the State Tent which featured exhibits by the following: Purdue University; University of Maryland; Michigan State University; University of Nevada; Oklahoma State University; West Virginia University; the Washington, D.C. Metropolitan Extension Council, and 4-H'ers Freddy Frog.

***At the Food and Fitness Fair on the Mall in Washington, D.C., Secretary of Agriculture John R. Block congratulates the three national first-place winners of the 1984 Food and Fitness Essay Contest. Proud of their achievement as essayists are Lydia Bevin, Timothy Carter, and Janet Fisher.***

# * Food and Fitness Footnotes

## Food and Fitness Activities in Oklahoma

Oklahoma jazzed up their food and fitness activities with a "Jazzercise" session in front of the state capitol. Agriculture representatives, state capitol employees, Extension personnel, and several local celebrities exercised to music in sweltering 90 degree temperature to kick off the state's food and fitness campaign. A few brows were wet after the hour-long workout.

Two television stations covered the event, held in August 1983. Governor Nigh signed a proclamation declaring August 1983 to August 1984 "Food and Fitness Year" in Oklahoma. State food and fitness campaign leader Rosemary Good distributed Extension materials and discussed the role of proper diet.

Oklahoma has enthusiastically responded to the campaign, according to Good. Among activities at the state level, Extension provided food and fitness kits to counties, and the Oklahoma Department of Agriculture in cooperation with Extension Home Economics built a food and fitness exhibit, which was used at two state fairs.

Oklahoma also participated in the video-teleconference sponsored by Sunkist, "Uplink to Food and Fitness," and prepared news releases, radio spots, and a five-part television series.

The television spots, each 1½-minutes long, focused on nutrition and fitness during infancy, preschool, adolescence, adulthood, and later years. Three local television stations aired the spots in the morning and at noon.


County food and fitness activities were numerous and included the following:

- Weigh Off, a 12-week, weight-loss program held in 14 counties;
- Exercise classes, some geared to older citizens, conducted by eight county home economists;
- Special programs on sports nutrition, exercise, dietary guidelines, fad diets, nutritious snacks, and related topics presented for youth, adults, civic groups, and senior citizens; and
- A Food and Fitness Awareness Day held at Langston University. President-elect of the American Dietetic Association, Donna Watson, State Department of Agriculture Marketing Development Coordinator, and aerobic instructors were featured speakers. □

*Rosemary Good*
*Extension Nutrition Education Specialist*
*Oklahoma State University, Stillwater*

## Video-teleconference— An Uplink to Food and Fitness

Extension Service-USDA helped developed the first international video-teleconference "Uplink to Food and Fitness" sponsored by Sunkist Growers, Inc. Forty sites nationwide participated in the March 1984 video-teleconference, many of them with Cooperative Extension site coordinators. Audience included dietitians, nutritionists, coaches, health care and public health professionals, Extension home economists, news media, supermarket personnel, and other interested groups—more than 5,000 strong—participated in the video-teleconference. □

*Ava D. Rodgers*
*Deputy Administrator*
*Home Economics and Human Nutrition*
*Extension Service, USDA*

## It's Your Move— To Better Nutrition

A teenager's fast-paced lifestyle may place a low priority on good nutrition. A skipped breakfast; hamburger, fries, and a soft drink for lunch; and just snack-type foods for dinner won't provide an active teen with all the vitamins and minerals he or she needs.

Given the necessary education, teens can improve their diets by improving their choices and decisions about food. This is particularly important today as more and more teenagers are involved in selecting and preparing foods for themselves, their friends, and their families.

In New York, a new 4-H program, "It's Your Move! 4-H Teen Nutrition Education Program," offers youth food and nutrition experiences a med at helping them make informed food choices. The 4-H program is gea ed to help 13- to 19-year-olds identify their attitudes and beliefs toward food and evaluate their practices while providing them ways to bring about change, if change is needed.

"It's Your Move!" consists of the following seven units:

- Values and Food, Introductory Unit
- Culture and Food
- Advertising and Food
- Body Image, Exercise, and Food
- Farm Production and Food
- Pregnancy and Food
- Alcohol and Food

Developed in 1982, the program has already been introduced in almost every New York county to Extension home economics and 4-H agents, Expanded Food and Nutrition Education Program (EFNEP) aides, 4-H paraprofessionals and volunteer leaders, and, in a few counties, to junior-high and high-school home economics teachers. The program is being conducted through EFNEP, 4-H clubs, schools, and other local community groups. Also, upon invitation, New York introduced the program to South Dakota state and county EFNEP and 4-H staff this past spring.

**Accomplishment**

Nutrition education is the primary goal of "It's Your Move!"; however, the program does more than educate teens about selecting nutritious foods. According to one 4-H leader, "the activities allow teens to come up with their own answers and conclusions, thus making the learning experience more powerful." Along with cultivating sensible eating habits, teens learn to manage their resources, develop leadership skills, work cooperatively with one another, and build positive self-concepts.

"It's Your Move!" is available from Cornell Extension in notebook form. Each of the seven units contain a leader's guide, fact sheets and/or information booklets, evaluation forms and handout materials in camera ready copy. □

*Susan E. Travis*
*Extension Nutritionist*
*Division of Nutritional Sciences*
*Cornell University, New York*

## Health Information As Near As Your Phone

Arizona's "Instant Health Info" dial access program offers up-to-date information on weight reduction, depression, diabetes, sex education, and other health topics. Information is primarily prevention oriented, emphasizing the individual's responsibility.

Arizona is averaging 3,200 calls a month—two-thirds from rural areas.

Funding for the program is provided by the Flinn Foundation and the Arizona Department of Health Services.

For more information, call 602-621-3346. □

*Bernice Epstein*
*Extension Specialist, Health and Safety*
*University of Arizona, Tucson*

## Cross-Country Run Against Cancer

Running 3,000 miles is ambitious even for the most ardent jogger; but to one 20-year-old 4-H alumni, this goal means more than just athletic achievement.

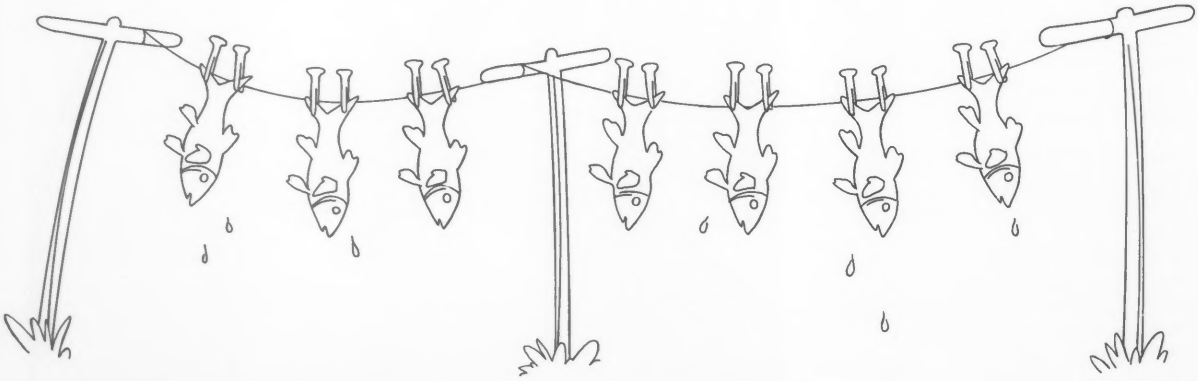
Gary Aramini of Chester, New Hampshire, was deeply touched by the early death of a friend, Bill Clay, who died of cancer. To draw attention to the need for cancer research, Aramini set out to run, cross-country, from California to New Hampshire—a total of 3,000 miles.

In doing so, he hopes to raise $100,000 for cancer research. Aramini is asking people to pledge what they can for each mile he runs or to make a flat contribution to the Billy Clay Fund for the benefit of the Dana-Farber Cancer Research Institute.

Aramini began the benefit run from San Francisco on May 3. Running about 40 miles a day, he expects to reach New Hampshire the middle of August. Aramini is meeting the people of our country along the way and finding that to be a very moving experience, according to Extension agent Lynn Garland.

Several radio and television stations in Derry, New hampshire, and in Boston, Massachusetts, as well as the *Union Leader* newspaper in Manchester, New Hampshire, are covering Aramini's trek across country. Also, as a sign of support, 4-H'ers and other youth in Chester have tied red ribbons, symbolizing courage, on their mail boxes.

Aramini was previously active in the Chester Cattle Corners 4-H Club raising dairy animals, poultry, and a bountiful garden.



## Sending Fish to the Cleaners

A new fish washing process that can extend the shelf life of fish could be available to Virginia's seafood processors by next year.

"Normally, fresh fish has a shelf life of 4 to 6 days, depending on the species," says George Flick, Virginia Tech Extension food scientist. But the new fish washer can extend this period to 12 to 17 days. This could mean new markets and more profits for Virginia seafood processors, who seek to tap the Midwest as a greater outlet for fish.

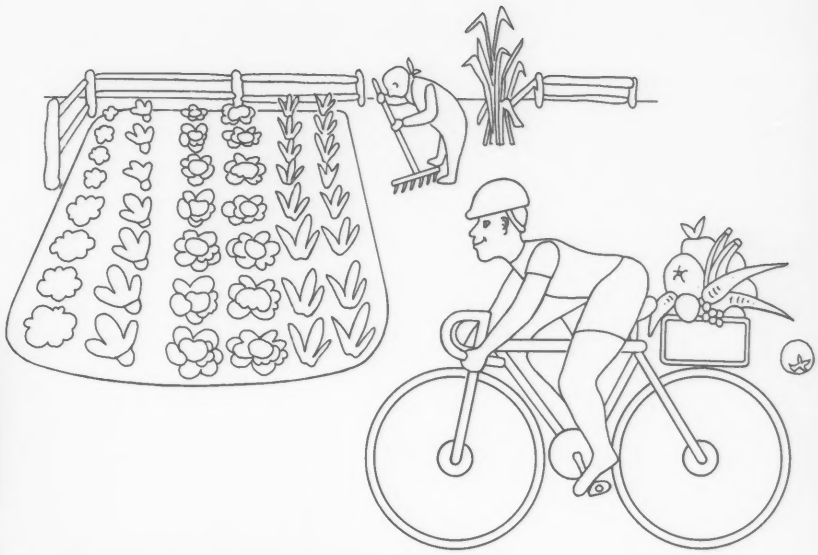
"If a processor now gets a markup of 17 percent, he or she should be able to get at least an additional 3 percent for a longer-life product. That means the firm's profits would go up by at least $200,000," Flick said. □

*George Flick*
*Extension Food Scientist*
*Virginia Polytechnic and State University, Blacksburg*

"...Aramini is giving of himself to help others in the best of the 4-H tradition," says Garland. "We look forward to having Gary tell his story of the trip to 4-H members and families once he's home." □

*Lynn B. Garland*
*County Extension Agent, 4-H*
*University of New Hampshire*

***Gary Aramini begins his gallant San Francisco to New Hampshire cross-country run to raise money for cancer research.***



## Cooperative Gardening Project

In a cooperative project involving Extension at the University of California, Orange County, and GLAD Wrap and Bags, 22 families are growing their own vegetables on a single piece of land.

Orange County is providing the water and the land adjacent to the Cooperative Extension office in Anaheim. GLAD Wrap and Bags is giving a grant to cover start-up costs for purchase of garden equipment, seeds, and supplies. 4-H is providing a volunteer and staff to coordinate development of the garden. "Of the 22 families planting gardens," says Dorothy A. Wenck, director of CE for Orange County, "all but one are enrolled in the Expanded Nutrition Education Program (EFNEP) for youths and adults.

"The purpose of this Extension program is to help low income families," she says, "particularly those with young children, improve their diets, understand nutrition, prepare and preserve food safely and grow their own food."

Terry Daubert, a horticulture student at Fullerton College, is the 4-H volunteer coordinator of the garden project aided by EFNEP 4-H staff members.

"Typical of 4-H projects, which are family oriented," notes Wenck, "the gardeners include fathers, mothers, children, and even grandparents." □

*Forrest D. Cress*
*Extension Communications Specialist*
*University of California, Riverside*

CORRECTION: The name of Tal C. DuVall, Director, Cooperative Extension Service, The University of Georgia, was misspelled in the article, "Computerizing The Peach State" in the Spring 1984 issue of *Extension Review.*

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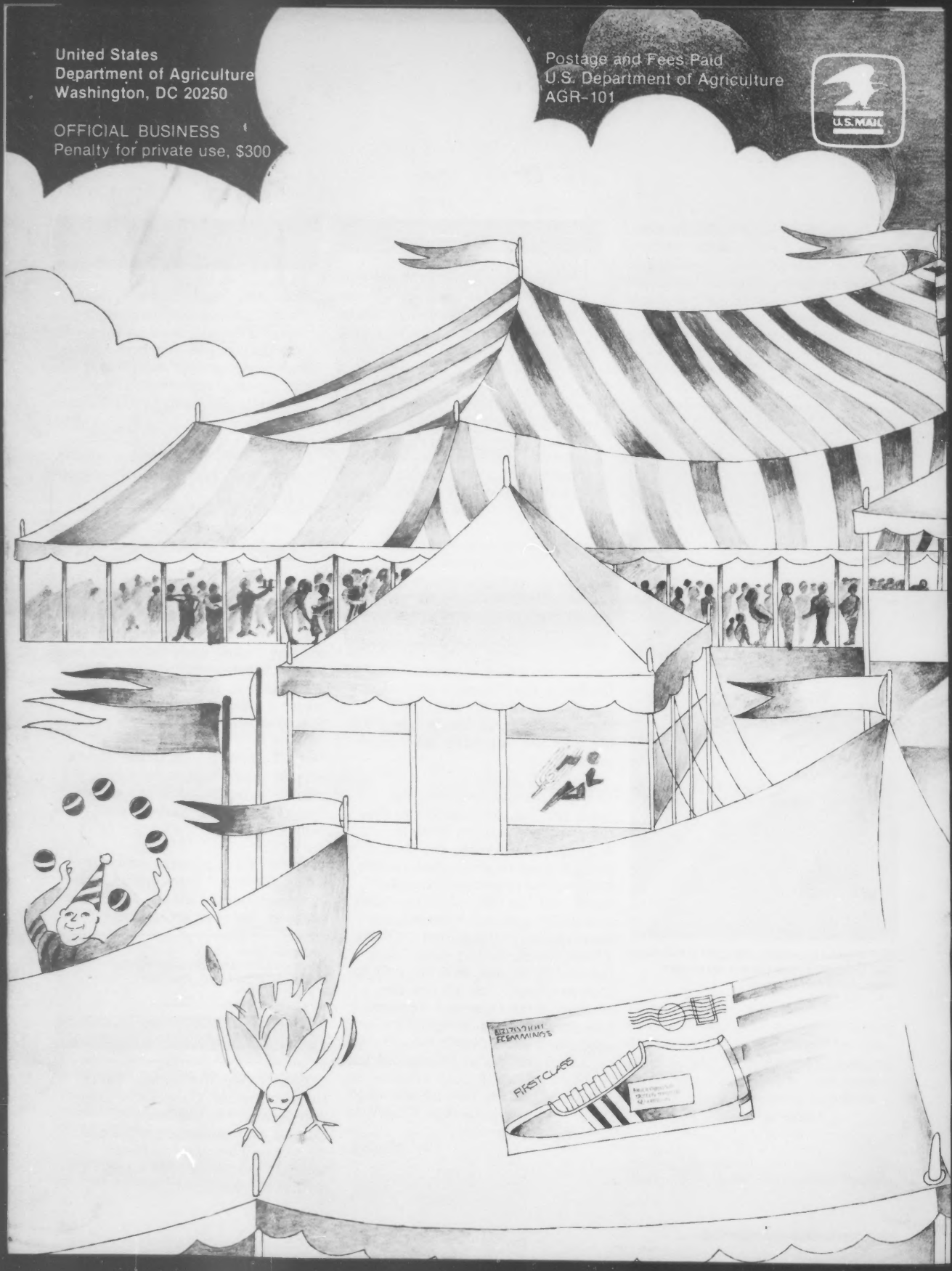
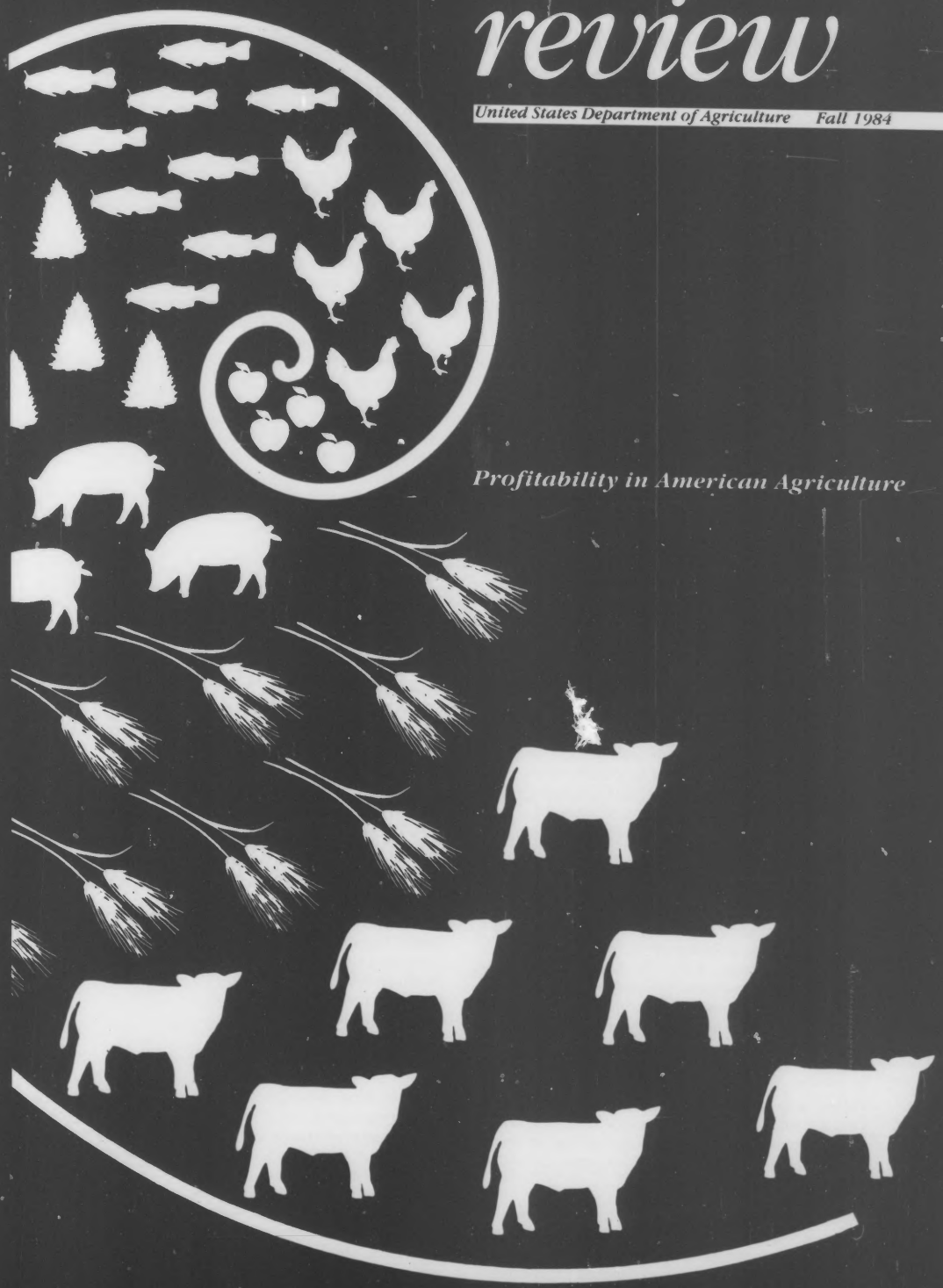


# extension review

United States Department of Agriculture Fall 1984



*Profitability in American Agriculture*

# Profitability For American Agriculture



What is the future for U.S. agriculture? What will make and keep it profitable?

It is the belief of the Cooperative Extension System, as well as of industry, that, while being sorely tried and severely tested, most farmers *can* continue to farm. But those who are not now efficient managers of production, financial, and marketing risks must become such or lose their operations.

**Cattle Picture**
Burton Eller, vice president for governmental affairs, National Cattlemen's Association, one of several agriculturalists interviewed for this editorial, describes the past 10 years as tough for cattle producers. He points out that "agriculture, unlike the rest of the U.S. economy, has not been experiencing recovery. Further, agriculture, as a basic industry, cannot pass on the costs of high interest rates to others but must absorb them."

John Adams, director, milk regulatory and animal health affairs, for the National Milk Producers Federation, reports that "Milk producers see several question marks on the horizon. Overall milk output is coming down due to the diversion program, but low prices and high interest rates remain a problem."

**Extension Role Critical**
The Cooperative Extension system, already deeply involved in work with farm operators, is emphasizing marketing and financial management decisionmaking along with management of production. We are increasing emphasis on integrating research and education resources to provide useful decisionmaking models for farmers and ranchers.

What will improve future profitability for the cattle producer? Burton Eller hopes for higher, sustained market prices, lower interest rates, and increased demand including more exports. Producers need to improve their financial management and business skills. The holistic production-marketing-management system approach of Extension, Eller believes, can help to head off the dangers inherent in the traditional method of trying individual new techniques as they come along.

What will help the situation for the dairy producer? John Adams believes that restoring our export market, increasing domestic use of dairy products, and greater use of cooperatives will all improve conditions.

U.S. farmers and ranchers currently receive separate pieces of information from many public and private sources. But the complexity of information available and the expanding capabilities of electronic technology to process data must be integrated at the operating level. Farmers and ranchers stand to gain more from effective decisionmaking when combining knowledge and technologies themselves.

**Conserving The Soil**
How can farmers earn a profitable living and practice soil conservation at the same time? Milton E. "Bud" Mekelburg, president of the National Association of Conservation Districts, responds: "Short-term economic conditions, caused by embargoes, high interest rates, value of the U.S. dollar, and declining land values, are causing severe economic stress in the farm sector. Some producers cannot, because of up-front costs, practice the more long-term conservation measures, such as shelter belts or terracing."

"In fact, in the long term, unless conservation is practiced, no farming will remain profitable," he concludes.

**Developments In Wheat**
What changes in agriculture may be over the horizon? Jerry Rees, senior vice president, National Association of Wheat Growers, believes "a revolution in wheat production practices will be spurred by new technology and changing economic realities. Faced with low wheat prices, static or reduced farmland prices, and high interest rates, the successful wheat producer of tomorrow will seek every available tool to reduce production costs. One way is by increasing yields and reducing input costs per bushel."

Bill Hambleton, county extension director, Fresno County, California, stresses Extension's work with farmers to improve their farm planning. "We're working on a computer program right now to make it interesting as well as practical for growers to do more indepth financial planning than before."

**Extension As Change Agent**
Lastly, Hambleton emphasized Cooperative Extension's role as change agent. "As liaison between grower groups and other government agencies, for example, we can do more than just transmit information back and forth. We can be advocates of information we know to be correct."

Because their ability to produce continues to rise, farmers and ranchers will need to rely increasingly on sources of information and educational services such as Cooperative Extension, to regain or maintain profitability. Restoring and maintaining profitability in American agriculture represents perhaps our greatest challenge, one whose outcome cannot be predicted. Our willingness to meet this challenge will go a long way toward ensuring that it will be met and that we will succeed. □

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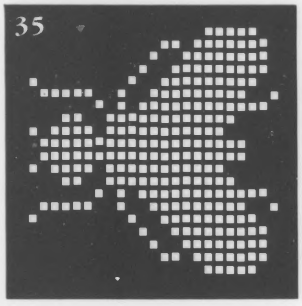







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# Fighting The Avian Influenza Virus



*Nelson H. Gotwalt*
*Extension Communications Specialist*
*The Pennsylvania State University, University Park*

In April 1983, a University of Pennsylvania veterinarian phoned Jay Irwin, Lancaster County Extension director, to inform him that a routine collection of poultry blood samples in eastern Lancaster county indicated a problem: a mild form of the avian influenza virus was showing up in a flock of layers.

Now, more than a year later, Irwin and others have reason to remember that phone message. It was the first signal of a $160 million dollar disaster that struck Lancaster County's poultry industry, one of the worst agricultural calamities ever to hit Pennsylvania. The somber toll: 11 million Pennsylvania chickens and turkeys killed; hundreds of poultry producers facing economic hardship; eggs for 7 million people and meat for 3 million people destroyed; temporary layoffs of hundreds of poultry workers, and reduction of Pennsylvania poultry exports.

Recently, Marketing and Inspection Services, USDA, has lifted the area quarantine in Pennsylvania. The Pennsylvania Department of Agriculture has also lifted their quarantine. However, premise quarantines will remain in effect until all cleaning and disinfecting procedures are satisfied.

**Emergency Declared**
When the disaster struck in 1983, Penn State Extension faculty and staff, state and federal officials, and industry representatives acted swiftly to assist the faltering poultry industry. The governor declared an extraordinary emergency, thereby authorizing the formation of a federal-state task force to deal with diagnosis, quarantine, and eradication. At the peak of the epidemic more than 400 task force members were working in Pennsylvania.

**Early Eradication Efforts**
At the onset of the epidemic, Dwight Schwartz, Penn State Extension veterinarian and noted poultry diagnostician, working with Jay Irwin and University of Pennsylvania veterinarians, verified that the avian influenza virus was present but in a mild nonlethal form. Most infected birds returned to normal in about 10 days.

Irwin, responsible for county Extension programs, made every possible attempt to eradicate the disease quickly. He prepared health security guidelines for each poultry producer in the area. He also scheduled a series of meetings, both area and countywide, to explain the disease characteristics and emphasize the need among poultry producers for strict, self-imposed sanitation and quarantine procedures. He also conducted seminars for practicing veterinarians, stressing diagnostic principles and methods of eradication.

Throughout the summer and early fall of 1983, in spite of every possible effort to convince owners of the seriousness of the problem, numerous flocks became infected by the mild strain of the disease.

**Virus Mutates**
In mid-October, with the approach of cold weather, the virus mutated, became lethal, and started wiping out large numbers of birds within flocks.

Egg production dropped to zero and eventually all birds within flocks became sick and many died.

Two weeks later, 50 layer and broiler flocks in the eastern section of Lancaster County were exposed to the disease. State Department of Agriculture officials, working with members of the Pennsylvania Poultry Federation, Lancaster County Poultry Association, Irwin, and Schwartz, established quarantine zones in the affected areas.

**Producers Hurt Badly**
Each day the disease spread to other parts of the county. Poultry producers with exposed flocks had little or no income, debt loads rose, and lifetime savings were wiped out.

At this point, the federal-state task force was formed. Irwin had signs printed and distributed to more than 600 poultry producers. The signs, placed at the entrance to all major poultry farms, read: *"Absolutely No Visitors! Avian Flu Alert!"*

In early November, 40 task force members, consisting of veterinarians and support personel, were ordered to Lancaster County by USDA and Governor Thornburgh.

**Cooperation**
Now working directly with task force officials, Irwin provided them with mailing lists of poultry producers, processors, and feed company personnel as well as previous data on area disease outbreaks.

Throughout the epidemic, both Irwin and Schwartz served as a primary link with the task force. Irwin and Poultry Science Extension served as an important liaison with industry through regularly scheduled monthly seminars keeping everyone abeast of the current status of the disease, important regulations, and new information.

Although Lancaster County has the state's largest concentration of layers, broilers, and breeding chickens, there was concern that the virus would infect flocks in other areas and seriously cripple the Commonwealth's $400 million industry. In counties bordering Lancaster, the combined sale of poultry products totals $100 million.

Extension agents in these counties immediately contacted producers through newsletters and personnel visits. Penn State Extension specialists, working with Pennsylvania Poultry Federation officials, issued statewide sanitation guidelines.

"Upon hearing of the disease outbreak in Lancaster County, our poultrymmen took sanitation procedures and self-imposed quarantine measures seriously," William, Murray, Adams County Extension agent, says. "They stayed off of other poultry farms and controlled the flow of traffic to and from their premises."

**Disease Spreads**

In spite of continued efforts to curb the spread of the deadly virus, more and more Lancaster County chickens became diseased. By November, 100 flocks containing 6 million birds were infected. Until funds were available to completely depopulate entire flocks, producers were advised to bury the dead chickens on their farms. "This," says Irwin, "meant the remaining diseased chickens in the highly pathogenic flocks were giving off the virus and providing the potential for spread."

*Photographs courtesy of Animal and Plant Health Inspection Service, USDA*

By Thanksgiving Day, a 10- to 15-percent dip in feed sales was costing one Lancaster County feed store $24,000 each week in lost income. Special disinfecting procedures for processors were costing $8,000 per week. Brokers were having a hard time marketing inspected poultry products because New York, New Jersey, and West Virginia restricted Pennsylvania poultry. Also, 14 foreign countries banned imports of Pennsylvania poultry products.

**Sanitary Measures Emphasized**

At this point, Irwin and Schwartz met with county poultry producers to convince them that it was up to them individually to help control the disease. Schwartz reminded more than 200 flock owners that, in many instances, critical sanitary measures were being ignored.

"I pointed out," Irwin says, "that in addition to laying hen and broiler deaths, 300,000 breeding hens—those used to produce eggs that go to hatcheries—had been killed. This, I told them, would present another problem when they were in a position to repopulate the flocks."

**Quarantine Zone Expands**

By late December, the virus spread to several flocks in Chester, Berks, Lebanon, York, and Adams counties. The quarantine zone was expanded to include 5,100 miles.

By mid-January, the task force received approval to depopulate those flocks with mild infections in an attempt to completely eradicate the disease. Currently, almost 300 Pennsylvania flocks have been slaughtered, about 90 percent of these in Lancaster County. More than $34 million in state and federal funds has been spent for depopulation, cleanup, plus indemnity payments for birds killed. Also, state funds were approved for research on virus eradication.

The Amish farmers, whose flocks in Lancaster County number between 5,000 and 10,000 birds and who derive a significant income from this source, were somewhat confused about avian influenza disease control. Amish religious beliefs do not allow them access to radio or television.

Amish groups in various areas asked Irwin to meet with them to discuss disease characteristics and preventative measures.

**Meetings With The Amish**
Irwin, always accompanied by a veterinarian, met with the Amish in firehalls and schools at periodic intervals. He was successful in helping them keep the virus out of their flocks until mid-December. To date, only a few Amish flocks have been infected with the virus, primarily due to strict sanitation procedures urged by Irwin.

**Safe For Consumption**
When the disease reached epidemic proportions and before the federal-state task force was established, a Lancaster County communications task force was organized to insure that the food chain remained intact by informing consumers that poultry products were safe for human consumption. This task force included Doris Thomas, Lancaster County Extension home economist, public relations personnel from industry, and the Lancaster Chamber of Commerce.

After meeting around the clock for several days, hearing testimony from growers, suppliers, federation officials and veterinarians, the group held a press conference to inform the media that poultry products were safe and in spite of higher prices, poultry was one of the best meat buys.

Doris Thomas was asked to be the primary spokesperson since she was experienced in media and knew consumer buying habits. Poultry sales dropped 50 percent for a short time and then recovered. Sales in other areas of the state were not affected.

As the new year arrived, 198 flocks had been depopulated; newly infected flocks had been depopulated since the outbreak occurred.

**New Programs For Poultry**
As a result of the avian influenza epidemic, Pennsylvania Cooperative Extension is initiating sanitary procedures on the farm for cleanup and disinfection of all poultry disease.

Penn State faculty and staff are developing new poultry management, marketing, and nutrition programs to increase production efficiency and help reduce the possibility of future poultry disease outbreaks. And veterinarians are increasing their efforts to find a cure for avian influenza through genetic engineering or vaccination.

Although the outbreak of avian influenza drastically affected the lives of hundreds of poultry producers, there may be long-term benefits taking place. Extension staff are reporting that, because poultry premises were cleaned so thoroughly, minor poultry health problems have practically been eliminated and meat and egg production has been significantly increased. □

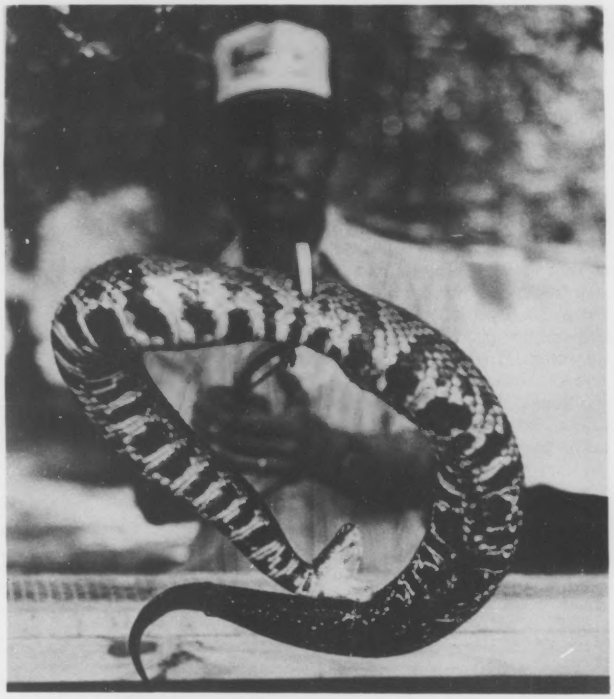

# Survival Tactics for Limited-Resource Farmers



***Bruce Washburn***
***Assistant Editor***
**Extension/Research Communications**
***North Carolina Agricultural and Technical State University, Greensboro***

What can a retired "snake farmer" do? That was the dilemma that Ethiman Spivey faced 2 years ago.

For most of his life, the 65-year-old farmer from Crusoe Island in Columbus County, North Carolina, had supported his family by growing a few acres of crops such as corn and soybeans. . .and by catching poisonous cottonmouth moccasins. He got $1 to $2 per snake for the dozens that he rounded up each week. But age and arthritis put an end to that.



Fortunately for Spivey, North Carolina has the Farm Opportunities Program (FOP). That program uses paraprofessions—called agricultural technicians—who work closely with limited-resource farmers like Spivey, showing them how to make better use of their resources, adopt appropriate agricultural practices, and adapt to changing conditions.

The program is coordinated by The Agricultural Extension Program at the state's 1890 land-grant school, North Carolina Agricultural and Technical (A&T) State University

**For Impact**

In Spivey's case, the Farm Opportunities Program showed him how to take advantage of other resources on his small swampland acreage. With guidance and encouragement from agricultural technician Delane Shelley and supervising agricultural agent James Norris, Spivey decided to try a new farm enterprise.

Now, 2 years later, he is the proud owner and operator of a wood-heated greenhouse where he sells vegetable plants, flower arrangements, and hanging baskets made from native cypress trees. And while his son Tommy carries on the family tradition of "snake farming," Ethiman Spivey is starting a new family tradition and way of life on his small farm.

Without the help of FOP, however, Spivey might not have been able to make such a transition. Like most limited-resource farmers, he had little

education (he can't read or write) and he needed the intensive, one-on-one, on-the-farm assistance, that FOP gives to more than 600 limited-resource farmers across North Carolina each year. Like Spivey, these farmers are learning how to do the things they need to do to continue making a living on their small farms.

**Four-County Tour**

This summer Daniel Lyons, coordinator of the Farm Opportunities Program at North Carolina A&T, organized a tour of FOP farms in four counties in the southeastern part of the state. The purpose of the tour was to show university officials, other Extension personnel, and the general public that limited-resource farmers can indeed survive—and even thrive—when given the right kind of assistance.

Among the farms the tour visited were:

• A 20-brood cow farm operated by a physically handicapped farmer, Gary McPherson. Before participating in FOP, McPherson didn't worm, castrate, dehorn, or practice parasite control on his cattle. He also had them on small pasture. He has since increased his pasture by 300 percent and adopted recommended practices. Now his cattle weigh an average of 400 pounds more each at the time of sale. In addition, FOP helped him develop two catfish ponds for food production.

• Several vegetable farms ranging in size from 13 to 35 acres were visited. Through diversifying their crops, using appropriate irrigation, and improving their marketing, FOP helped these farmers to increase yields and income. For example, by using trickle irrigation farmer Wade Cole increased peppers and cantaloupe production threefold. Another farmer, Albert Beatty, didn't think he had enough land to do anything with before joining the program. Now he's doing intensive vegetable gardening on 2 acres and recently cleared $676 from a tenth of an acre of okra.

• Perry Davis, owner of a 30-sow feeder pig farm, learned how improved swine housing facilities could increase his income. After joining FOP, he participated in an energy audit of his facilities and subsequently insulated his hog housing. He also received help on his breeding stock selection and on disease and parasite control. Now, he's getting nine live pigs per litter rather than eight.

• The tour also visited a specialty crop operation, a 27-acre blueberry farm owned by Thomas Smith. After joining FOP, Smith adopted recommended practices and used integrated pest management. He is now grossing $4,8000 per acre and expects to increase that by adding irrigation soon.

Similar success stories can be found elsewhere in the 20 counties where the Farm Opportunities Program is in place. But, Daniel Godfrey, administrator of the Agricultural Extension Program, notes: "The enterprises on these farms substantiate that there are opportunities and a future for small and limited-resource farmers in our state."

**Lost Farms**

One real problem, however, is making sure that the farmers will be around to take advantage of such opportunities. Last year North Carolina lost an estimated 3,000 farms. Further, black farmers—are losing their land and farms much faster than other farmers.

It's for these reasons that the North Carolina A&T Agricultural Extension Program also developed the Landownership Information Project (LIP). That project is helping farmers, especially minority farmers, learn their rights and responsibilities as landowners so that they can keep their land and farms.

LIP has done this for 4 years by conducting workshops and forums, publishing and distributing educational materials, establishing a statewide advisory council, and working closely with other concerned organizations such as the Rural Advancement Fund, the Eastern Carolina Rural Development Coalition, and the North Carolina Association of Black Lawyers.

LIP was instrumental in helping the latter organization form the Land Loss Prevention Project in Durham, North Carolina. That project provides free or low-cost legal help to black farmers and others who are in danger of losing their land.

**LIP Grant Assistance**

Last year the Landownership Information Project received a special grant from Extension Service, USDA, to expand its educational efforts to all states with 1890 land-grant institutions. LIP is currently working with the Extension programs at those schools, helping them create a greater awareness of the land loss problem in their states and methods for addressing it.

North Carolina A&T is also working on an additional project that should prove very valuable to the state's limited-resource farmers: a model small farm which will be set up on the university's farm complex in Guilford County.

The model small farm will focus on enterprises and alternatives that will improve the lives of limited-resource farmers and help stop the trend of disappearing small family farms.

In addition to developing and refining appropriate small-farm enterprises, the model farm will serve as a training facility for students and farmers.

**Family Farm Stability Task Force**

In addition to its FOP, LIP, and model small farm efforts, North Carolina A&T has also joined Extension at North Carolina State University in forming the Family Farm Stability Task Force.

That task force, composed of Extension personnel from both universities, is examining how policies and programs affecting family farms—especially small and economically disadvantaged farms—can be improved.

It is also looking at the special problems and needs associated with farmland retention by black farmers.

With such programs, the Agricultural Extension program at North Carolina A&T is showing that limited-resource farmers—whether they raise snakes or more traditional livestock and crops—can indeed survive, given the right kind of assistance. □

# Freeze Recovery For Florida Citrus



***Kathleen Carlton***
***Visiting Assistant,***
***Fruit Crops***
***and***
***Wayne H. Smith***
***Task Force Co-Chair***
***Institute of Food and Agricultural Sciences***
***University of Florida,***
***Gainesville***

In Florida, a late December freeze caused extensive devastation to the citrus industry and more than $1 billion in economic loss to the state.

During a 3-day period—December 25-27—temperatures plunged to a low near 16 degrees F. at night with the average low approximately 21 degrees F.

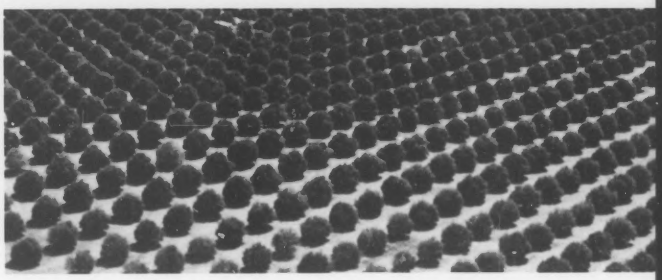
This cold front followed several days of overcast, mild conditions—an unusual situation that predisposes plants to cold damage. While many plants suffered damage, the most serious impact was on the citrus industry in 11 central Florida counties: Pasco, Hernando, Sumter, Marion, Lake, Putnam, Volusia, Seminole, Brevard, Osceola, and Orange.

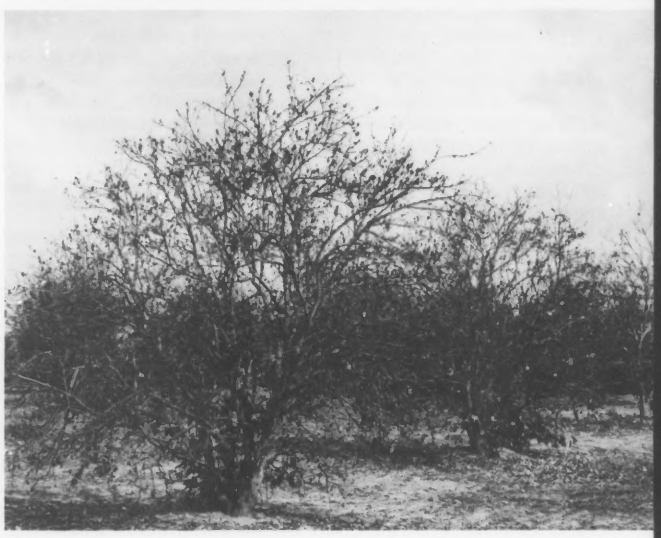
The Cooperative Extension Service, Institute of Food and Agricultural Sciences (IFAS), University of Florida, through its county Extension faculty, moved quickly to offer appropriate programs to area growers.

**Hard Choices**

An estimated 250,000 acres of citrus were damaged to varying degrees including 120,000 acres which may be dead, growers must now make many decisions—whether to prune trees, to completely remove trees and reset to citrus, to enter other enterprises, or to wait another year before taking action.

Similarly, workers usually employed in citrus harvesting, handling and processing or in enterprises supported indirectly by the citrus industry must make equally difficult decisions. Extension quickly recognized early the need for additional, more focused efforts to assist growers and workers in the affected region.





To meet this need, the Vice President for Agricultural Affairs appointed a Central Florida Freeze Recovery Task Force. The task force, begun in June 1984, comprises three working groups—Citrus Recovery, Alternative Commodities, and Unemployment—and two analysis teams—Natural Resources and Economic Evaluation. About 40 state Extension and research faculty members, along with selected county Extension faculty, form the task force.

Task force leaders meet regularly with county Extension directors from the 11 counties to monitor needs and track progress.

**Working Group Activities**

The Citrus Recovery Working Group focuses on rejuvenation of severaly damaged, heavily pruned citrus groves and the reestablishment of groves where total kill occurred.

Task force information aids growers, local governments and business communities in coping with problems caused by the freeze. Culture and protection of young trees or severely pruned trees is the focus of these programs.

Not counting land clearing, it costs $1,800/acre to establish a productive grove. Those want-

ing to reset groves are experiencing another setback with the recent discovery of citrus canker—a bacterial disease—in six Florida nurseries growing the resets. Millions of nursery trees have been destroyed to eliminate the trees carrying this disease.

The Alternative Commodities Working Group assists Florida citrus growers in evaluating alternative commodities as short- or long-term replacement for citrus production. With available resets, it takes about 5 years to get productive trees.

In the near term, intercropping could provide cash flow. Although many affected groves will be rejuvenated or replanted, some growers may decide to use their land for other agricultural commodities. Feed grains, certain vegetables, and other tree crops are being evaluated for these lands.

The Unemployment Working Group is helping families to cope with the resulting impacts upon jobs and income. Their goals are to provide information concerning available community resources, future employment options, family stress management, and family finances and budgeting.

The location and characteristics of the unemployed have been described and the needed educational programs identified. As a first step, an EFNEP unit in the most severely impacted county was formed and an existing unit in another seriously affected county was expanded.

**Analysis Team Activities**

The analysis teams provide data and regional analyses on resources and impacts important to all work groups. Freeze hazard areas, freeze probability, soil suitability and water availability analyses, using remote sensing when appropriate, are being assessed to aid the task force. An evaluation plan was designed to monitor the effectiveness of the program.

Why is IFAS responding to this need? In July 1984, the Florida Crop and Livestock Reporting Service and the Florida Department of Agriculture data were used by the task force to estimate the total on-tree value of citrus losses (fruit loss) at $186 million in the 11-county area.

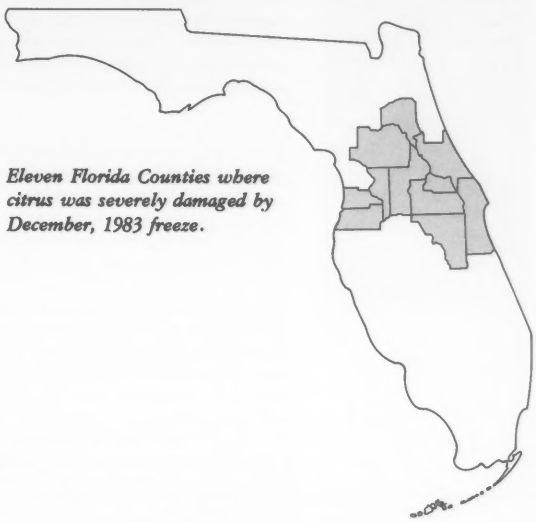
Forty million boxes of fruit in the 11 counties and 60 million boxes of fruit statewide are also estimated losses. The total losses of 40 million boxes of citrus would have generated pick-and-haul expenditures of $63 million.

Losses associated with packing and processing were estimated to be about $210 million. The task force's Economic Analysis Team arrived at a revised, combined direct loss estimate in September 1984 of $460 million in the 11 counties and a direct statewide loss of nearly $700 million.

Capital loss is estimated at $7,000 per acre, and the freeze killed approximately 120,000 acres of groves statewide and 85,000 acres in the 11-county area. The capital loss is equal to roughly $840 million and $600 million, respectively. Combining all loss-estimates in the 11 county area places the direct loss at over one billion dollars.

**Economic Loss Severe**

Obviously, the total economic losses are much greater because these estimates do not include reduced purchases of chemicals, fuels, and other indirect expenditures. IFAS faculty, especially county Extension faculty, monitoring the situation since the freeze, are providing necessary programs suggested by the interim assessments.



*Eleven Florida Counties where citrus was severely damaged by December, 1983 freeze.*

State and county Extension staff will continue to assess client needs and determine their reactions to the educational programs based on task force guidelines.

When the task force completes its mission in December 1984, the evaluation effort should show that Extension educational programs were vital to central Florida's recovery from the most severe freeze of this century. □

# Financial Fitness For Farmers



***Carolyn Bigwood***
***Writer-Editor***
***Extension Service, USDA***

Today more than ever, farmers need strong financial management skills for profitmaking and even survival. Many are acquiring these skills by participating in Extension educational programs in farm financial management.

These programs assist producers in preparing and analyzing cash flow and other financial statements, developing improved plans for organizing farm enterprises, and making effective marketing decisions. By participating, producers learn to develop survival strategies and set realistic goals for their particular situations.

**One-On-One Assistance Increased**
Individual assistance is critical to solving major financial problems. Many states are increasing their one-on-one assistance efforts, especially for financially distressed farm families. During the past year, Minnesota and Illinois estimate that they gave individual assistance to more than 5,000 farmers in each state. Farmers analyzed financial problems and prepared detailed plans to deal with them.

Iowa estimates that about one-third of farm families there have debts equal to 41 percent or more of their assets. About 30,000 families located in all areas of the state are carrying 65 percent of the total Iowa farm debt.

Recently, with $200,000 appropriated by the state legislature and redirected state funds, Iowa began a comprehensive program directed at helping these farm families and rural communities deal constructively with financial adjustments occurring in agriculture.

Iowa's program, called ASSIST, consists of four parts: General Awareness, FarmAid, Community Resource Committees, and Agricultural Credit Short Courses.

The General Awareness portion of the program aims to inform community leaders and officials of the scope and severity of farm financial problems through local meetings led by county Extension directors. At the first round of meetings Extension reached 1,500 community leaders.

FarmAid, the second part of the program, is a strengthened, ongoing farm financial analysis and counseling effort offered by Extension in cooperation with farm lenders. Following the 1983 drought in southern Iowa, Extension provided individual counseling and assistance to over 1,000 farm families.

**Involving The Community**
The third part of ASSIST helps citizens organize Community Resource Committees in their areas to assist farm families and the community during farm stress situations.

Extension helps organize and provide training for individual committees. Once established, however, committees select their own leadership, goals, and activities.

Agricultural Credit Short Courses, the fourth part of the program, offer classroom training for agricultural lenders, attorneys, professional farm managers, and farm financial advisers who work with financially stressed farm families.

Major topics covered in approximately 15 hours of coursework are financial planning and analysis, tax and legal concerns in financial restructuring, and communication and counseling techniques. By December 1984, Iowa will have completed 12 schools throughout the state.

**Highly Individualized Assistance**
Some states now offer highly individualized assistance to producers for a fee to cover some of the costs. Nebraska implemented such a program in November 1984 with $200,000 in funding from the state and $50,000 from Extension Service, USDA.

The pilot program, Managing for Tomorrow, offers extensive financial management assistance to farm couples for a $200 fee, which covers a portion of the costs. The actual cost of services provided is estimated at $600 to $1,000 per family.

**Workshops Held**
The program begins with group workshops held 1 day a week for 4 weeks. During these sessions, financial management analysts instruct farm couples in practical financial management principles; acquaint them with information needed to analyze their farm or ranch; and assist them in gathering and organizing data for input into a computer.

Later, in individual consultations, financial management specialists help families analyze their business situations and develop plans for the coming year. A committee of additional agricultural professionals are also available to review each family's analysis and projections, and offer alternative ideas for consideration.

**Followup Sessions Included**
During several followup sessions, Extension specialists review each couple's financial situation and progress, and start them on planning for the following year.

Farm lenders are cooperating with Extension to promote this program. Some are paying one-half of the fee. At least one lender has offered to subtract $200 from the interest bills of farmers who complete the program.

Working with at least 10 but no more than 20 couples in each group, Nebraska expects to reach 800 people by spring 1985.

**Ongoing And Future Efforts**
Minnesota is organizing a new Farm Financial Management Center that will be used to conduct educational programs with farmers. Minnesota will also work closely with other Extension Services to help them in their program efforts.

Missouri is continuing program efforts started several years ago for economically distressed farmers and planning new activities for the future as well.

Missouri's Troubleshooting Program, launched in 1982, helps farmers analyze their total farm business operations; pinpoint major problem areas—financial, production, and marketing; and develop survival strategies needed until "better" times.

The program reaches farmers through clinics, meetings, and individual consultations. Extension also disseminates information through newspaper articles, newsletters, radio and television programs, and publications.

**Family Farm Development Program**
Extension's Family Farm Development Program, now about 5 years old, helps individual farm families acquire and use resources to develop a profitable business. Farmers learn financial management techniques, including keeping and maintaining farm records; using farm inventories, annual sales, and production expenses to communicate to lenders and to monitor business growth; and developing long-range plans compatible with their particular circumstances.

Over half of the approximately 300 families participating in this program have developed long-range farm plans. About 20 percent of participants estimate they would not be in the farm business today had they not participated in this program.

Missouri's educational thrust over the next several years will focus on providing indepth farm financial management courses for farmers who want to upgrade their business skills. Classes structured similar to college level courses will include 24 hours of classroom work, plus outside assignments, on various financial management topics.

Agricultural lenders will cooperate with Missouri Extension in selecting couples who should participate.

**Working With Agricultural Lenders**
Along with Missouri, many other states are involving agricultural lenders and the Farmers Home Administration (FmHA) in educational programs. Most states have increased their efforts to provide training for lenders to improve their evaluation of farmers' loan applications.

Extension is also supplying lenders with information and assistance on cost and return data, and analytical tools, including computer financial management programs.

**Expanding Computer Use**
Extension farm financial management specialists are increasingly developing and using computer programs to help farmers make cash-flow projections; organize plans for their farms; analyze profits from farm investments; prepare financial statements; keep farm records; and provide estimates on production costs. Specialists also are using computers to make more efficient use of their time.

Minnesota has developed a computerized financial management program, called FINPACK, which is being used extensively in a number of states.

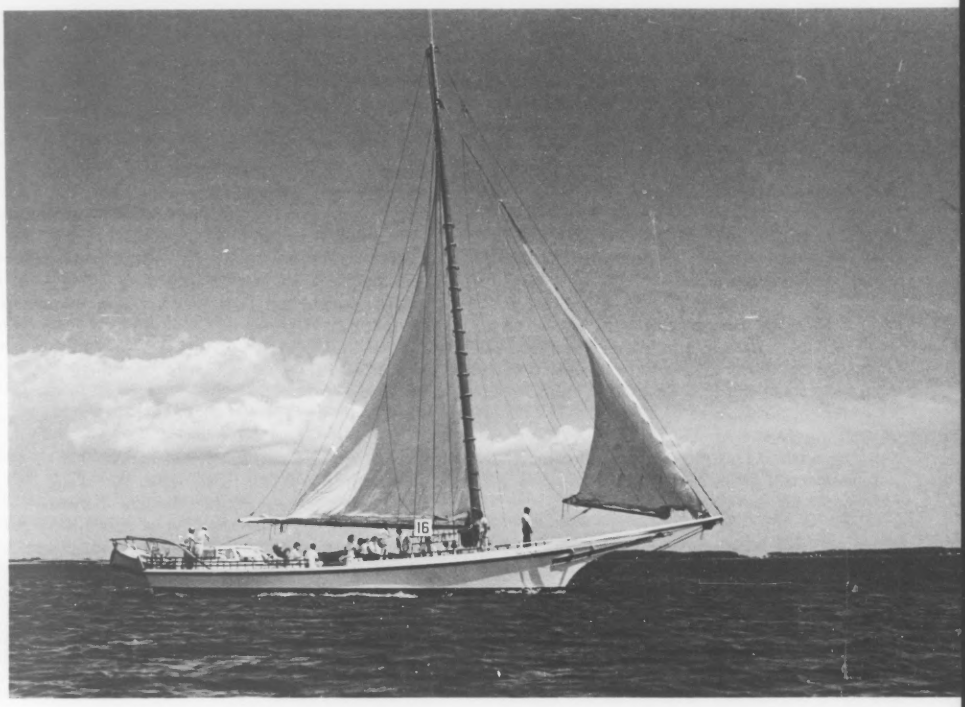
**National Initiative**
In "Challenge and Change. . .A Blueprint for the Future," Extension Service-USDA identified Financial Management as a national initiative for emphasis in the 80's. State Extension Services across the country have strengthened and expanded farm financial management efforts to help farmers help themselves.

Continued support and expansion of educational programs will enable more farmers to improve their business skills, resulting in higher profits for them and a more productive and efficient agricultural system for us all. □

# Partners With The Bay



***Kathleen A. DeMarco***
***Extension Television Specialist***
***University of Maryland, College Park***




The largest inland estuary in the world, the Chesapeake Bay, posed a large problem for agricultural communicators in Maryland last year. It still does. State and federal experts found that pollution was ruining the pleasures and profits from this marine-rich body of water.

Industry sometimes let chemicals go into the Chesapeake; municipalities contributed; as did boaters and waterfront residents. And some of the blame fell on agriculture. Nonpoint pollution from animal waste and fertilizer runoff and soil erosion seemed to be making its way from farmlands to the Bay, as well.

The challenge for agriculture communicators was twofold; to alert farmers to their role in the cleanup, without making others think farmers are the only polluters.

The solution hinged on encouraging growers to be part of the effort to save the Chesapeake; the communications strategy became a campaign of awareness and education, using various media and media communicators.

Partnership in communications became rampant. More than a half dozen state and federal agencies joined forces under the umbrella of the Maryland State Soil Conservation Committee. Serving on one of two subcommittees, some would study the technical aspects of the Environmental Protection Agency's massive report on the Chesapeake while others would seek ways to disseminate the scientific recommendations to agricultural and urban publics.

**Developing The Information Campaign**

In late summer 1983, the information group, serving under the leadership of agricultural administrators at The University of Maryland Cooperative Extension Service, began to develop the campaign around the theme, "Maryland Farmers: Partners with the Bay."

Early efforts to publicize the theme took the form of promotional items like lapel pins and farmer caps that sported the

"partners" logo. This was a symbolic intertwining of the land, represented in a single stalk of corn, and the water, seen in the curve of a single wave.

But human resources got the job done. As the campaign advanced beyond novelty items, the more serious efforts of print and electronic journalism took precedence, with support staff from the Cooperative Extension Service (CES) and Soil Conservation Service (SCS) assigned to handle media production.

By fall 1983 videotaping of soil conservation sites began, so communicators could gather a library of footage before the snows fell. Meanwhile, information kits were assembled: glossy folders held printed materials that explained the finer points of nonpoint pollution control for press and legislative groups.

**Best Management Practices**

In the spring of 1984, the technical subcommittee's report was out and Best Management Practices (BMP's) were in. Terracing and grass waterways, both methods for keeping soil and nutrients on cropland, became the topics for the first video releases to regional television stations. Communicators wrote news releases on conservation tillage, animal waste control, nitrogen, and phosphorus for area newspapers and magazines.

Communicators also developed educational fact sheets on nonpoint pollution and the history of agriculture and the Bay. Copies of the news releases, fact sheets, and television scripts were included in the information kits; they helped explain the "partners" program during one-on-one promotion. Packets also went out to CES and SCS county offices. Radio interviews on reel-to-reel tape reached a statewide audience.

After distributing the spring releases, geared for planting time, the education subcommittee looked ahead to the fall harvest season.

They planned more fact sheets, asking Extension and SCS specialists to write them. Out in the field, agency personnel used agricultural field days to highlight engineering practices, good for controlling runoff.

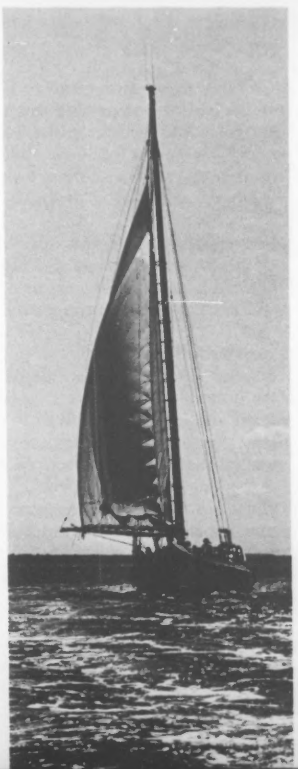
**Further Efforts**

As thoughts turned toward fall, the postproduction of television materials concluded and distribution began. This time, both urban and rural audiences were media targets, as the problems of overfertilization of lawns and the use of home phosphate detergents were put before the public.

Meanwhile, other kinds of support materials, such as slide sets, took shape. The communications partnership even began to extend beyond government to include advocacy groups committed to helping the Bay; a joint publication for homeowners is underway.

Cleaning up the Chesapeake Bay will take a long time and demand the ongoing cooperation of all sectors of society. By apprising farmers of their role in controlling nonpoint pollution through continual educational messages, the phrase "Partners with the Bay" will become more than a slogan; it will be a reality. At that point, agriculture will not be a part of the problem, it will be part of the solution.

The communication process remains an essential part of that challenge . . . to keep the Chesapeake Bay a national treasure. □



# Wisconsin WRAPs Illegal Residues



*Robb Hall*
*Extension WRAP*
*Program*
*Information*
*Specialist*
*University of*
*Wisconsin*


"If it may be meat, don't treat!" That's one slogan which the Wisconsin Residue Avoidance Project (WRAP) staff use to warn farmers about the misuse of antibiotics in meat animals. In our effort, which goes far beyond slogans, we have used many information and evaluation techniques. One result should be a larger role than before for local Extension agents.

The University of Wisconsin Cooperative Extension WRAP project is part of a 33-state project to reduce illegal drug residues in slaughtered animals. The project is funded by Department of Agriculture's Extension Service with pass-through funds from the Food Safety and Inspection Service (FSIS).

First, Extension attempted to identify causes of the problem by searching the literature for current drug information and studying violations in Wisconsin during 1979 to 1982. Illegal sulfa residues in calves less than 3 weeks of age (bob veal) were the biggest problem.

Next violators were sent questionnaires on their calf health management and drug use practices. Wisconsin dairy producers selected at random were also asked such questions.

**Poor Practices**

"Several practices caused illegal drug residues," says Robert Hall, Cooperative Extension veterinarian and co-leader of WRAP. "Apparently, many producers use drugs instead of recommended management practices.

Others are surprisingly unaware of withdrawal times for antibiotics and sulfa drugs. Illegal antibiotic residues seem to result from poor management or ignorance, not a deliberate attempt to violate the law."

Survey results guided the information/education campaign. Respondents had indicated current and preferred information sources.

They received health/management information from agricultural magazines, veterinarians, feedstore/co-ops, Extension newsletters, and local farm-oriented newspapers. Most of these sources were named as *preferred* sources of information.

**Educational Effort**

WRAP's educational effort, which began in May 1983, involves articles for farm press; direct mailings; Extension publications and fact sheets; a computer cattle health/management program; and slide sets.

"Monitoring the effects of our education effort is a high priority," states George Danchuk, an adult educator and WRAP's project evaluator. "Although the project is too new for comprehensive evaluation, our monitoring surveys indicate that our efforts are improving producers' drug knowledge and animal health techniques."

A 1984 "midstream" analysis sought the opinions of Extension agents and administrators as well as producers and agribusiness professionals.

Producers who responded to the initial surveys tended to rank the county agent behind veterinarians and farm press as sources of animal

health and management information. So WRAP has attempted to bolster agents' credibility.

**Agent Role**
The groups surveyed thought Extension agents did have a role in drug use and animal health/management education. Survey results indicated that people's knowledge about drug use and animal health practices increased with agent contact.

Several agents are participating in a pilot project to increase their role in educating farmers about drug use and animal health/management. Some agents will ask local producers and agribusiness to form committees to help reduce illegal residues in meat.

Other agents will cooperate with local veterinarians. The agents will also distribute material to feedstores, co-ops, and other outlets for livestock antibiotics.

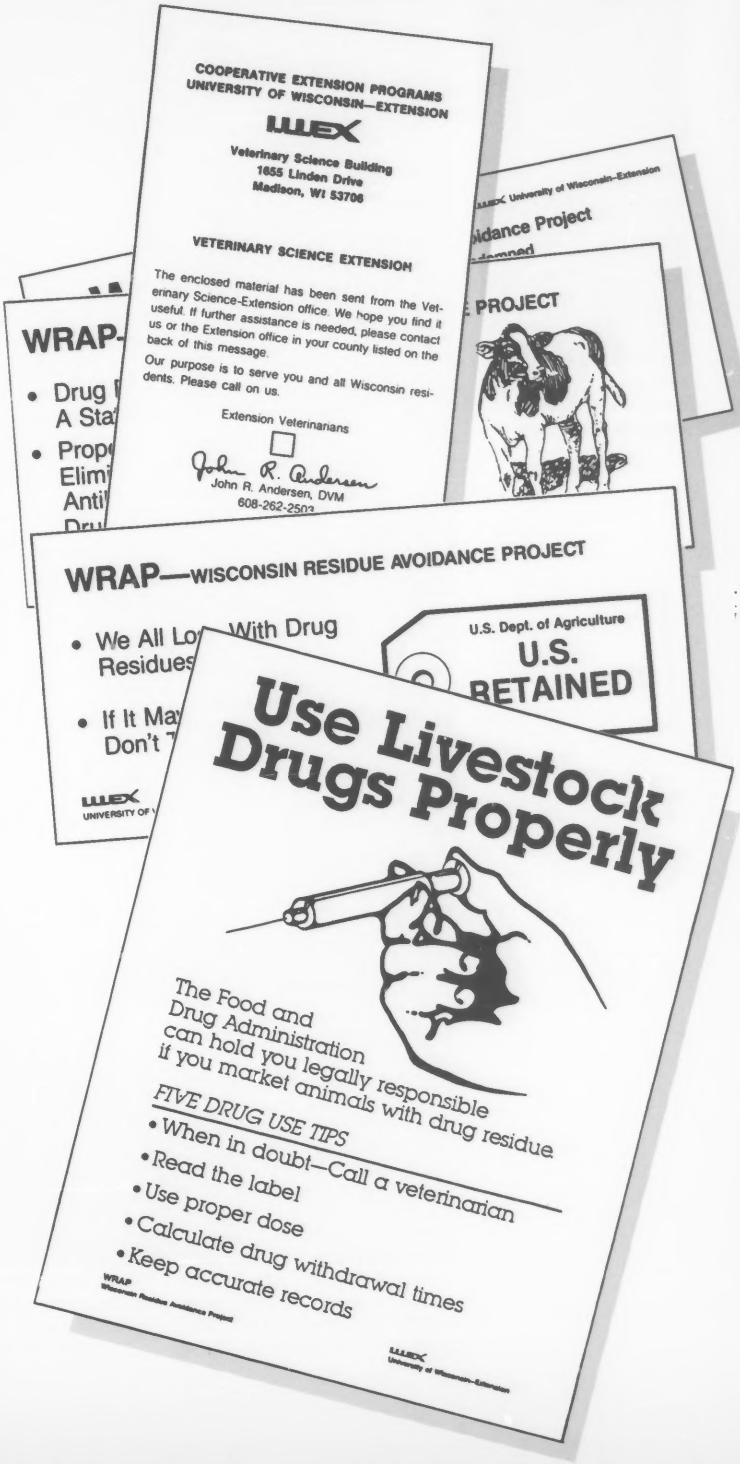
All pilot counties have copies of slide-tape presentations developed by WRAP. Information will be disseminated through local newsletters, radio programs, and columns. Timely information will be organized with a computerized "tickler file" calendar to remind agents of current animal health topics and provide sources of additional information on the subject. The emphasis will be on disease prevention.

**Further WRAP Goals**
WRAP will monitor changes in producer knowledge, attitude, and behavior. One goal is to facilitate agents' communication with producers and help make agents more effective. This practice will help reduce illegal residues and enhance agents' effectiveness elsewhere.

No single educational approach can solve Wisconsin's problem with illegal drug residues. So our efforts are flexible enough to respond to changing conditions with Extension's ability to educate and inform.

Illegal drug residues illustrate a paradox in agriculture. Producers cherish their independence, which they say has helped foster tremendous productivity. Yet actions of a few producers jeopardize that independence and threaten to erode consumer confidence in food. One of WRAP's goals is to ensure that independence while maintaining consumer confidence.

If you have questions or comments or would like survey summaries, contact:
The Wisconsin Residue Avoidance Project
Department of Veterinary Science-Extension
1655 Linden Drive
Madison, Wisconsin 53706
Phone (608) 273-0538 □



# The Bug Patrol



***Andy Duncan***
***Editor***
***Oregon's* Agriculture**
**Progress Magazine**

Bug scouts don't get merit badges, but they are receiving applause and money from growers in two of Oregon's juiciest industries.

Insect scouting services, using techniques pioneered in Oregon by experiment station researchers and Extension Service specialists and agents, have sprung up in Medford and Hood River to serve the state's pear and apple growers, who produced more than $50 million worth of fruit last year.

Through the services, growers hire a consultant who monitors pests in their orchards, regularly assesses the potential for fruit damage, and outlines possible strategies for dealing with the bugs, including simply letting them alone if there aren't too many.

Growers subscribing to the two services, both basically one-person operations, are looking for a way to curb the skyrocketing cost of pest control.

By keeping closer tabs on bugs like codling moths, spider mites, and pear psylla, growers hope to spray their trees only when absolutely necessary or when the pests are especially vulnerable. Also, they hope to avoid spraying trees when the chemicals would wipe out populations of beneficial insects like ladybird beetles that help keep pests in check.

**Savings On Spray Costs**

In some cases, the approach seems to be working.

"I still have problem spots in my orchards, but spray costs are going up terribly and I know I've saved money. There's no question about it," says Ed Earnest, a Medford pear grower and packer who is unabashedly enthusiastic about the scouting service he used the last two growing seasons.

"It's the only way to go," says Al Brown, a Hood River grower who uses a scouting service. "I used to have three chemical salespeople come by and each recommend a different spray. You don't know what to do. You might put on all three sprays. Now, an insect scout says, 'Don't spray till I tell you to,' and I don't."

**IPM At Work**

Both of Oregon's fledgling scouting services (for pears and apples—there are similar services for other crops) are 3 years old. The one in Medford is operated by Wayne Rolle, a 32-year-old former entomology research assistant at OSU's Southern Oregon Agricultural Experiment Station at Medford.

The Hood River scouting service is operated by 41-year-old Gary Fields, formerly a technician at OSU's Mid-Columbia Agricultural Experiment Station at Hood River.

That both Rolle and Fields used to work for OSU is no coincidence. For more than 10 years, scientists at the Medford and Hood River branch stations have studied the benefits of insect scouting as part of integrated pest management, or IPM, a program which stresses coordinated use of chemical, cultural, biological, and other pest control strategies.

To take a more precise approach to pest control, growers need more data about the insects in their orchard, say the scientists spearheading IPM research with pears and apples, Pete Westigard at Medford and Bob Zwick at Hood River.

**Does Scouting Pay?**

In a study with 1983 crops, Westigard and others found that Medford pear grower Ed Earnest saved about $40 an acre on spray costs, after paying scouting costs, compared to a grower with a similar orchard who did not use the insect scouting service.

Not everyone is convinced scouting can pay its way, though.

However, Westigard says, "The cost-per-unit price of scouting makes it more feasible for the big operator than the small one, although the small operator certainly has more flexibility."

The four pear growers who used Rolle's Medford scouting service last season—two large-acreage growers and two small-acreage growers—farm a total of about 2,000 acres, about 15 percent of southern Oregon's total pear acreage.

In Hood River, where farms are smaller, Fields estimated his 37 clients farm about 10 percent of the Hood River Valley's 15,000 or so acres of pears and apples.

How do the scouts themselves see the prospects for their business?

**A Matter Of Time**

"I guess that slowly, this sort of thing will gain wide acceptance," says Rolle. "I can walk through an orchard with most any grower and he'll know as much as I do about the pests. But growers don't have time to keep track the way you must for IPM."

Regular and precise sampling procedures are a key to this program, and there must be a real commitment to collecting accurate data.

"I've had a few dropouts," Fields says. "But the first year I saved a fellow over $4,500 on 52 acres—over and above my fee. I'm sure it's just a matter of time until others get in. □

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**Reprinted from a publication of The Oregon Experiment Station, Oregon State University, Corvallis. Photograph courtesy of Dave King.**

# Pigs Pay Off!



*Tina T. Scarbrough*
*Extension News Editor*
*Mississippi State University*

Two 4-H youth in Lee County are learning that pigs pay off in more ways than one. Nea Taylor, age 9, and Ken Robison, age 13, are taking part in a new swine program designed to teach youngsters money management while showing pigs.

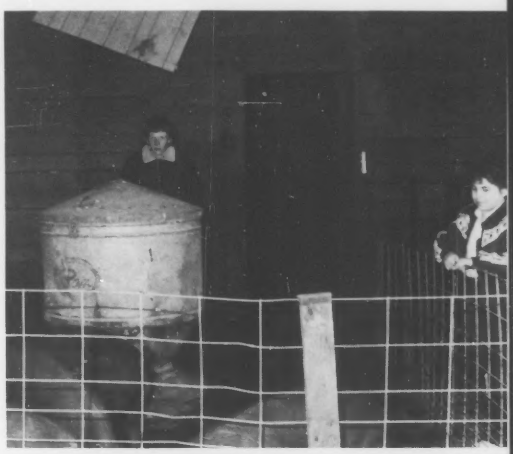
Taylor and Robison are the first participants in the new program. After the Lee County 4-H Advisory Council identified a swine program as a need, Council members developed guidelines with the Lee County Extension Service, the Big Ten Development Association, and the Bank of Mississippi.

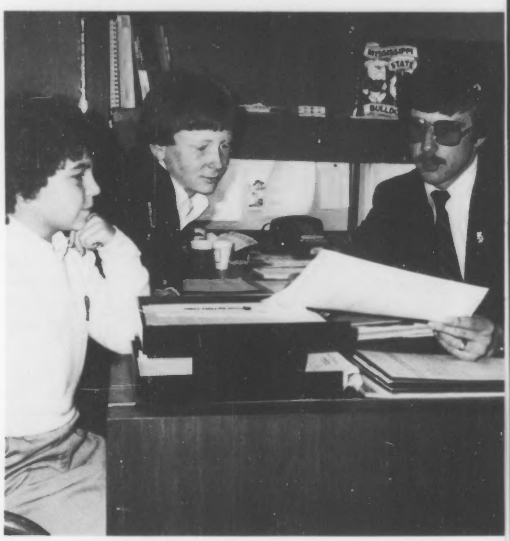
**Financing The Venture**
When Nea Taylor decided she wanted a pig, she knew it would involve more money than her parents were willing to spend. Instead, she enrolled in the 4-H swine program and got a loan from the bank.

"Like adults, Ken and Nea were required to get a cash flow statement to secure the loans," says Glenna Fennell, 4-H youth agent in Lee County. "They went through all the paperwork adults do to get loans."

James Moore, assistant vice president, and Charlie Greer, first vice president, of the Bank of Mississippi, explained to the 4-H'ers their responsibility in paying back the $1,000 each borrowed.

"As former 4-H'ers ourselves, Charlie Greer and I knew how 4-H could benefit youth," Moore says. "Through 4-H, the Bank of Mississippi hopes to teach them the importance of financial management."





*Young Mississipians Nea Taylor and Ken Robison are learning all about the world of money management while participating in a 4-H swine project.*

**Help With Stock Selection**
Once the 4-H'ers had their money, Greg Giachelli, executive director of Big Ten Development, selected the best stock possible for them. "My part in the swine program is to keep a watch on what the 4-H'ers are doing," he says. "I bought their gilts and helped them with their feed selection and vaccinations."

With the pigs in their possession, the 4-H'ers were ready to begin feeding and caring for them. At showtime, the premiums they earn will go toward paying off their loans. Both Taylor and Robison are on the Lee County Junior Livestock Judging Team and soon will compete in the district contest.

The 4-H'ers had their pigs bred. By selling most of the young pigs, they can pay back more money. "By selecting the ones to keep I think I have become a better swine judge," says Ken Robison.

**Program May Expand**
Billy Robison, Ken's mother, says she's pleased with the program. "I think Ken has learned the value of a dollar besides learning more about swine," she says.

The Bank of Mississippi plans to expand the program if it continues to work well. "The same program could be administered in other Mississippi counties through our branch banks," Moore says. "If more youth can learn what these have through the 4-H program, it is worth our support." □

# TV: Neglected Teaching Tool?



***Mark Hall***
***Associate County Agent***
***Auburn University, Alabama***

Television's biggest advantage is that it reaches a lot of people. It may surprise many that the farmer, a daybreak-to-dusk worker, is a heavy television viewer. The farmer tends to view heavily at mid-day and watch more news than other programs.

It is unfortunate that this medium has often been neglected by Extension as a tool to provide our clientele with educational information. Television offers many advantages over other educational methods.

These advantages are demonstrated by my live farm news segment on Huntsville's WHNT-TV. The segment, which shows 3 times a week, consists of broadcasting the futures prices, local cash crop prices, the day's agriculture news and Extension reminder, and concludes with a news story provided by Auburn University and the Information Service of Mississippi State University.

**What Ratings Reveal**

The November 1983 Ratings revealed that the noon news show had "an average 37 share." This means that 37 percent of all TV sets that were turned on were tuned to the noon news show. A decent, if not overwhelming figure—until one realizes that it translates into 37,348 households or 53,000 people.

Television has proved personally cost effective—especially if the figures include agent, secretary time, and travel. With this data incorporated, television costs 62 cents per thousand people reached. By comparison, a two-page newsletter costs $277.58 per thousand people reached.

The message gets across quickly. Those on radio can make the same claim, but television reaches a vaster audience. And this media sends visual images as well as words to reinforce any message.

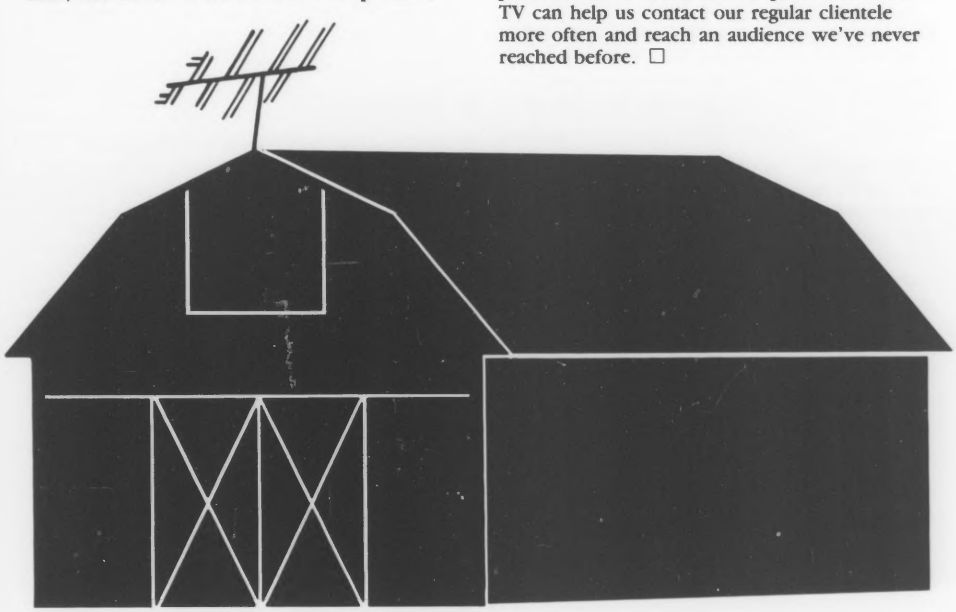
**Obtaining Air Time**

The first step in using television effectively is obtaining air time. Many discourage too easily when it comes to using this media for their message.

Extension is a fine source for a variety of agriculture information. When you know you have a news story that will interest the general public, contact the assignment director at your TV station and give him the details. Be willing to help the director line up interviews and be interviewed yourself.

Another method of getting your message across is to send the station brief news stories. In this case, "brief" translates to messages that take no longer than 20 to 30 seconds to read aloud. News stories that are too long are often rejected for that reason alone.

When it comes to Extension's educational outreach, TV will never replace group meetings, personal visits, radio, and the print media. But TV can help us contact our regular clientele more often and reach an audience we've never reached before. □



# Boosting The Beef In Hawaii



*June V. Gibson*
*Extension Publications Editor*
*College of Tropical Agriculture*
*University of Hawaii, Honolulu*

Beef production in Hawaii has been boosted by Extension's introduction of pasture management techniques which have proven successful to other American ranchers.

When Burt Smith, Extension specialist in livestock and pasture management, University of Hawaii, first arrived in the state 4 years ago, he found that few Hawaiian ranchers were practicing pasture rotation of cattle.

"This situation," Smith comments, "was probably due to Hawaii's tropical location and its isolation from the rest of the United States. Advanced information was slow to arrive in the islands. There were few places cattle ranchers could gather to share ideas and discuss new management techniques."

Because Hawaii's ranchers were isolated from regular updating, Smith points out, they had not been exposed to some of the latest ideas and practices. "In the past, Hawaii's ranchers suffered losses of time and money because many 'mainland' ideas proved inadaptable to Hawaii's unique tropical conditions," he says.

**Newsletter**
Smith began issuing a publication called the **Hawaiian Range Newsletter** containing information on range management and related topics. The primary audience for the newsletter was cattle ranchers.

Smith knew how to talk the rancher's language. He had worked as a range scientist with the Forest Service, USDA, in New Mexico and before that as a rancher. This background enabled him to communicate easily with cattle raisers.

To demonstrate the benefits of an intensive management program in ranching, Smith started cooperative demonstrations with various ranchers. The demonstrations emphasized pasture management.

**Grass Management Workshops**
When these cooperative demonstrations were under way, Smith initiated an annual Grasslands Workshop. He invited Allen Savory, the developer of a grazing method bearing his name, to speak at the first all-day workshop held in 1981 in Kamuela, Hawaii. Savory urged intensive methods of grass management. He had ideas that appealed to ranchers.

The initial meeting sparked tremendous interest. Shortly after, several Hawaii ranchers accompanied Smith to a similar workshop on grass management held in Albuquerque, New Mexico. When they returned, some ranchers began implementing workshop ideas.

**Employ Grazing Cells**
Most important of these ideas was high-density grazing. Earlier demonstrations done in Hawaii had been encouraging. Ranchers found that high-density methods made sense, and the first grazing cell went into operation on January 1, 1982, on the Huehue Ranch in Kona, Hawaii. Several other ranchers followed suit, most notably the Kahua Ranch in North Kohala, Hawaii. It set up a "weaner" rather than a cow-calf operation.

A grazing cell is a configuration of individual grazing units (paddocks) most popularly wagon-wheel shaped. Other layouts are also used, depending upon the terrain and other factors.

With a typical wagon-wheel setup, the hub area—containing water, mineral supplements, and optional working facilities—is located at the center.

Each grazing cell is divided into 20 or more paddocks, with the animals left inside for no more than 4 days, often only a day or less. The exact amount of time depends upon the rate of grass growth.

**Replenishment And Control**
Controlled grazing—allowing animals to eat only what the rancher wants them to eat—gives each paddock up to a 95 percent rest period over a year's time. This gives the grass time to replenish itself.

An additional advantage of the method is control; the rancher knows where and what the animals are doing at all times. The high-density method also permits control of brush problems that previously required either spraying with a herbicide or bulldozer removal.

The chief aim in a "weaner" set-up is to put weight on young animals. Smith was able to use the weaner cell for demonstration purposes. He obtained useful information by checking weight gains every 30 days or so. A fourfold increase in beef production per acre was measured by Smith, findings which clearly demonstrated that introducing the cell-grazing method result in dramatically increased production in contrast to traditional methods of handling Hawaii beef cattle.

**Costs Returned Quickly**
PingSun Leung, assistant professor of agricultural and resource economics, University of Hawaii, compared the use of the cell-grazing method to traditional continuous grazing. His findings showed that the cell-grazing method supported 578 animals compared to 338 animals using traditional grazing, almost double the number on the same 338 acres of land.

The animals were able to gain the desired 200 pounds of additional body weight per head in 161 days compared to the former 299 days—almost half the time. The initial setup cost of a cell-grazing system on the 338 acres was $31,000. It covered equipment, materials, fencing, and labor. This cost was returned during the first 9 months of operation.

To spread knowledge of improved cell-grazing methods, Smith has been giving 5-day workshops around the state. To date, over 160 people have been trained during seven workshops conducted on Hawaii, Kauai, Maui, and Oahu.

**New Fencing**
Along with improved grazing methods, a new fencing concept—the permanent power fence—is being recommended. Only two or three strings of wire are required. Posts can be made of various materials (wood, steel, fiberglass) and fewer are needed.

A mile of fence can be put up for one-fourth of the cost of a conventional fence, and two people can put up 3,000 feet or more of fencing in 1 day.

**Cattle Numbers To Increase**
Some ranchers have set timetables to meet new production goals using the new cell-grazing method. Kahua Ranch has a program which adds three grazing cells per year; plans call for the entire operation to be in grazing cells by 1986. Parker Ranch on Hawaii has two grazing cells in operation and there are plans to add more.

"Most cattle ranchers will be adopting variations of the high-density grazing approach," Smith predicts. "It's very likely," he says, "that there will be a significant increase in the number of cattle in Hawaii within the next 10 years." □

# New Mexico Solution: Specialty Crops



***Rita A. Popp***
***Extension Media Specialist***
***Department of Agricultural Information***
***New Mexico State University, Las Cruces***

No one seems quite sure what to call them—some people say "specialty," others say "high value" or "alternative" crops. But whichever term is used when New Mexicans hear them they turn their heads and listen.

Growers are looking for ways to survive in farming. Some think specialty crops are the answer. Farmers know how to grow and market the traditional agronomic crops (cotton, alfalfa, grains, and sorghum), but with pumping costs for irrigation increasing, other inputs high, and profits slim, many are finding that traditional know-how is not enough.

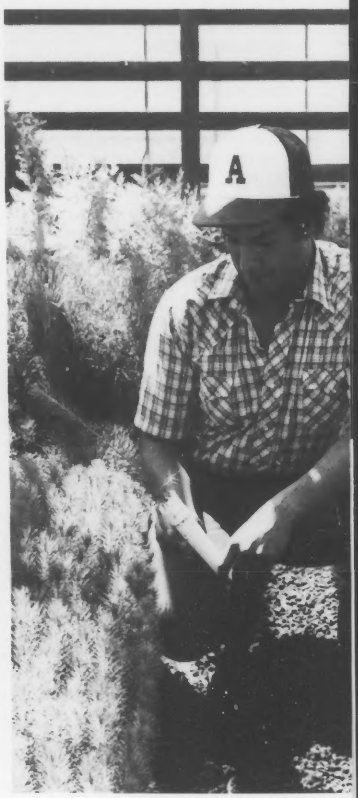
**Anything That Will Grow**

In New Mexico, growers are talking about and experimenting with specialty crops. Under cultivation are pumpkins, raspberries, broccoli, cauliflower, tomatoes, lettuce, chile, cucumbers, pistachios, pecans, and blue corn—about anything that will grow in New Mexico's irrigated soil.

In some cases, they have joined with county Extension agents and specialists who are conducting variety trials of vegetables and fruits.

New Mexico State University (NMSU) researchers are looking far into the future, experimenting with such plants as guayule, a desert shrub from which rubber can be extracted. Plant genetic engineering projects are underway which could lead to highly desirable characteristics, such as the ability to use water more efficiently.

Less exotic, but drawing the interest of local people, are NMSU's afghan and ponderosa pine tree projects in the southeastern and northeastern parts of the state. NMSU faculty believe pines can be grown for the live tree and Christmas tree markets.



*To boost agricultural income in the face of high production costs, New Mexico growers are experimenting with such "specialty crops" as pine trees for the Christmas market.*

**Boosts Agricultural Income**

New Mexico statistics show specialty crops significantly boost agricultural income. NMSU Agricultural Economist Tom Clevenger found in 1981 that production of specialty crops amounted to only 6 percent of the state's 1.1 million irrigated acres. However, they contributed 27 percent of the estimated gross receipts from irrigated acreage.

Dona Ana County (NMSU's main campus location in southern New Mexico) led the state in per acre receipts in 1981. Specialty crops accounted for 34 percent of the 88,250 planted and irrigated acres. Per acre value without specialty crops was $475, but with specialty crops it averaged $972.

"There would appear to be potential," Clevenger says, "to enhance profitability on acres now in forage crops by growing specialty crops to get a more a more efficient, economical crop mix for New Mexico."

A Dona Ana County family is succeeding with a vegetable crop mix that rotates seasonally. The Koening family's operation includes a newly constructed packaging plant for crops such as asparagus, lettuce, spinach, onions, cucumbers, and bell peppers grown on 400 acres.

**Evaluating Vegetables**

In central New Mexico, Torrance County Agent Bill Neish, Farm Demonstration Specialist George Dickerson, and a local farmer evaluate vegetables, such as asparagus, broccoli, and cauliflower, that might be adapted to the shorter growing season of the Estancia Valley.

"Alfalfa profits vary from producer to producer," Neish says. "There is a $75 to $100 per acre return for a person's labor, and some people are projecting three to four times that much for vegetable crops. But we don't know what the yields will be on a commercial scale."

**Promoting Chile**

Whenever the subject of high-value crops is discussed, three issues surface: which specialty crops can be grown in New Mexico, how to grow them, and how to market them.

Chile production on a large scale is a recent phenomenon.

Production was so low in 1971, figures for chile weren't reported in the agricultural statistics. Last year the chile grown was valued at $30 million. NMSU research has been responsible for developing many of the varieties presently grown commercially. Discussions at the 1984 Chile Conference focused on a proposed commission to support chile research, promotion, and market development to enhance profitability.


Grapes are another specialty crop with recent plantings of more than 4,200 acres of mostly wine grapes. Since of many of those acres have been planted by foreign investors with European experience, there is a question as to whether imported techniques will produce quality wines with large-scale markets.

Farmers and NMSU faculty agree that marketing high-value crops is a skilled specialty in itself and more marketing expertise is needed in the state.

Neish agrees: "Most farmers don't want to get into the hassle of marketing. They just want to grow the crop and have somebody give them a fair value price."

**Need For Marketing Support**

Stanley Farlin, Extension assistant director for agriculture and resource development at NMSU, says Extension needs to learn more about growing and marketing aspecialty crops. "There is a real danger to Extension promoting new crops without proper marketing support," he says. "Right now, marketing systems don't exist for new crops as they do for traditional crops."

Extension administrators are quick to point out, however, that efforts are being made on several fronts to develop or acquire this expertise.

State legislative funding will be sought this year for five new agricultural specialist positions—in marketing, vine and small fruit crops, vegetables and seed crops, tree and woody ornamentals, and crop demonstrations, according to John Oren, NMSU director of Extension.

In August, NMSU agricultural faculty and growers in the state toured the California agribusiness region. L.S. Pope, dean of the College of Agriculture and Home Economics, says New Mexico can learn much from its western neighbor. "California is successfully integrating agricultural programs, with processing tied to production," Pope says.

**New Ideas**

Another effort is a "thinktank" of Extension and research faculty and a New Mexico Department of Agriculture representative. Together they are considering marketing avenues for new crops. They are exploring the idea of an agricultural marketing company which would broker, buy, process, and sell New Mexico products.

In the northwest corner of New Mexico, for example, San Juan County Agent Orion Utton has worked with local people to establish two farmers' markets. "The area is becoming a trade center and people are coming down from Colorado and buying vegetables," Utton observes.

"We will gradually see an increase in vegetable production for sale." Potential exists for growers to fit into a regional onion or lettuce market," Utton says, but he adds, "it would take organization."

In Eddy County in southeastern New Mexico, growers are raising more chile—about a 4-percent increase in production in 1983 compared to the previous season.

Eddy County Agent Dan Liesner is supportive of grower's wishes to try more productive crops such as chile. He is working on an afghan pine project and has been trying to find a market for machine-harvested tomatoes. Finding a marketing "window" for specialty crops is a key to success, he points out.

Liesner suggests that growers start small, perhaps planting 5 acres of pines, or a small crop of vegetables.

**Optimistic Projections**

"I think the interest in new crops is great, and when I talk to farmers who are interested, I encourage them. I am an eternal optimist and that's the only way we can be in farming," he says.

NMSU's Extension director also speaks of optimism and necessity. "I'm excited about the opportunity for New Mexico to become more involved in specialty crop production," John Oren says. "When we look at the tremendous costs of production in agriculture, we have to look at specialty crops to keep our farming operations viable. They can have a tremendous economic impact on New Mexico." □

# Mississippi Farms The Water



***Jimmy Bonner***
***Extension Writer-Editor***
***Information Department***
***Mississippi State University***

Cotton and soybeans may still be king of the hill in Mississippi agriculture, but some lesser known aquacultural enterprises are making their presence known in agricultural circles.

Although the individual value of catfish, crawfish, and other farm-raised species is well below that of big-ticket and traditional agricultural crops, the aquaculture industry adds an estimated $175 million in farm value to the agricultural economy of Mississippi and provides thousands of jobs for citizens in the state.

The aquaculture industry in Mississippi includes farm-raised channel catfish, crawfish, longmouth bass, bluegill, and bait minnows.

Extension is providing educational information materials based on proven research and management technology to producers in the industry to enable them to more profitably produce and market their products.

**Newcomers To The Establishment**

Catfish and crawfish are—relatively speaking—among the newest farm-raised enterprises in the state.

Almost all catfish produced in Mississippi are grown in the Delta area in the northwest part of the state.

Catfish production has increased progressively since its beginning in 1965. Acreage for catfish production grew from 25,000 in 1979 to 65,000 in 1983.

"Although the catfish industry is currently expanding at a slower rate," says Tom Wellborn, head of the Extension Wildlife and Fisheries Department, Mississippi State University (MSU), "it has main-

tained its reputation for year-to-year growth by climbing to a record 110 million in farm value in 1983. Extension educational programs have played an important part in this growth."

**Local Processing**
In Mississippi, catfish culture is an important industry because, unlike many other raw products that are processed out of state, essentially all Mississippi-grown catfish are processed locally. Twelve catfish processing plants are located in or around the Mississippi Delta which processed a record 140 million pounds of catfish in 1983.

Farm-raised catfish are grown in fresh-water ponds averaging about four feet deep. A typical catfish pond is about 17 acres. About 4,500 fish are stocked per acre.

Currently, primary markets for catfish are in the South and Midwest, although new markets are being developed as supplies increase.

**Methods For Improving Yields**
"A typical catfish pond yields about 5,000 pounds of fish per acre," Wellborn says. "Farmers have improved yields by using improved production, harvesting techniques, and water management practices recommended by Extension specialists."

In 1984, catfish prices paid to the farmer by processing plants reached an all-time high of 75 cents a pound.

**Obtaining Meat From Byproducts**
While catfish are sold primarily as whole fish and filets, recent industry developments are allowing processors to use byproducts once discarded as suitable only for pet food.

Extension food technologists have provided processors with the technology to obtain high-quality meat from the frames of catfish after filets are removed.

"The meat, called minced catfish, is then used to make fish patties, fish sticks, and reformed filets," says Gladden Brooks, Extension food technologist at MSU who helped develop the process.

Brooks estimates that 4 million pounds of minced catfish can be produced annually in the state, adding a retail value of $5 million to the catfish industry. The new technology, he believes, may attract new industry and result in a wide range of processed catfish products.

**Crawfish: Popular Delicacy**
Crawfish production began in the state in 1980 and is providing added income for more than 40 producers with farms, for the most part, in the Mississippi Delta.

Crawfish (also known as crayfish, crawdads, or Dixie Lobsters) are a novelty in many parts of the country and a popular delicacy in parts of the South such as Louisiana and east Texas. Louisianians produce about 80,000 acreas of the crustaceans, while Mississippians produce about 1,000 acres. Crawfish culture is Mississippi's newest aquacultural enterprise.

**Critical Oxygen Requirement**
Crawfish require specialized treatment to produce domestically, and, like catfish, need extra oxygen through the use of aerators when produced en masse.

Oxygen depletions can do away with an entire crop in less than 2 hours. Crawfish ponds are shallow, drained in May and June, and after draining, are tilled and planted in rice, grain, or other crops for crawfish to feed and forage on.

"We try to create a favorable growth environment for the crawfish—it's critical," says Randy MacMillan, Extension wildlife and fisheries specialist, headquartered at the Delta Branch Experiment Station, Stoneville, Mississippi.

Crawfish can reach marketable size in about 60 days after hatching in the fall with yields of live crawfish ranging from 500 to 1,500 pounds per acre. However, the production cycle is considerably more complex and time consuming than the 60-day growing period.

Both crawfish producers and Extension specialists believe that increasing consumer acceptance and the present market

availability provide the key to increasing its potential.

To meet the goal, a new research facility designed to study crawfish production has been established: the Delta Branch Experiment Station at Stoneville, Mississippi. The station is expected to provide vital production information to growers of the "Dixie Lobsters."

**Seafood Boosts State Economy**

The state's seafood industry is a boon to the Mississippi Gulf Coast. Shrimpers alone annually take about 5 million pounds from the Gulf of Mexico's shallow waters. While the dockside value of seafood products in Mississippi is approximately $25 million, the total seafood industry adds about $150 million annually to the state's economy.

"The seafood industry has been important to the Mississippi Gulf Coast for the past three-quarters of a century," says David Veal, head of Extension Sea Grant Advisory Services on the Gulf Coast.

The Sea Grant Advisory Service was organized in 1972 to help Gulf Coast seafood producers produce and market their products more profitably.

**Strict Quality Controls**

"While the national per capita consumption of seafood is about 12 pounds," Veal points out, "coastal residents consume about twice as much as inland consumers."

In addition to shrimp, the Mississippi coastal waters produce abundant quantities of oysters, crabs, finfish, and other seafood products. The Gulf Coast also has a large industrial finfish industry engaged in the manufacture of pet food, fish meal for poultry feed, and fish oil.

Researchers at Mississippi State University are testing the economic feasibility of producing fresh water shrimp in areas of the state outside the catfish-rich Delta and the Gulf Coast. If further studies support the profitability of producing fresh water shrimp, specialists hope this venture will provide another important souce of income for growers and meet the demand for seafood products. □

***Farm-raised catfish and crawfish are newcomers to Mississippi's aquaculture industry but they are adding to the state's agricultural economy and providing thousands of jobs.***

# Is There A Crop Doctor In The House?



*Jere A. Brittain*
*IPM Coordinator and Extension Horticulturist*

*Clyde Gorsuch*
*Extension Entomolgist*

*R. Walker Miller*
*Extension Plant Pathology*
*Clemson University*
*South Carolina*

The big chills of '82 and '83 were not the only news in the South Carolina peach industry. Thrity-five peach growers paid Clemson Extension $125,000 per year for scouting services on about 11,000 acres of orchards. The experimental, fee-based program, Peach Orchard Management Services (POMS), was the offspring of a federally funded pilot IPM project.

POMS originated in the three-county region known as the Ridge of South Carolina in 1980. Clemson added a second unit in the Piedmont region in 1981 and a third unit for Sandhill and Upper Coastal Plains growers in 1982.

**POMS Services**

Basic services provided by POMS were soil and foliar analysis for nutrients, nematode sampling and analysis, aerial photographs, tree inventories, pest monitoring, development of orchard histories, fruit quality assessment, and interpretive reporting and consulting.

The fee for the basic service package was $12.50 per acre for bearing orchards and $6 per acre for nonbearing or declining orchards. POMS growers with orchards meeting specific criteria could subscribe to "Reduced Pesticide Services" (REPS).

About 3,000 acres were required to support each of the four POMS technicians at the $12.50 per acre fee. The technicians, who operated the program, each hold Master of Science degrees—two with degrees in horticulture and two with degrees in entomology. All were assigned to the county-district Extension system and received close technical support from four key specialists.

**Observations And Conclusions**

Clemson designed POMS as an experiment in delivering the Extension program to commercial peach growers rather than as a permanent feature of the Extension system. The following observations and conclusions are based on 8 years of combined experience with POMS, Peach IPM, and private consulting:

- There is a need in the South Carolina peach industry for direct and highly individualized information and advisory services, and a significant percentage of peach growers are willing and able to pay for these services.
- It is possible, although awkward at times, to deliver client-funded, individualized information and advisory services through Cooperative Extension structure.
- Operating a fee-based information and advisory service within Cooperative Extension sharpened the focus of the total Clemson peach program (including research, teaching, and regulatory).
- Nonparticipating peach growers benefited from POMS. Extension specialists, researchers, county agents, and administrators had tremendous feedback from growers through POMS technicians.
- POMS technicians probably should be listed on organizational charts at the level of area agents.
- "Matrix supervision" involving the district agent, the principal Extension pomologist for peaches, and county agricultural agents with multicounty fruit assignments seems appropriate.

**Transfer Of Service To Private Industry**

Clemson operated the POMS project until December 1983. Extension's withdrawal was part of a planned move to enhance the transfer of services provided by POMS to the private sector.

POMS was directly responsible for the formation of a 3,500-acre private consulting unit in the South Carolina Piedmont region. Edmond Taylor, a former POMS agent, initiated the transfer of a group of about 12 growers from Extension to private services in early 1983.

The Extension POMS units, totaling about 5,000 acres, remained in place in the Ridge and Upper Coastal Plains through 1983.

Further private consulting development, as well as maintenance of dynamic Extension and agribusiness services, will depend heavily on the ability of land-grant universities, such as Clemson, to train practical crop doctors.

**Need For Crop Doctors**

Program relevance will take care of itself with commercial growers if Cooperative Extension Services provide workers who are competent to suggest solutions for 90 percent of common crop problems. Two- or three-layered referral systems will not maintain credibility with these growers. They are going to call someone who can and will provide straight answers and opinions. They won't settle for information; they want strong advice from a trained and experienced crop doctor.

*Janine Frazza, Extension agent, Peach Orchard Management Services (POMS), Clemson University, South Carolina, investigates a peach tree for signs of disease. POMS was an experimental fee-based information and advisory service aimed at commercial peach growers.*

**Training Resources Available**

Resources are already available in our system for rigorous nonthesis, professional training. Well-directed internships and courses could tilt the system toward crop doctoring.

As the POMS project indicates, South Carolina peach growers want direct, practical services and many are willing and able to pay for them. Creating a new breed of crop doctors can help Extension meet these needs not only for peach growers in South Carolina but also for crop producers nationwide. □

# HAYMARKET Is O.K., Oklahoma!



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*Extension*
*Information Specialist*
*Agricultural*
*Information*
*Department*
*Oklahoma State*
*University, Stillwater*

"We're getting $10 to $15 per ton more for our hay!"

"It's almost to the point we're getting too many phone calls!"

"Buyers don't question the protein content or other quality factors when the hay is listed on HAYMARKET!"

These are some of the enthusiastic quotes from users of Oklahoma's electronic alfalfa marketing system known as HAYMARKET after a year's experience.

The system, an outgrowth of cooperation of the Oklahoma Alfalfa Hay and Seed Association (OAH & SA) and Extension specialists at Oklahoma State University (OSU), listed more than 10,000 tons of quality tested alfalfa hay during its first 15 months of operation.

Through the first full year, HAYMARKET handled 68 lots of hay from 29 sellers at a seasonally averaged price of nearly $94 a ton. In fact, the system has been so successful, it could be self-defeating.

**Successful Contracts**
"Numerous producers listed and sold one lot of alfalfa on the system," says Loren Rommann, Extension forage specialist, "and, as a result, their entire production for the year has been contracted!"

"In 1983," Rommann says, "one producer contracted his entire 1984 crop. Now he has no need to list again this year."

Rommann recognizes that that's what the HAYMARKET electronic marketing system was designed to do: bring buyers and sellers together with a quality tested product and let the bargaining set the price.

HAYMARKET's history goes back a few years.

**Background**
In July 1982, as they mapped out plans to combat publicity about blister beetles in Oklahoma alfalfa, one of the directors of the OAH & SA remarked: "Even though we can do an excellent job of producing alfalfa, marketing is our biggest problem!"

Even before 1982, agronomists at OSU saw the need to "certify" alfalfa in a fashion similar to grains.

Then, in the summer of 1982, OSU hired a new coordinator, Gerritt Cuperus, for the Integrated Pest Management program whose background included experience on a dairy farm and graduate research on alfalfa insects.

**Next Step: Marketing**
"After our visit with Cuperus," Rommann says, "we decided marketing was a logical extension of the production programs in which we both were involved."

At that time, after much discussion, the program was condensed: the crop would be sampled and evaluated by an unbiased third party with a charge paid by the producer. Mandatory test factors would include a protein and moisture analysis by the OSU Agronomic Lab, a color rating, estimate of maturity, and percentage of foreign material. Basic information, such as cutting dates and tonnage, would be obtained from the producer.

"At this time," Rommann explains, "Extension Marketing Specialist Clem Ward began working with the program to analyze data gathered from reported sales."

**Program Publicized**
The program was publicized and the farm and popular press reported details, and announced a startup date of January 1, 1983. The publicity drew immediate response. Many callers were surprised to see alfalfa for sale in the middle of the winter. The first HAYMARKET printout was mailed in February to those who had inquired about the initial stories.

Soon afterward, members of several state, regional, and nationwide farm publications attended an informal field day and demonstration of the system. The coverage of this field day, held at Grady County OSU Cooperative Extension Center in Chickasha, Oklahoma, boosted an already popular program.

"Of course this has been a boon to producers, but buyers like the service, too," Rommann says. "They appreciate being able to find quality hay without driving all over Oklahoma. Several have even offered to pay for the service!"

In addition, HAYMARKET has been a tremendous educational tool in Oklahoma.

**Payment For Quality**
"Traditionally, few alfalfa producers tested hay for quality," Rommann points out. "But with this system, producers can get paid for producing higher quality forage, and HAYMARKET encourages them to do so with the mandatory testing provision."

A San Antonio, Texas, firm—National Hay Exchange—has worked closely with Oklahomans in forming the first privately owned systems. Also, Control (Control Data and Cenex) has obtained the details of the program with the idea of starting a similar system in Minnesota.

"The success of HAYMARKET, however, goes to the people involved," Rommann says. "The growers, the buyers, the county, area and state Extension personnel, and industry representatives have all helped to increase the efficiency of marketing quality alfalfa." □

# Database Curbs Crop Diseases



*Maeve McConnell*
*Visiting Extension Agent*
*Institute of Food and Agricultural Sciences*
*University of Florida, Gainesville*

Flor¹ ¹a growers and county agents are resonding faster than ever to crop-threatening pests and diseases by obtaining immediate access to up-to-date agricultural information from FAIRS, the Florida Agricultural Information Retrieval System. FAIRS is a statewide database developed 3 years ago by scientists at the Institute of Food and Agricultural Sciences (IFAS) in Gainesville, Florida. The Kellogg Foundation provided funds through SHARE (Special Help for Agricultural Research and Education), part of the University of Florida Foundation.

**Crop And Pest Database**
Last June, Kellogg funded phase two of the computerized crop information delivery system. In phase one, IFAS scientists developed a soybean, tomato, and citrus crop database. The second phase will expand the database to cover strawberries, avocadoes, limes, and mangoes.

Through FAIRS, many growers and county Extension faculty have instant access to crop and pest control information through computer terminals in their offices or homes. Virtually no computer experience is needed to use the system. Growers and Extension faculty can retrieve agricultural information from an extensive electronic library; they can diagnose crop production problems; and they can obtain recommendations designed for their individual situations.

**Easy To Use**
"From the start, software design has been geared toward simplicity of use," explains Fred Johnson, FAIRS project director and entomologist. "Now, with the software basically in place, we are ready to share the engineering of the system with other states so they can build databanks to fit their specific needs for food and fiber production."

The system was planned originally to disseminate pest control information but, according to Johnson, "We decided if you're going to provide information on pest problems, why not go a step farther so a farmer will have information on the entire production process?"

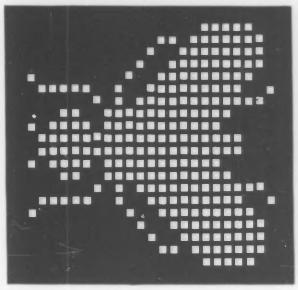
Johnson believes that access to FAIRS through office or home computers will improve communications between agents and growers. "The agent's job is to educate people and disseminate information. This system will help them do that," he says.

**Updating No Problem**
FAIRS has other advantages. As Johnson points out, "It doesn't take up a lot of space and it's easily updated." Corrections can be made instantly. Nor does FAIRS require any special training. "The system we designed is unique," Johnson explains, "and extremely user-friendly. You don't have to go to classes or understand any of the computer languages. In just a very few minutes you can get information on any disease or insect—the kind of information that would take hours to find going through the literature." Preparing a user-friendly system can be expensive. Such a system must be compatible with people's needs and be able to retrieve information quickly.

Often, this requires intricate engineering and complicated design. However, a quickly developed, less expensive program would have required much more effort from the user.

In the long run, information costs will be reduced because of the new system. The system will eliminate mailing out lengthy publications at substantial expense. The system will not replace all publishing but it will reduce the need for many reports.

**Simulated Specimens**
Other uses for FAIRS include



graphics capability. This feature permits farmers and agents to identify specimens by comparing them with the computer simulation.

**Sharing The New Technology**
How are agents and growers responding so far to FAIRS? They like the system and use it frequently. Their constructive criticisms have enabled system designers to improve its operation.

Other potential users are extremely interested. The agreement with the Kellogg Foundation includes sharing the technology.

Last year, over 30 demonstrations of FAIRS made lasting impressions on groups from states and countries. The most frequently asked questions are: "How do I use it?" and "How can I buy it?"

If you would like more information on FAIRS, contact Fred Johnson, Entomology Department, University of Florida, by phoning (904) 393-1938. □

# "Pick-Your-Own"—A Growing Farm Market



***John W. Courter***
***Extension Specialist, Small Fruits and Vegetables***
***University of Illinois at Urbana-Champaign***

Nothing beats fresh field-ripened fruits and vegetables, and to get them, increasing numbers of consumers are turning to pick-your-own farms. Not only are consumers saving money by picking their own produce, but producers are increasing their incomes.

Strawberries are a good example of this boon to growers. Illinois strawberry acreage was declining steadily until 1968. With the help of Illinois Extension, direct consumer harvesting was promoted and now strawberry farmers are harvesting 96 percent of their crop this way. The number of farms growing strawberries has increased by 40 percent in the last 10 years.

**Strawberries Lead The Way**
As labor shortages increased on Illinois strawberry farms in the early 1960's, the need for alternative harvesting practices became apparent.

Extension helped current and potential strawberry producers deal with this situation in a number of ways:

- Introduced marketing topics and advertising workshops into the programs of the Strawberry School, run by Extension at the University of Illinois. Previously the curriculum was almost exclusively production oriented.

- Encouraged customer harvest of experimental plots at the Dixon Springs Agricultural Center in southern Illinois.

- Began studies of customer demographics on pick-your-own farms in 1969 and conducted extensive studies in 1970 and 1978 to 1980.

**Guidelines And Concepts**
In addition, Extension conducted studies of innovative strawberry farms throughout the United States and Canada and prepared guidelines to help farmers improve their pick-your-own selling techniques.

Many farmers found that learning to grow their best berries specifically for consumer harvest required a totally new perspective. Many at first were negative and felt that a consumer harvest would not work because consumers would damage the plants and not pick the field clean.

But, as it turned out, people appreciated the opportunity to pick thier own berries and did a good job when given courteous supervision.

**Other Popular Crops**
A wide range of fruit and vegetable crops is sold through pick-your-own. Among the most popular crops are: strawberries, blueberries, raspberries, blackberries, cherries, beans, peas, tomatoes, and greens.

Most of these crops require intensive labor before they can be harvested and prepared for terminal wholesale markets.

Obviously, pick-your-own farmers must be customer oriented. The challenge is to plan field layouts, train employees, set prices, advertise, and learn how to deal with the public. Often, the business is a family enterprise.

For a successful pick-your-own operation it is important to choose a convenient location near a relatively large population accessed by good roads.

**Farm Trade Areas**
Extension data shows that 1 acre of strawberries can be marketed to a rural population of 2,500 people within 20 miles of the farm. The ratio changes on operations near big cities: 1 acre of pick-your-own for a population of 10,000. Many city residents may not know of the opportunity, or lack transportation.

Farmers use these trade area projections to expand their present acreage, discover new opportunities, and pinpoint overly competitive locations.

To enable farmers to increase their advertising skills, Del Dahl, head of Extension agricultural communications at the University of Illinois, helped to develop and implement an advertising program farmers could afford. As a result, one farm, serving as an advertising case study, doubled sales within a 2-year period.

Direct marketing is now a viable option for both large and small growers who properly assess their "trade areas"—an Extension-developed concept to predict consumer buying potential within locales. Small growers, for example, have reported gross sales of $3,000 to $4,000 per acre for the 5 to 8 acreas of strawberries they raise for local consumer harvest.

**Extension Aid**
Extension helps farmers improve their direct marketing in many ways. Invitations are extended to leading horticulturists, economists, and marketers to speak at winter schools in Illinois.

Extension publishes proceedings to document the educational programs, and these, along with horticulture fact sheets, provide every county with recent Extension recommendations for its clientele.

Extension cooperates with the Illinois Department of Agriculture to develop directories of pick-your-own farms for the general public.

**Benefits Of Direct Markets**
Consumers like pick-your-own farms because of the freshness of the produce and the family recreational aspects. On an Extension survey, a customer made the following comments:

"Ever since moving to southern Illinois, we have enjoyed the benefits of harvesting fruit on pick-your-own farms. Newspaper articles alert us to picking dates, farm locations, and crop conditions. County Extension 'talk' programs on local radio have been educational on the subject. We will continue to patronize pick-your-own farms because they are an economical alternative to soaring food costs, recreational for the entire family, and because we feel nothing beats *fresh* fruit!" □

# Onfarm Demonstrations: Proof For Profit



*C. Richard Maples*
*Extension Specialist, Agricultural Communications*
*University of Arkansas, Little Rock*

To prove that existing technology can maximize crop yields and profits Arkansas Extension is conducting on-the-farm trials in the state's cotton, soybean, and rice fields.

"Research Verification trial" is a term coined by W.J. Moline, Arkansas Extension director, to describe an effort to combine today's technology from the various disciplines into a crop production package which fits the farmer's situation.

**Cotton Trials**
Efforts to develop optimum crop production programs for individual fields began in 1980 with the High Yield Cotton Verification Trials.

The project was funded by a grant from the Ben J. Altheimer Foundation, a private organization established by an Arkansas cotton farmer.

Extension cotton specialist William E. Woodall was named project leader and assigned to work with an advisory committee comprised of Arkansas Research and Extension faculty members. The group selected five fields and developed an optimum cropping program for each.

The project leader worked directly with the farmer to make timely, yield-enhancing management decisions.

**Approach Pays Dividends**
After the first year of the cotton trials, it became obvious that an interdisciplinary approach to developing crop recommendations would pay big dividends to the farmer.

During the first 3 years of the trials, yields averaged 879 pounds of lint per acre, compared with a statewide average of 486 pounds. Returns per acre on trial fields averaged $203.58 during the same period.

The High Yield Cotton Verification Trials are still going strong in 1984. The number of trial fields has doubled from 5 to 10. As cotton production programs have been refined, yields and income have continued to increase.

**Similar Trials For Soybeans**
With the success of the cotton trials, a similar program began in 1983 for soybean producers. The project was funded by the Soybean Promotion Board, which administers volunteer grower check-off funds.

As in the cotton trials, a project leader, Michael Erstine, was assigned to work with the farmers. Erstine and an advisory committee of Arkansas Research and Extension faculty members selected four fields and developed total production programs for each.

**Yields High Despite Drought**
Soybean yields on the trial fields averaged 54 bushels per acre in 1983, a year when drought cut the statewide average yield to 17 bushels per acre. While irrigation was responsible for much of the difference, the trial fields still averaged from 8 to 17 bushels per acre more than adjacent irrigated fields with the same soil types.

With $8 soybeans, the 8- to 17-bushel increase meant an additional $64 to $136 of income per acre attributable to factors other than irrigation.

**Rice Trials**
Arkansas leads the Nation in rice production, but yields have generally declined since 1971, when per acre yields peaked at 5,050 pounds.

In 1983, Rice Research Verification Trials were financed by the Rice Research Board, which administers grower checkoff funds, to verify current University of Arkansas recommendations and identify areas where additional research was needed.

The Research and Extension Advisory Committee and Bobby Huey, Extension rice specialist and project leader, selected five fields in central and eastern Arkansas for the trials.

Despite a late start, the 1983 rice trials were successful. Yields on the five trial fields averaged 5,376 pounds per acre, 25 percent above the state average.

**Evolution Of The Trials**
Since 1980, when the cotton trials began, the Arkansas Research Verification Trials have been refined to meet the needs of the state's farmers.

One of the more beneficial changes may, on the surface, appear to minor to the casual observer. In 1983, county Extension agents began monitoring fields and working directly with farmers to improve the timeliness of management decisions.

Increased participation of county staffs in the verification trials paid immediate dividends. Agents who worked with state specialists to develop management recommendations were able to share their knowledge with farmers outside the program.

**The Bottom Line**
Arkansas' research verification trials for cotton, soybeans, and rice are not contests to grow record yields. Long-term analysis of production costs is an important part of the program.

The trials have shown farmers that University of Arkansas recommendations can improve financial returns as well as yields. □

# Wheat Demo Plots—Better Than Ever!



One of the oldest Extension teaching methods—demonstration plots—is back in use as a unique Extension program to inform Oklahoma wheat producers on recent varieties and modern crop management methods.

When Extension work began around the turn of the century, demonstration plots were the key to convincing growers of research-backed methods. Today, demonstration plots are few and far between—especially for growers who hope to see something other than just variety trials.

"We had scores of variety trials," says Roy Johnston, former Extension wheat specialist with Oklahoma State University (OSU), ". . . the only problem was, varieties were all we could show."

Also, Johnston says it was difficult to interest farmers in seeing the plots. "We decided to get them to come out," he says, "and show them something that works . . . that meant field demonstrations that would show them reliable, regionally specific production information."

**Fund Demo Centers**

With that in mind, OSU agronomists went to the Oklahoma Wheat Commission with a proposal for funding several Wheat Production Demonstration Centers across the western part of the state.

"We wanted to establish several of these sites to fill in the gaps where we didn't have experiment stations," says Jim Stiegler, OSU Extension agronomist. "We had variety trials 'all over the state' but we wanted sites where growers could do some 'one-stop-shopping' for information on proven methods. We wanted a place where growers could come at any time during the season to monitor various ways of growing wheat."

In late 1982, the Oklahoma Wheat Commission supported the idea and provided initial funding. Because of the late season and droughty conditions at that time, the specialists decided to wait a season.

**Found Cooperative Growers**

"We used the time to find sites across western Oklahoma which had the land and soil types we needed, and cooperative growers who had the desire to work on such a project," Johnston says. "Also, we had to find growers who had the proper equipment to do the different tillage methods we wanted to demonstrate."

Praising the growers working with the project, Johnston says, "Their cooperation is vital. After all, these folks are essentially sacrificing this land for the 3 to 5 years' worth of tests. In addition, they are taking rainfall data for us and, in some cases, providing the labor!"

In all cases, the cooperators voluntarily refused any compensation for their time and the nearly 30 acres of land used in the tests.

**Tillage Sections**

"Although each site is different, all are divided into two sections—standard tillage and Lo-Till methods," says Gerrit Cuperus, Extension integrated pest management specialist, who has been working closely with the project since its inception.

"Also, each site has an economic study which includes several varieties grown under four different conditions," he explains.

"On one, we try for maximum economic yields . . . (we're shooting for 100 bushels per acre dryland). There, plant growth regulators, fungicides, field scouts, and other management tools are used to enhance production.

"Another involves the methods recommended to reach 1.5 times the county yield average; another is grown to reach the county yield average and the other is 'zero input,' " he says.

Within each of the tillage categories growers can observe a total of 26 treatments—each representing a management method, he added.

**Results**

The success of the program is building as word travels about the work done on the sites. This spring, more than 80 growers attended each of the four formal guided tours of the plots.

"These successes are the results of a cooperative venture," says Johnston, "It's not just OSU, it's not the Wheat Commission, and it's not just the farmers. It's the result of all three of these groups working together!" □

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*Extension*
*Information Specialist*
*Agricultural*
*Information Department*
*Oklahoma State*
*University, Stillwater*

# Profits Up, Inputs Down



*Rachel A. Surls*
*Former Extension Editorial Assistant*
*Extension Information Office*
*Virginia Polytechnic Institute and State University, Blacksburg*

A growing acceptance of integrated pest management (IPM), organic practices, minimum tillage, and the "prescription" approach to crop production is changing the face of agriculture in Virginia.

"Cutting down on input costs is the only way for many farmers to survive right now," says James Moore, Extension farm management specialist at Virginia Polytechnic Institute and State University (VPISU). "Virginia farmers haven't recovered from the 1980 and 1983 droughts. They are working toward the highest net profit with fewer inputs."

Economic pressures, he says, are resulting in farmers using more sophisticated management techniques. They are turning away from routine cultivation and spraying practices. Most farmers are searching for proven ways to keep yields up as they cut inputs down. Extension specialists at VPISU advocate the use of nematode assay, and field scouting to determine what kinds of weeds and pests are present before applying lime, fertilizers, and pesticides.

**Holistic Approach**

What farmers are discovering is that to farm well with fewer chemicals, it's impossible to separate the crop from the rest of the environment. To succeed in the new style of management using what is termed "the holistic approach," means becoming a scientist who looks at the soil, crop, insects, diseases, and weeds as an entire interdependent system.

John Luna, Extension entomologist at VPISU explains that integrated pest management is a pest control system founded on the holistic approach.

It is very popular with farmers, and, he says, through IPM they are finding that working with nature as much as possible can be very profitable. "One thing we're finding in integrated pest management," Luna says, "is that you can rarely solve a pest problem without looking at the entire farming system."

IPM brings farmers, or specially trained insect scouts of the County Farm Bureau into the fields to count both harmful and beneficial organisms. Only when numbers of the "bad" bugs reach a certain population level does spraying take place.

**Soybean Program Works Well**

Integrated pest management has been a great success in Virginia's soybean growing areas thanks to strong leadership by county agents, says William Allen, Extension's agriculture program leader.

Richmond County Agent Pete Newsome has won recognition for his work in IPM. He began trying to get interest in an IPM scouting program in the 1970's by sending letters. It wasn't until he visited the cash grain farmers personally that he got participation. Now 90 percent of the cash grain farmers in his county use IPM methods.

**Biological Control**

Newsome and many other county agents are also involved in biological control methods.

In many cases, biological controls can bring the pest populations down to reasonable levels. For instance, tiny parasitic wasps of a particular species are released by the thousands in Virginia every spring. Smaller than a typical gnat, they lay their eggs in the larvae of Mexican bean beetles, a major soybean pest. Other species of wasps attack cereal leaf beetles, which plague small grain crops. Thanks to the wasps, populations of these pests have been greatly reduced.

Raised by the Virginia Department of Agriculture and Consumer Services, the wasps are released in farmer's fields free of charge by Virginia Extension agents.

**Safer Pesticide Use**

Chemical spraying remains an integral part of the IPM approach, but what's significant is that spraying is done only when required.

"If large areas are sprayed repeatedly, pests may develop resistance. A product which knocks them dead one year can be ineffective a few years later," says Robert McPherson, an entomologist who heads the state's IPM program for soybeans.

Extension, Luna believes, can help growers implement use of these safer, low-toxicity insecticides. "Many farmers don't realize there often are less toxic alternatives to what they're using," he says. "We can help them choose these alternatives."

"Virginia farmers have come a long way in safe application of pesticides and using lower rates," adds McPherson. "Many farmers and custom applicators now attend clinics and workshops on safe, effective chemical use."

**Another Systems Approach**
Reducing unnecessary fertilizer use can be a way to cut costs.

In many cases, organic or biological farming practices, also a systems approach, could be an answer. Animal manures, green manures (crops grown to plow down for organic matter), and crop residues are cycled back to the soil in organic farming, then winter legumes such as Austrian winter peas, hairy vetch, or crimson clover, are grown to provide nitrogen to the following crop. The result is a more fertile soil which needs less fertilizer to produce a crop.

**Resolution Passed**
The Virginia legislature recently passed a resolution encouraging the Virginia Cooperative Extension Service and the State Department of Agriculture to make more information available on organic methods and for the land-grant universities to conduct more organic farming research.

To address the issue, researchers and Extension specialists at VPISU have formed a Biological and Organic Farming Committee. "We're compiling a list of publications already available on organic methods, and will then make some recommendations about what new research needs to be done," says Committee Chairman William Allen.

**Minimum Tillage Saves Soil**
Another popular movement in Virginia agriculture is also based on preserving the land. No-till and minimum-till farming are helping to save the rapidly eroding soil of many Virginia counties, making production possible on hilly acreages and greatly reducing erosion where this practice is used.

"The number of acres of no-till forage planted in Virginia rose from essentially none in 1981 to 27,000 acres last year," says Harlan White, Extension forage specialist at VPISU. Corn and soybeans have also taken off as no-till crops in Virginia.

Unfortunately, potential for weed and other pest problems may increase when planting into unplowed land, so pesticide use may be increased to keep production up under no-till, White points out.

**Computer Weather Monitoring**
Six years ago in the Tidewater region of Virginia, J. Ernest Wrenn, Extension county agent, noticed the narrow profit margins of local peanut farmers and wondered what could be done. The result today is a growing movement which emphasizes that every farm has different "best" management practices which will keep a farmer's land and profits healthy.

Called prescription farming, it is based on computer weather monitoring. Under this system, microcomputers receive information on rainfall, air, soil temperature, wind speed, and solar radiation for a grower's location. The computer model can then predict disease outbreaks for that location and decide if the time is right for planting and harvesting.

"Many farmers can reduce spraying for leaf spot from six to two applications during a season if they follow our computer weather advisories," says Allen Allison, Extension peanut specialist who helped develop the prescription program.

**Peanuts And The Total System Approach**
"Peanut farmers have traditionally used far more herbicides then they needed," Allison says. "We're eliminating the shotgun approach to weed management and applying more selective herbicides. More than ever, farmers are coming to us with weed identification problems."

"The entire Virginia peanut producing area used to have the same basic recommendations for chemicals," he says. "We're trying to move from that extreme to a total systems approach. Pest scouting, accurate seeding recommendations, and soil testing for nutrients and nematodes are all part of prescription production. So far, we've only scratched the surface."

**New Concerns**
There is another motivation for cutting back on chemicals in peanut country. "Farmers are concerned about Chesapeake Bay," Allison says. "They realize that agricultural chemicals have had some part in damaging it. They want the water to be clean again. They have a definite concern for environmental quality."

Farming in Virginia appears to be changing, but what does it mean? "In the past, we've only looked at our ability to get high yields in the short term," says John Luna. "Now, we're beginning to take a look at the long term effects of our production system as we seek new means for profitability." □

***A "prescription" approach to crop production is altering Virginia agriculture. Integrated Pest Management (IPM) cuts down on expensive chemical inputs and is seeing growing acceptance among soybean growers and other cash grain farmers.***

# Paying For Services Pays Off



*Gary E. Pepper*
*Extension Agronomist, Soybeans*
*University of Illinois, Urbana—Champaign*

Farmers in every state can benefit from Extension activities supported by federal, state, and local taxes. But Illinois soybean farmers are benefiting from an Extension project designed especially for them that is rather unique—the farmers have been paying for it themselves from their personal soybean profits.

Through the state soybean checkoff program, Illinois farmers contribute one-half cent per bushel from proceeds of soybeans sold. The money is collected and disbursed by the Illinois Soybean Program Operating Board (ISPOB), composed of 18 farmers. In August 1977, ISPOB began donating a portion of this money to support a Soybean Extension Project at the University of Illinois.

**Serving Needs Of Growers**
The project is staffed by a full-time Extension specialist in the University's Agronomy Department who devotes 100 percent of his time to soybean Extension work. Previously funds were not available to support such a position.

Working on a full-time basis, the specialist has the time and support needed to perform numerous activities beneficial to soybean growers. When field days are held by the Agronomy Department, the specialist provides expertise on soybean subjects, such as cultural practices and new varieties.

County staff now have a specialist to call on when planning sessions on soybean topics. Variety demonstration plots, also organized at the county level, offer soybean growers an opportunity to gain more from their investment in Extension since the soybean specialist is often directly involved.

**Benefiting From Applied Research**
The ISPOB grant also supports applied research beneficial to soybean growers. Plot work provides data useful to growers in evaluating alternative cropping practices to help maximize yield and profit. The trend toward using narrower rows has raised questions by growers on soybean variety versus row-space interaction. Extension organized a 3-year, three-location study that will help growers estimate yield responses from different varieties, as rows narrow to decrease non-cultivated spacings.

**Soybean Publications**
Several new publications have been published for soybean farmers as a result of the Soybean Project. *"Narrow Row Soybeans: What to Consider,"* is used extensively by county staff in counseling growers. The soybean specialist also uses the publication at various meetings as an educational handout piece.

A major contribution to published information available to Illinois growers is *Illinois Growers' Guide to Superior Soybean Production,* the result of a multidepartmental effort coordinated by the Soybean Extension Project. ISPOB provided a special grant for the initial printing of 35,000 copies.

Many soybean varieties are now on the market. To help growers compare varieties and choose the most profitable soybean for their operation, Extension initiated an annual survey of soybeans available in Illinois. The current survey contains nearly 400 variety descriptions and is provided to growers free of charge.

**Continued Support Needed**
From 1977 to 1982, ISPOB grants completely covered operational expenses as well as the specialist's salary for the Project. The initial grant specified, however, that the University would assume financial responsibility of the Project as funds became available. In 1982 to 1983, Illinois paid half of the specialist's salary.

**Funding Of Future Projects**
The Soybean Extension Project offers diversified services for Illinois soybean growers, helping them maintain a profit from their crops. What's unique is that growers have provided most of the funding. In a period where tax dollars are shrinking in buying power and becoming less available to the Extension Service, new and alternative ways of funding are needed. Producer organizations, such as ISPOB, must be considered for supplemental, if not full funding.

Admittedly, every program area in Extension may not have a grower or industrial group to support activities. In the crops and livestock area, however, grower organizations and industry associations do exist that can provide support. The key to obtaining funds may be as simple as identifying such groups and illustrating to them the potential benefits gained by supporting Extension projects. □

# Action-Packed Ag Media Days



***Patricia Loudon***
***Deputy Director,***
***Information and***
***Communications***
***Extension Service,***
***USDA***

Have you got the whole story on agriculture? Media representatives in Nebraska do.

This fall's annual Media News Day drew a record number of print, radio, TV and wire service correspondents to the Lincoln campus for a comprehensive update on agricultural programs and related economic issues.

A new format, increased marketing and advertising, and high staff involvement throughout the Institute of Agriculture and Natural Resources (IANR)—all added up to excellent media response and participation. Thirty representatives from 26 media organizations across the state attended the 1-day seminar.

A team of staffers from the Department of Agricultural Communications developed and managed the program; James Randall, broadcast specialist, chaired the team. Reporters were welcomed with a brief orientation at the Agricultural Communications building. Next they divided into sections (radio, TV, and print) and were transported to concurrent sessions in three exciting research areas on campus. The groups rotated sessions every hour.

**Tours**
At one stop on the tour, George Meyer and fellow researchers at the University of Nebraska bypassed Mother Nature to breed plants and promote growth. Media representatives observed chambers where computer-fed Nebraska weather data.

The one-of-a-kind Nebraska Tractor Testing Lab was another tour stop. There, Lou Leviticus and staff test American and foreign tractors on an outdoor oval track and indoors with sophisticated testing equipment. While Nebraska is the only state to prohibit by law tractor sales without prior testing and passing, people worldwide look to this lab for valuable data when buying farm equipment.

A group of viruses, discovered by Jim Van Etten and other Nebraska researchers, may open the door to biotechnology at IANR. These viruses replicate and infect lower plant life, and they possess characteristics that may be useful in transferring genes to plants.

At each tour stop, reporters conducted on-the-spot interviews, taped show segments, and photographed the researchers in action. A noon luncheon gave media reps an opportunity to meet key IANR administrators and faculty, other media colleagues, and ag communications staffers.

**Farm Income Controversy**
The afternoon session featured Michael Boehlje, a thought-provoking ag economist from Iowa State. Boehlje addressed the dual topics of financial stress and public policy as they relate to today's farm income problems. His proposed solutions provoked many diverse reactions from panelists selected to respond to his presentation. These included: Mark Drabenstott, senior economist, Federal Reserve Bank of Kansas City; Richard Gady, vice president, ConAgra, Inc.; Bryce Neidig, president, Nebraska Farm Bureau Federation, and Martin Strange, co-director, Center for Rural Affairs, Nebraska.

Media reaction and responses to the financial management session and morning tours were extremely favorable. "To focus on a special issue and bring divergent interests in an open forum is a definite plus," said Robert Bishop, editor of the *Nebraska Farmer*. "It's also an opportunity to meet and interact with other agricultural communicators and Nebraska faculty and to explore ideas, issues and areas of concern."

Roger Flemmer, associate farm editor, KFAB radio, agreed, "Media day is an investment in our program—an opportunity to investigate areas in agriculture that we don't often cover."

**Mississippi Media Event**
Fourteen key newspaper executives (editors and publishers) attended a 2-day media event in Mississippi, reports Ralph Ballew, leader, Extension information. Extension Administration hosted the meeting with Barry Jones, managing editor, news, providing overall leadership for the event.

Representatives heard presentations on key Extension program areas and agri-business issues and concerns. The group also toured the Extension Center, including the Information Department, and discussed print media work and future computerization plans with staff editors.

"These key newspaper executives, who are state opinion leaders, now have a better understanding of Extension and its mission," says Ballew.

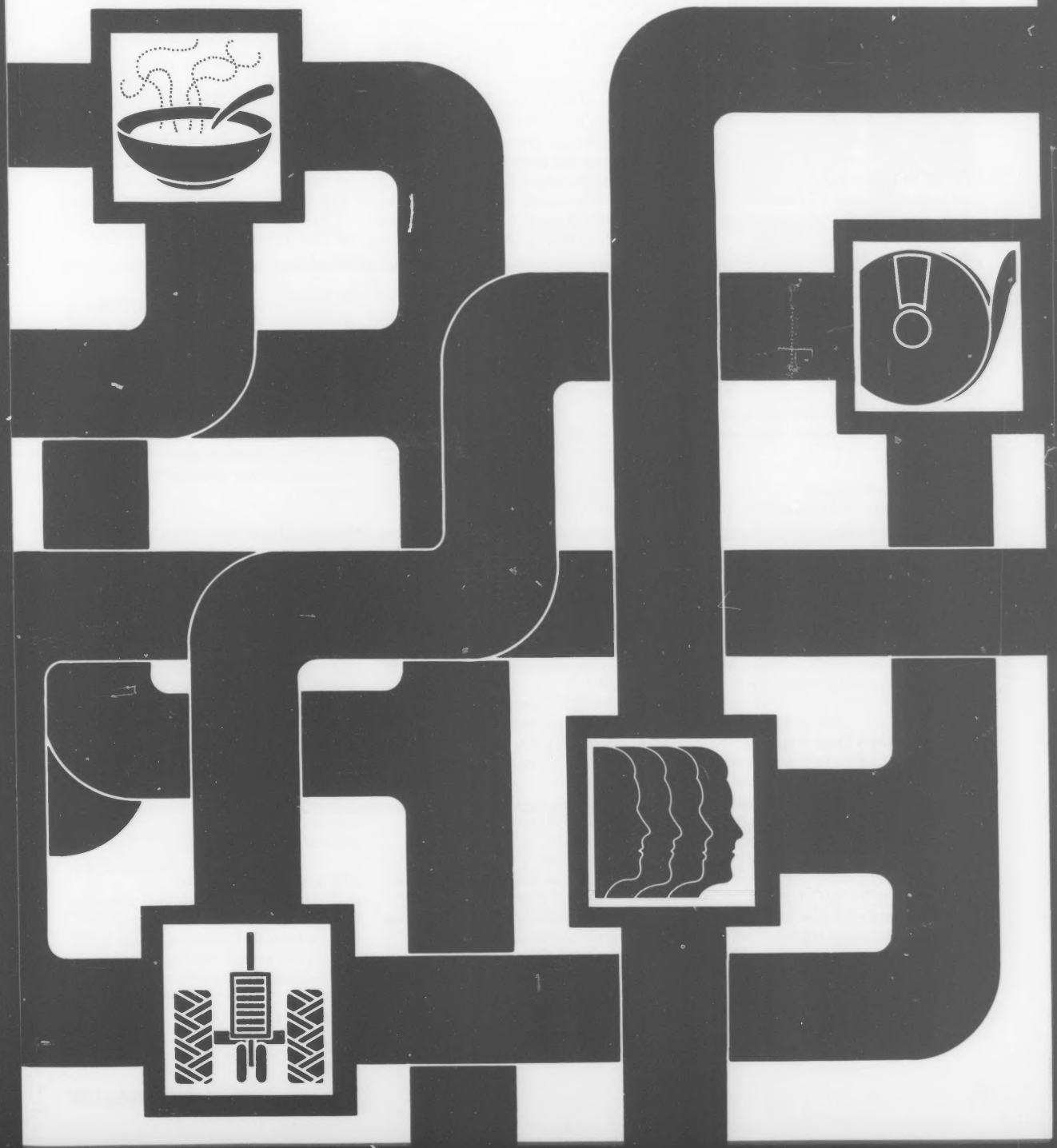
**KSU Media Day**
An appearance by Secretary of Agriculture John Block highlighted the second Ag Media Day program on the Kansas State University (KSU) campus says Gary Vacin, head, Department of Extension Information.

The 2-day event is sponsored by the College of Agriculture, Cooperative Extension Service, and the Agricultural Experiment Station. Thirty-three media representatives from print, radio, television, and the wire services attended the program, which featured a presentation and panel on "Fats and Oils in Human Health: Separating Fact from Fiction"; an audio-visual presentation by award-winning photographer, Jim Richardson, *Denver Post,* and more than 90 one-on-one interviews with 32 of KSU's top faculty. □

Winter 1984 United States Department of Agriculture

# extension review

## Accountability and Evaluation



# review

## What Does The Federal Partner Want?

Believe it or not, the federal partner is interested in the same kinds of accountability and evaluation information that states and counties are.

So when you wonder what kind of accountability information the "feds" want, why and what will be of use to them, you probably already are closer to the answer than you realize. Ask yourself:

- Who are the influentials and decisionmakers who "call the shots" in my state or county?
- What kind of questions do they ask me and what information do they want?
- What kind of information packaging gets their attention, approval and action?

You will shape county accountability and evaluation to respond to locally identified problems, issues and questions. You will decide what information you need, for whom, and search out how to find it. Your progress reports, conclusions and recommendations will get passed along to supervisors, local influentials and decisionmakers and interested others.

**Can Strengthen State Reports**
When your CES state office is asked program questions or must justify budgets, your county reports will feed into whatever response, proposals or reports are developed. When your county results contribute data which can be aggregated with that of other counties, the result will be a more powerful total state report than would otherwise be possible. Then, too, occasionally your county narrative may be unique or so outstanding that it surfaces as a separately identifiable item in the state report.

How does information passed along to the state CES office get used in the county? Do reports outline progress with clientele, improvements or innovations in the program development process, functional operation, staffing and so on? Does the budget information you submit also guide your review of the resource allocations within your control in the county? Can it be used to justify increases in funding, both in-house and from non-Extension granting sources? The kind of information most useful to you in the county is probably also most useful to your state CES office and to us here in ES-USDA.

One fact that county Extension workers sometimes forget is that CES, the state partner, is the channel through which the county partner's accountability and evaluation information reaches ES-USDA. Information provided by counties is aggregated, summarized, combined or otherwise massaged in the state level reporting process. This process often leads to alteration of county reports. But this is to be expected in a process which takes information useful "as is" in the county generating it, and reworks it along with information from other counties in the state to increase the size, scope and result impacts for the state as a whole. It is this larger in-impact more concise-in-size version that ultimately reaches us in ES-USDA.

The federal partner goes through state accountability and evaluation information in a parallel manner to that of states.

**What Kind of Accountability and Evaluation?**
That which helps us justify budget requests, respond to inquiries from the Congress, congressional aides, the Government Accounting Office, U.S. Office of Management and Budget, USDA Secretary's Office and others at the Department level, the Assistant Secretary for Science and Education, Extension Administrators and others, State Extension Directors and state counterparts to national program leaders, universities, media, agencies and organizations, commodity groups, special and public interest groups, professional and trade associations and the general public.

**Response to Inquiries**
Information counties provide to states helps us convey:

- how funds are being used
- cost effectiveness
- who we serve, how many, how
- why program is needed, what's happening, accomplishments
- how Extension supports USDA thrusts
- trends, new facets of existing programs
- specific examples of program success, documented impact

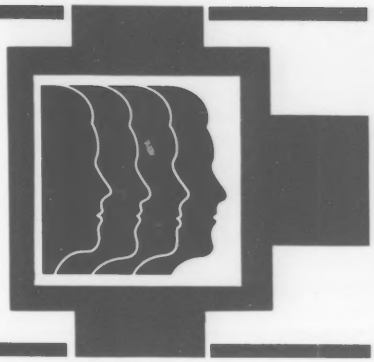
**Who Needs The Information?**
We all do, in part. Individuals use what they need to meet the responsibilities associated with their position.

**How Is The Information Used?**
In many ways. Some ES staff develop the national reports required by funding sources and others plan new budget justifications and programs, help improve existing ones, generate communication to states, and territories, prepare special reports, write speeches and briefing memorandums for the Secretary and USDA Administrators, create media releases, serve as liaison to the groups previously mentioned, serve as a locator reference for what is being done where, act as a key part of many networks, and more.

The accountability and evaluation information you provide to document local county happenings ultimately becomes an integral part of the proud organizational achievement record all of us in the Extension "family" collectively share as partners. □

# contents












**extension review**

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# Guidelines From The Grassroots

*Jim Shaner*
*State Information Extension Specialist*
*University of Missouri, Columbia*

They were animated people, most in seed caps and jeans. Their questions were tough: How do you stop tons of soil from moving off your farm? How can you afford to save soil when you're plowing every acre to turn another dollar to save your farm? Across the cavernous room, educators and parents listen as a minister tells of a single mother—crushed by utility bills and food costs—trying to cope with problem kids. Different members of the group ask: Where will tomorrow's jobs be? Who will help the poor? The elderly? Together they turned the Independence Extension Center into a warehouse of ideas for coping with this decade of change.

**Volunteer Investment**

More than 200 of these volunteers invested roughly 2,600 hours meeting and studying materials to help establish Extension's educational priorities and approaches in meeting them. Their goal, says regional Extension director Al Black, was to put Kansas City Extension "at the cutting edge" for developing educational solutions for the problems of the 1980's.

To ensure substantive results, Extension used a four-step process, developed by rural sociologist Daryl Hobbs, University of Missouri at Columbia, and Black. First, interviews of 60 opinion leaders helped establish the issues. Then Extension councils in each county listed the issues they and their neighbors faced. Next, Kansas City's Extension staff collected data to analyze trends. Then, using the results of this process, volunteers, chosen to represent the broad interests of Kansas City, identified five categories of concern: economic development, energy, family, food and fiber, and providing human services.

New things are already happening in Kansas City. For one, planning brought together groups that had never been together before.

That led to the "first ever" BEST Conference—Business and Economic Strategies for Teens. The program, cosponsored by the Missouri Council of Economic Education with support from the Cray Foundation, used a quiz-bowl format. It taught about the economy to a "cross section of young people." Black says his staff also is working with the University of Missouri at Kansas City and others to study the job skills that will be needed for tomorrow's work. Then Kansas City Extension will work to help local organizations restructure their curricula to provide that training.

Saving energy also ranked high in Kansas City. Gail Imig, associate dean and director of Extension home economics, says retrofitting makes older homes more efficient. "Retrofitting" can range from insulating windows to adding greenhouses "to try to make passive solar heating more functional." The first step, says Imig, is an energy audit to identify "heat loss zones."

Glenda Kinder, area specialist, then developed an energy audit booklet and a videotape for airing over local cable television. It "walks people through" an energy audit of two older homes. The UMKC Communications Department produced the video. After training people to do their own audits, Kansas City specialists plan to train them to insulate and retrofit their own homes. Plans call for as may as three more teaching programs for cable television.

**Early Planners for the Future**

This kind of formal planning isn't new to Missouri. The state's first published area plan, completed in southeast Missouri's Bootheel, dates back to 1966. Since that time more than 30 plans were developed for the state's 21 geographic areas.

***Extension is helping authorities to involve citizens in the fight to curb crime. Here, at a special anticrime exhibit a police officer displays a case with drug paraphernalia.***

In the first, Bootheel farmers set Extension's directions on growing cotton. Now Extension planning encompasses Missouri's broad range of expertise. Besides such traditional disciplines as agriculture, the Show-Me State offers field specialists in continuing education for professionals, business and industry development, and in community development and local government. Specialists in those last two disciplines can assist communities in doing self-study surveys that aid in the planning process. All are part of Missouri's Cooperative Extension network, says Director Leonard Douglas.

Naturally, Douglas sees the purpose of these plans as drawing direction from the people they serve.

"You have to get to people talking about their own counties" for the planning process to work, says Douglas. That means tangible goals that people can achieve. If a goal is identified "by the people themselves, it's identified in terms of what it takes to reach it. It brings commitment."

*Top: Skyline of Kansas City reveals trucks loaded with produce moving past elevators along the Missouri River. Above: Grain prices are scrutinized by brokers at the Kansas City Board of Trade.*

Nationwide Extension uses grassroots direction for its programs. In Missouri those local results can have a statewide impact—and vice versa—as Extension staff work to integrate state and area plans.

**Kansas City Planners**

In Kansas City that process was rather straightforward. Tom Hill, director of 4-H youth programs for Missouri, met with Black and the region's youth staff to mesh their local plans with two national one's—Extension in the 1980's and the national needs assessment done for 4-H by North Carolina State University. Tom Henderson, director of Misouri's business and industry program, says Kansas City's planning resulted in a "nearly perfect mesh" between the economic concerns there and his program's major thrusts.

For instance, a $75,000 grant from the Economic Development Administration helped extend the individual counseling Extension offers Missouri business owners. In Kansas City alone, Henderson reports that brought in roughly $115,000 in new investment and the program saved two jobs and created four more. Projections for the state include more than 400 jobs saved, more than 250 new ones created, and new investments tallying as much as $8¼ million.

**Advisory Committees**

However, not all direction for Extension in Missouri comes from area plans. Advisory committees, beginning with those that work with Douglas and with the university system president, James C. Olson, also play a major role.

Advisory committees also help set directions in home economics, youth, agriculture, and in Henderson's business and industry and continuing education programs. Perhaps the most structured of those approaches is used in home economics. Gail Imig explains: "Planning starts at the county level. Advisory committees work with each Extension home economist to identify local needs. These are funneled through Extension's field staff representatives who identify key needs across the state for their corresponding academic departments. Teleconferencing, first within a region to give the local representative a broad perspective and then among the areas and regions, helps supply background to these representatives so they can set priorities at a campus meeting each December." (A "region" usually is comprised of two or three Extension "areas." Each area might include from three to 10 counties.)

*Kansas City 4-H'ers in a teen program learn first-hand about careers in medicine. At the Lakeside Hospital in south Kansas City an emergency room nurse chats with the youth about her various duties.*

Local planning and needs are taken into account in those first meetings and throughout the process. Then Imig works to integrate all this planning into a master plan that takes Extension's national plan into account. Members from each of the program advisory committees sit on an overall committee together with a representative for the Extension Homemakers Program and one for the Expanded Food and Nutrition Program.

*Below: Improving reproductive efficiency in hog and livestock production is an important part of Extension's commodity planning efforts. Here, swine producers Jim and Lois Phillips of Drexel, Missouri, get tips on the latest equipment to improve their weekly farrowing schedule.*

Together, they integrate national trends and guidelines with what the staff knows about Missouri families and the latest research findings. Then Imig says they "negotiate" the thrusts of their statewide home economics program for the year. Area staff adapt them to their areas and regions.

**Other Planning Efforts**

Besides the area planning process used by all Extension, the college of agriculture gets direction from two other planning efforts. Charles E. Campbell, assistant director for agricultural Extension, led in one—commodity planning.

Because that planning concentrates on a commodity on a one-time basis, Campbell observes, "You get involvement from leadership who won't participate in the more long-term approach of Extension councils. Therefore, you get some ideas you wouldn't get otherwise." Reaching those new people was "one of the satisfactions for me," Campbell says.

The purpose of the commodities planning effort is to identify research problems. Still, Campbell says, Extension plays a strong role. Field specialists worked to make people aware of the hearings and to encourage attendance. An Extension specialist convened every commodity hearing. University researchers provided situation statements. Then an audience, totaling roughly 1,600 Missourians over 11 locations, responded with their needs and priorities.

They covered 14 commodities, ranging from such traditional ones as corn and beef to horses, cotton, rice and tobacco.

The other planning approach, "Food for the 21st Century," involved lengthy discussions among university social and biological scientists and scientists in the agribusiness industry. The scientists agreed that much current research just shows that things *do* happen. But to make further progress in plant and animal growth they needed to learn more about *why* and *how* things happen.

Consequently, for long-term planning, the scientists agreed the university should deal with "very basic research and abstract knowledge needs." They cited "the genetic manipulation of plants and animals." But even that ties in with the commodities planning process. Livestock producers also wanted to improve reproductive efficiency. So Campbell concludes the two plans "were not totally discrete."

Why should Extension be involved in setting research directions? Sanders, associate dean and director of agricultural Extension, observes that Extension involvement in both these research planning efforts fits well with the area specialist's role.


*Top: Extension in Missouri has played a major role in assisting neighborhoods to rehabilitate housing. Above: Local parks have been the sites of successful crime watch programs.*

"That's what makes Extension unique, it delivers research-based information," he says.

However good Missouri's area planning system is, it's not foolproof. Both Douglas and Sanders would like to do more to get the directions set in area planning worked into Missouri's statewide structure.

"Locally, they can plan their programs fairly well," Sanders says, "because we have area specialists with great technical competency. But the weakness appears to be the translation of the plan to the state specialist."

The director of agricultural Extension continues, "At least there doesn't seem to be the direct mechanism to make sure that the flows of information come together. We would be remiss, if we didn't

*Missouri livestock producers such as Charles Kinney of Liberty Bell Farm appreciate the benefits of Extension's research-based information. Kinney, (right) president of Missouri's Red Angus Association, proudly shows off a prize-winning bull.*

*Martin Phillips uses a personal computer to help the family firm keep track of the 8,000 hogs marketed each year.*

consider the local plans." Sanders continues, "If the project in animal science is going to be able to assist, there needs to be the opportunity for flow of that information back and forth."

**Problems and Solutions**

Another problem is tight funding—a problem faced by Extension everywhere. The state's 21 areas have been going through a grassroots planning process every 5 years. That means four or five plans every year. To cut down on that burden and on other administrative costs, Douglas is moving Missouri Extension to a nine-region structure. County and area planning would continue, Douglas says, but formal, 5-year planning would be done by an entire region.

All this planning generates another concern for Sanders—that the planning document itself might become an edict. "Planning is a process of self examination," he says, "and the documentation that results from that can be a guide, but not the sole basis on which you perform. It has to be flexible." If it's inflexible, Sanders says, "you're a victim of the plan."

So he would like to see the area plans informally updated every year. The former field entomologist believes that would make them more flexible and keep staffs tuned to their major directions and to current conditions. Yearly updates also would make formal documentation and modification of a regional plan, every 5 years, "a fairly easy proposition." Sanders suggests letting "the planning process generate the thoughts, the ideas, the innovations" and following them "as closely as you possibly can," but altering that plan as things change.

Does all this planning work?

Well it seems to, but not always the same way. The smaller staff working in the business and industry and in the continuing education programs precludes those specialists from meeting with advisory committees in every county. So Henderson's continuing education specialists use a series of ad-hoc, or "self destructing" committees. They meet to set up programs by a subject, such as health care, and then stop meeting once a program is in place to meet those needs.

John Henschke used that approach to organize a five-session course on sex education. It reached more than 250 parents and their children in Maryville and in Albany in northwest Missouri. The continuing education specialist worked with child and family development specialist Diana Bonner to defuse this potentially explosive topic and set up the course.

"The key to success is offering such a course was making the program noncontroversial by building a foundation of endorsement and support within the community," Henschke observed. To do that, Henschke and Bonner contacted teachers, school administrators, the Nodaway County Ministerial Fellowship and others. Then the two Extension specialists sought the endorsement of local civic groups by describing the program's approach and value.

"The basic concept behind the course is to make the parent the primary source for human sexuality information," said course instructor Jean Brown, Family Guidance Center at St. Joseph.

A train-the-trainer approach added 76 new instructors to the St. Joseph program. Last spring they reached other communities in northwestern Missouri and nearby Iowa with it. And the national Public Broadcasting System will televise highlights early in 1984 as part of a seven-part series called "Your Child, My Children."

The idea of moving government decisionmaking back to the people caught on with the Extension Service—nationally—decades ago. Missouri just shows how much. □

# Remedy for Stored Grain Spoilage

*Marlene Fritz*
*Agricultural Information Specialist, CES*
*University of Idaho*

Five years ago, the Idaho Feed and Grain Association approached the University of Idaho College of Agriculture with concerns about stored grain spoilage. Growers in southeastern Idaho were losing up to 5 percent of their crop—$10 million annually.

To be responsive to their clientele, a UI research agricultural engineer and an Extension entomologist in a 3-year research project showed that aeration could eliminate nearly all stored grain losses in the region. Nor would costly, and often ineffective, chemical grain protectants be necessary.

**Demonstration Bins**
This year, University of Idaho staff made 5 grain-filled demonstration bins available and electronically monitored aeration systems were provided by project funds.

Cooperator Donald Trupp of Newdale, involved in the project since its inception says, "We were looking at this sort of thing 5 or 6 years ago because we wanted to know what was going on. We knew we were having trouble.

"The UI people have done a good job and have been very receptive to our needs."

**Broad Based Support**
The project has attracted broad support within the university and the client groups Extension serves. According to Ray Prigge, director of agricultural programs in southeastern Idaho for the UI College of Agriculture: "We've drawn professionals from across functional lines to develop a consensus of need and a program of action.

"Very significant is the involvement of four farmers, a researcher, two Extension specialists, seven county agents, a district director, the Great Western Malting Co., Anheuser-Busch, Coors, the Idaho Wheat Growers, the Idaho Wheat Commission, county wheat growers' groups, county commissioners, a commercial grain elevator, local agribusiness firms and USDA Integrated Pest Management staff."

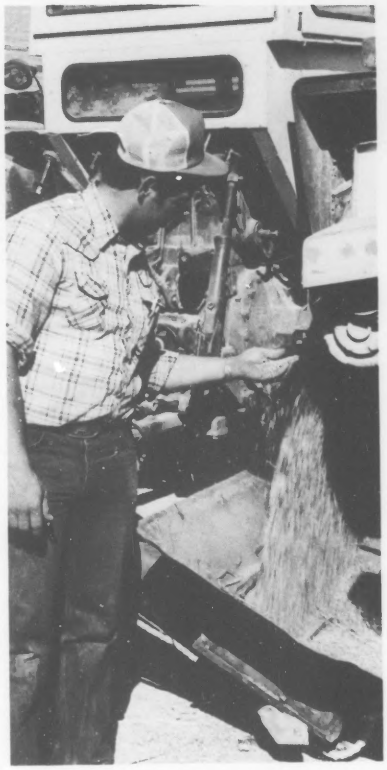
Prigge hopes that, after successful demonstration, evaluation, and adoption by southwestern Idaho clientele, the program will be used elsewhere in the country.

Lynn Murdock, Bingham County cooperator, reports that his friends and neighbors are showing increasing interest. "Nobody is ready to spend the money if it's just something to keep them from climbing up the outside of the bin. But once they find out that the technology can do something for them—like keep insects out and raise their profits—then they'll do it," he says.

**Series of Meetings Lead to Project**
The research project resulted from a series of meetings across southeastern Idaho in 1978 at which growers, field representatives, elevator operators, and county agents heard technical presentations and discussed the problem. They agreed that UI scientists should probe the extent of the losses, their causes, and their remedies.

By 1981, ag engineer James Halderson and Extension entomologist Larry Sandvol had determined that USDA recommendations favoring chemical grain protectants did not apply.

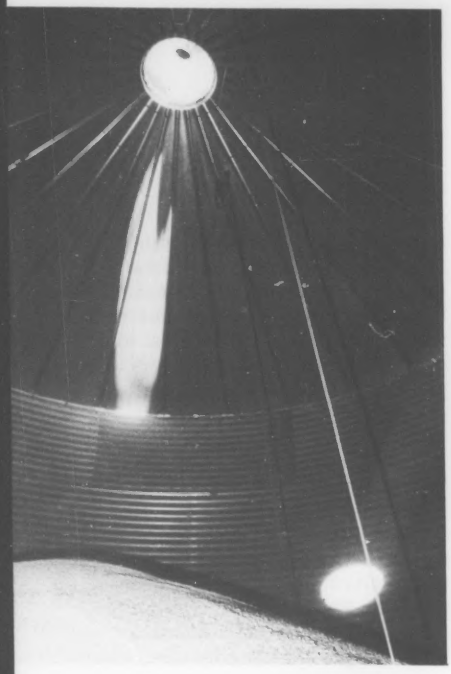
The region's cool nights—generally falling below the 60-degree Fahrenheit minimum required for egg-laying by most insects—eliminated the threat of high insect populations when aeration systems were conscientiously used.



Halderson estimates that fewer than 1 in 10 southern Idaho grain growers used aeration systems while "substantial numbers" applied grain protectants. The initial cost of electronically monitored aeration systems is $400 to $1,500, and they are inexpensive to operate.

Halderson and Sandvol found that grain protectants actually may contribute to storage losses by giving a false sense of security.

"The top center part of the bin is where you're most likely to find grain insects during the colder winter months, and that's where heat and moisture tend to break down the grain protectants," Halderson says.



*Spoilage of stored grain in southeastern Idaho totals about $10 million in losses to growers annually. The remedy appears to be aeration. A 3-year research project by the University of Idaho College of Agriculture, involving Extension specialists and professionals from many disciplines, showed that aeration systems are vastly more successful cutting grain losses than costly chemical grain protectants. The project used 5 grain-filled demonstration bins that were electronically monitored.*

When the research was completed, Halderson, Sandvol, and Prigge—along with agricultural economist Joseph Guenthner and county agents Brian Finnigan, Sterling Schow, Cecil Alldaffer and James Whitmore—met to weigh ideas on how to expedite technology transfer. Settling on farm-based demonstrations, they proposed the concept to industry groups and clientele in November and December 1982.

**Positive Response**

The response was overwhelmingly positive. All key groups declared the educational program to be a high-priority need.

Local agribusiness firms volunteered equipment and installation services. Four local farmers and one commercial grain elevator owner donated the use of their round, steel bins for instrumentation and demonstration. In addition to Murdock and Trupp, the co-operators include Doyal Stiles of Caribou County, Kenneth Koompin of Power County and David Reinke of Fremont County.

Anheuser-Busch, Coors, and Great Western Malting Co. provided $9,000 for the research. Seed money of $1,000 for the demonstration came from the Anheuser-Busch Malt Barley Growers Association. U.S. Integrated Pest Management funds of $22,000 were obtained through UI IPM specialist Edward Bechinski.

In addition to providing bin instrumentation and staff travel, the funds will be used to develop educational packages, including seven publications in the Current Information Series, slide-tape sets, a 20-minute public service TV program, and 5 to 10 public service announcements.

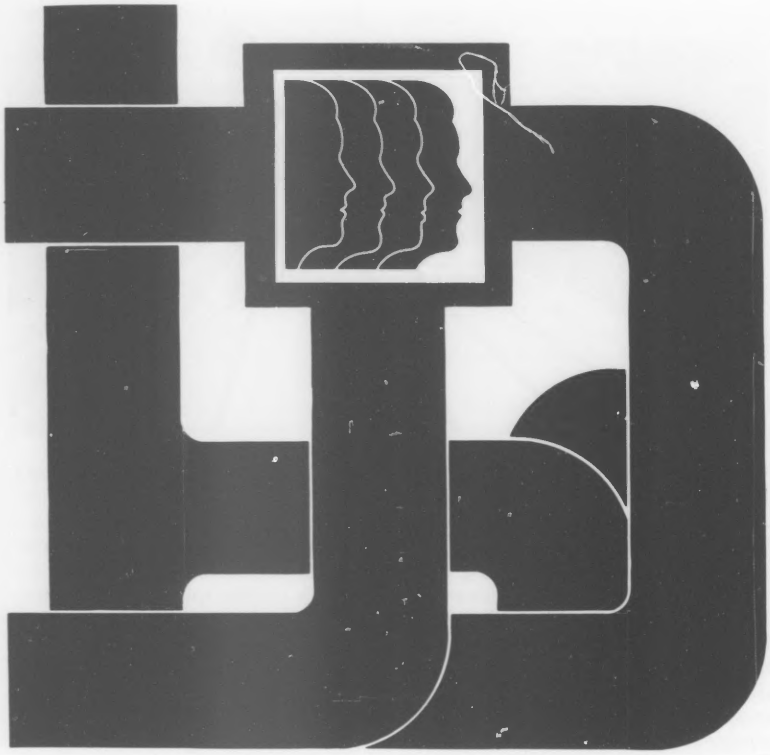
On May 10 and 12, 1983, a 20-minute videotape on the grain bin demonstration was broadcast on Pocatello television.

Growers saw the project this summer through tours led by county agents. One of these tours was sponsored by the National Association of Wheat Growers.

"This is what we had in mind," said cooperator Trupp. "It's a really good example of working toward a common goal. And an example of accountability to users and ongoing evaluation in action." □

# The Performance Appraisal Connection

*Peter Warnock*
*Extension District Director*
*University of Florida, Gainesville*



Both agent performance appraisal and program evaluation attempt to measure the success of Extension work. One assesses process, the other the finished product. Extension programs are to an agent what a cake is to a cook or a house to a carpenter. For these professionals to evaluate process without evaluating the product would be woefully inadequate, leaving them with too many unanswered questions.

Florida Cooperative Extension was deeply involved in strengthening their program planning and evaluation practices when two closely related occurrences added impetus to their efforts. Roger Neiswinder, Seminole County Administrator, laid out the challenge to Extension faculty in 1981 when he asked them to account for their actions by answering three questions: What are you doing? How are you doing it? What difference are you making?

Questions 1 and 2 were relatively easily answered, whereas little could be said in response to question 3.

At about the same time, motivation to change came from a state legislative oversight committee, which probed deeply into the programs, practices and policies of the University of Florida's Institute of Food and Agricultural Sciences. Like Neiswinder, state legislators also were asking the question—"What difference are you making?"

**Means/Ends Dichotomy**

Extension program evaluation and personnel performance appraisals have always been closely related. As Extension agents know, to conduct a comprehensive and meaningful program review without addressing agent performance is almost impossible.

By and large, internal managers, like Extension agents, cooks, and carpenters continue to be concerned with both ends and means. Competition for tax dollars, however, has made the ends more important to external evaluators. These judges are like the restaurant's customer who judges the cake by its appearance, taste, and cost or the home buyer who analyzes a home purchase on the basis of its utility, attractiveness, cost, and projected resale. The means used by the cook and carpenter are of little concern to the buyer of these products. Because of their limited time and expertise, they are primarily interested in the final product and its relative value.

Means to the Extension agent provide internal measures necessary to improve program performance. In the mid-1970's, the American Institute for Research, under contract with the Extension Service, USDA, established that successful Extension agents are proficient in program planning, program promotion and public relations, program implementation, gaining program support, interpersonal/personal relations and supervision. Only through careful attention to these means of doing business can new and experienced agents hope to achieve excellence in their work. They, like superior cooks and carpenters, must be able to understand and evaluate both the means and ends which affect their work.

**Agent Expectations**
Making the intellectual shift in program evaluation and performance appraisal from means to program ends is not easy. The National Accountability and Evaluation System (A/E) facilitates emphasis on final product as reflected in 4-year major programs. Many Florida faculty are optimistic about potential benefits to them and their clients. Following are a few of their solicited expectations:

Marion County home economics program leader Jenta Wyatt believes that agents will gain increased *satisfaction* and *recognition* from 4-year major programs as compared to annually planned programs of lesser consequences.

Ryan—district director—is convinced that Extension's potential *survival* in Florida depends on effectively measuring and reporting clientele benefits in specific measurable terms.

"The new A/E system *maintains individual expression.* Extension program development is still a bottom-up planning process which begins at the county level," says Jesse Godbold, Clay County Extension director. "State and national data collection and analyses could help Florida agents do a better job by seeing what others are doing with similar programs around the country."

"My problem has always been not having enough time to adequately plan, implement, and evaluate programs," says Uday Yadav, Orange County horticultural agent. "It appears that the 4-year planning cycle gives us *more time* to negotiate, modify, and gather data to determine with confidence if we did make a difference in the lives and/or businesses of our clientele."

Marcia Crocker, 4-H program leader, sees 4-year program plans as a means of putting more *objectivity* and *fairness* into performance appraisals. In her view, "a 4-year major program requires a clear understanding on the part of the agent and supervisor as to what will be done; how it will be done; and what difference it will make."

**Barriers to Overcome**
The new A/E system could fail if agent behavior remains unchanged. Habit gives predictability to work and play which is indispensable, but it can also seriously weaken an individual or organization in transition. The challenge facing Florida's agents, specialists, and volunteers is to shift attention to program ends by spending more quality time in planning and evaluating Extension programs. This change will require considerable ego strength and self-discipline since it moves counter to the temperament of most agents. For example, Extension agents are known as "doers," who enjoy seeing things happen! Typically, agents prefer to write, teach, demonstrate, and counsel. Four-year major programs undoubtedly will require more time and effort to plan and evaluate programs, probably at the expense of these preferred tasks and activities.

Performance appraisals and program evaluations can be emotional and disheartening experiences. With few exceptions, adults don't like to be reviewed, analyzed, compared, or evaluated. Therefore, the new A/E system, with increased emphasis on evaluation of program results (ends), carries with it a threat to one's professional standing. In this era of accountability, agents must be able to rise above these legitimate concerns by using elements of the A/E system which are designed to provide sufficient time to adequately plan and evaluate programs, using objective and fair means, while maintaining individual expression.

**Florida Practice**
Florida Cooperative Extension has anticipated the current emphasis on program ends in its program evaluation and performance appraisal practices. For the past two program years, agents have been primarily appraised on the basis of measured changes in client knowledge, skills, attitudes, aspirations, practices, and/or behaviors. Faculty from the Program Evaluation and Organizational Development Unit, along with program deans and district directors have conducted extensive training on planning, evaluating, and reporting major programs. Departmental Extension specialists, Extension faculty at many of the state's 23 research centers, and agents received this instruction which re-emphasizes the importance of program ends in the program development process. Effecting change in the professional ranks is difficult, time consuming, and at times discouraging, but major substantive programs are beginning to appear and be implemented.

Program means and ends continue to be the fundamental components of program evaluation and performance appraisal. Emphasis in 1984 is on the question, "What difference are you making?" Florida agents, specialists, and volunteers are preparing to answer this question through their 4-year major programs and performance appraisal system which focuses on program ends. There is a sense of optimism that they will be able to justify their existence as part of a national educational system with proven ability to adjust, adapt, and go with the flow. □

# Energy For Oregon— An Evaluation Effort

*Joyce Patterson*
*Extension Communications Specialist, Energy*
*Oregon State University, Corvallis*

The Oregon State University Extension energy program was new. And most of the energy agents and the only full-time energy specialist were also new to Extension. It was important to evaluate our efforts from the start—to see if what we were doing and how we were doing it actually helped people save energy.

That was in 1980. Now, 3½ years later, we can report results of three major, formal evaluations and many less formal ones along the way. And we have five more formal evaluations in process.

It was important for professionals to help our evaluation efforts. None of us knew how to conduct evaluations. First, we hired Communication Design in Seattle to hold an evaluation workshop for us. Next, we contracted with the Survey Research Center at Oregon State University (OSU) to help us conduct three major, scientifically designed evaluations. Smaller ongoing evaluations we do ourselves.

What have we learned? The answer to this question can be divided into two parts: What we've learned about evaluation and what we've learned about our programs.

**Evaluation—Why?**
We learned that evaluation is an attempt to determine what happened because of a particular program. And we learned that building evaluation into a program from the beginning improves that program. The evaluation process forces us to set goals and to plan activities that are specific, attainable, measurable, and pertinent in order to reach those goals.

Program evaluation has many forms. For example, take an Extension bulletin. Before anyone on the energy faculty writes a manuscript, we discuss together the need for a bulletin on that topic, availability of similar bulletins, and the use we see for the bulletin. Before we send a manuscript to an editor, we ask experts in the appropriate field to review it. We also ask other Extension workers to review it. That's all part of evaluation.

**Publication Evaluation**
For a more formal, scientific evaluation of a specific publication, we contracted with the OSU Survey Research Center. Their activities range from consultation to handling all parts of a survey.

The publication evaluated was written by two of our energy agents. Its topic—solar water heating—included an explanation of different systems, the need for other conservation measures, and consumer protection information.

From questions suggested by the energy staff, the Survey Research Center developed a telephone questionnaire. Readers of the publication were asked to evaluate its relevance and helpfulness. These readers were also quizzed about their hot water energy conservation awareness, knowledge, and behavior.

Survey results indicated that 9 out of 10 of those who received the publication read at least some of it; that three-quarters of the readers found that it provided the kind of information they expected when they requested it, that it helped 86 percent of the readers make decisions to take conservation measures, and that 7 percent of the readers installed a solar water heating system within 6 months following receipt of the publication.

**Workshop Evaluation**
Our workshops deliver energy conservation information to the public. At the end of each workshop, participants fill out a form evaluating that particular session. From these evaluations, we learned that 6-hour workshops are too long. Workshops that are 3 or 4-hours long are better.

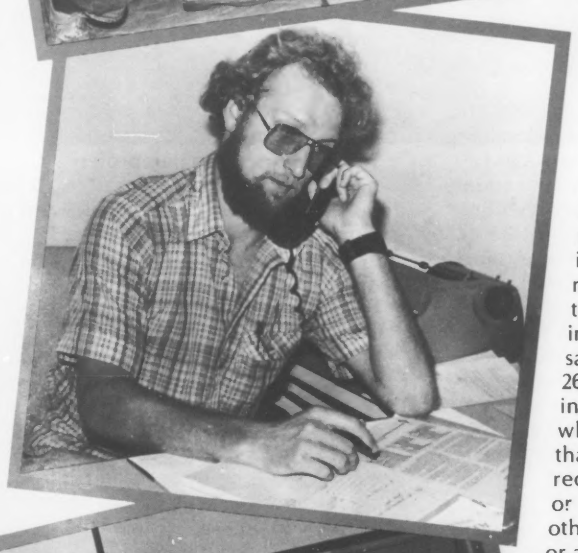
The Survey Research Center also evaluated one series of workshops—those conducted in the Portland metropolitan area on solar water heating. In fact, we had them do two evaluations of these workshops. And we're planning a third.

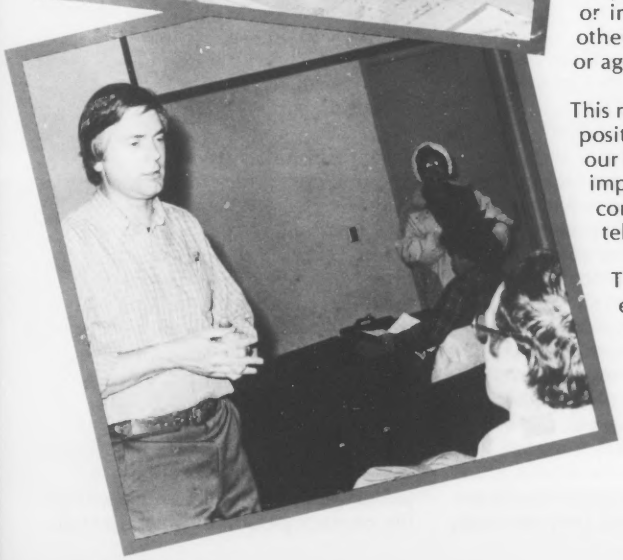
Because the first survey found that 15 percent of the first-year participants installed solar water heating within the year and 75 percent more intended to do so, we did a follow-up survey the next year. By then, 23 percent had installed and 56 percent still intended to do so. The next followup survey is targeted at this 56 percent to see if they've followed through with their intentions.

**Telephone Consultation Evaluation**
Our staff spends a great deal of time on the telephone answering energy-related questions, so we decided to see how effective this delivery method really is.

For 6 months we recorded names, addresses, the nature of the inquiry, and our response.

The Survey Research Center helped us develop a mail questionnaire that included items concerning the kinds of conservation measures people called about, action they had taken (and when), energy savings they had realized, the type of information they had requested, the extent to which their needs for information had been met, how helpful the



information had been in saving energy, and any other organizations they had contacted for similar help.

Their answers showed that of the people who called, about 60 percent had taken some conservation measure(s), 30 percent within 8 months following the phone call. About two-thirds of those who took conservation measures noticed a reduction in energy consumption. And of these, 73 percent found the information they received from Extension very helpful in enabling them to save energy. Another 26 percent found the information some what helpful. Fewer than half the callers requested similar help or information from other organizations or agencies.

This response was positive enough that our staff decided it is important to continue answering telephone inquiries.

These three major evaluations cost about $10,000, with funding coming from a U.S. Department of Energy grant.

We're now working with the Survey Research Center in evaluating five more programs:

- The followup, previously mentioned, to the solar water heating workshops that will show how many participants actually installed a solar water heating system.

- A survey of clients who were unable to attend one of our solar water heating workshops but requested the construction/installation manual that we distribute at the workshops. This evaluation will show how useful the manual is alone.

- A monthly newsletter on energy topics that is written by one of the energy agents and mailed to about 800 people. From this we hope to learn how recipients use the newsletter and if it helps them make energy-conserving decisions.

- A project in which we are using the multiplier effect by working through volunteers. In this project, the agent arranged with the county health department for sanitarians to suggest and demonstrate low-flow shower heads to hotels and motels when the sanitarians make their regular twice-a-year inspections. The evaluation will be designed to show how much energy is being saved as a result of this effort.

- A followup to the survey on the telephone inquiries we receive. As part of this evaluation we will obtain before-and-after utility records of those who said they took energy conservation measures as a result of the information we provided.

The utility records will show how much energy these measures save. □

# Resident Program Aides Make a Difference

*Gloria J. Boyd*
*Extension Communications Specialist*
*Prairie View A&M University, Texas*

During the past eleven years, 1890 Extension programs have demonstrated that paraprofessionals are extremely effective in reaching non-traditional clientele. This has indeed been the case for the 1890 Extension program in Texas; paraprofessionals continue to be the glue of its one-on-one concept.

The paraprofessionals, also referred to as program aides, working with the Cooperative Extension Program at Prairie View A&M University in Texas, serve as catalysts in helping non-traditional clientele become aware of and adopt new self-improvement practices.

The paraprofessionals' effectiveness is due to the fact that they, themselves are selected from the clientele group they intend to help. County agents, with the help of program specialists, identify a person who is a resident of the county he expects to serve. They look for people who have the ability to gain acceptance in their respective communities. Paraprofessionals come from diverse backgrounds such as ministers, farmers, and community leaders.

**Supervised By County Agents**
The paraprofessionals are employed directly by the 1890 program, but work under the supervision of a designated county Extension agent of the 1862 Extension Service. The paraprofessionals receive training and backup support for Extension specialists and faculty members from both Prairie View A&M University and the Texas Agricultural Extension Service.

Since the paraprofessionals come from similar backgrounds as their clientele they can often readily identify the needs of this group. Additional areas of need for limited income families are identified by program specialists, county Extension agents and of course, the

target audience themselves. The paraprofessionals attend training sessions at Prairie View A&M University and also in the county and district offices on a periodic basis. These sessions, conducted by program specialists in coordination with county agents keep the program aides up-to-date on subject matter to transfer to their clientele. Several publications, specifically designed for limited income audiences, are shown to the program aides at the training sessions so they can share them with their target audience.

**Training**
Since there are four areas of emphasis in the 1890 Extension Program in Texas—agriculture, home economics, community development, and 4-H and youth—the program aides receive varying amounts of training according to the demand and frequency of change in each program area. For example, the home economics component may emphasize nutrition one month and the displaced homemaker the next. The 4-H and youth component may have a continuous effort of helping limited income youth become productive citizens.

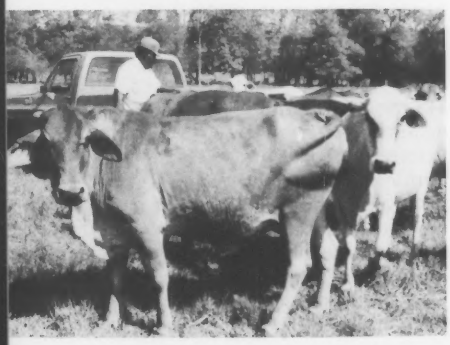
Once the program aides have been selected and trained, they are ready to employ the one-on-one concept in reaching non-traditional clientele. Paraprofessionals make farm, home, or community visits to their clientele on a weekly basis. The paraprofessionals are able to talk to the clientele on a one-on-one basis, using the common language or jargon that is familiar to the people. This helps the limited resource individual or family relax and gain confidence in the paraprofessionals. Once this confidence is established, helping the individual or family in whatever their needs are is less complicated.

**Accomplishments**
The 1890 Extension paraprofessionals in Texas have been instrumental in helping families and individuals weatherize houses, install water systems in communities, grow their own vegetables, help small farm pond owners produce and market over 300,000 pounds of catfish, obtain medical assistance, and secure employment for youth.

In some instances, paraprofessionals work with other agencies and organizations who are better able to handle certain target audience concerns. This brings about a good working relationship between Extension and other agencies.

Paraprofessionals are also instrumental in identifying volunteer leaders who are very important to the success of the 1890 Extension Program in Texas. Since the program has begun, volunteer leaders have secured meeting places, helped organize youth clubs, served as translators, and assisted in camping projects.

To determine the effectiveness of the program aides and their impact on limited income audiences, the paraprofessionals keep an individual file on each person in their clientele



group. This helps them maintain a record on their clientele's progress. Paraprofessionals also make monthly followup visits to their clientele to check on their progress.

The paraprofessionals are also expected to work with building and advisory committees to plan programs for limited income clientele. These committees help the program aides keep abreast of educational activities to be conducted in their respective counties.

***Resident program aides are proving to be extremely effective reaching non-traditional clientele in the 1890 Extension program in Texas. Whether helping small livestock producers, demonstrating canning techniques to youths, or helping families grow their own vegetables, resident program aides are proving the one-on-one concept works.***

**Monthly Reports**

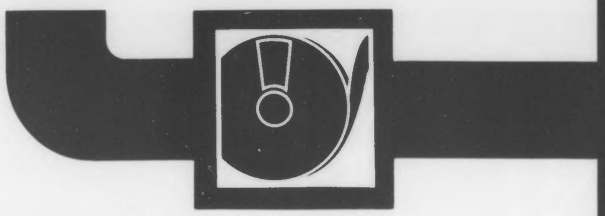
Monthly contact reports are also prepared by the paraprofessionals which indicate the number of persons they contact on a monthly basis and also identifies the sex, racial and ethnic groups of the clientele. Monthly narrative reports are done by the program aides in which detailed information is given on the activities they have conducted with their specific target audiences for each month.

Not only have the paraprofessionals been effective in assisting limited income audiences, they have also benefited themselves. Several program aides have furthered their education and secured Extension work. Others have received recognition for their work. Recently, one paraprofessional working with the agricultural component received an outstanding service award from the 1890 Extension Program in Texas for his work in assisting small farmers. These are just a few accomplishments made by the paraprofessionals.

The paraprofessionals, through the use of the one-on-one concept in assisting limited income audiences, will continue to live up to the Extension philosophy, "Helping People to Help Themselves." □

# Tennessee Turns To TIS

*Cecil E. Carter, Jr.*
*Professor of Agricultural Extension Education*
*University of Tennessee*



The Tennessee Information System (TIS) is a statewide approach used in Tennessee to obtain, analyze, and use survey data from Extension clientele and Weekly Activity Reports (WAR) required from staff as part of the Tennessee Extension Management Information System (TEMIS). Program planners use TIS as an aid in program planning, monitoring, and evaluating impacts. TIS provides two types of data: clientele inputs and program operations—within all major subject matter areas. Data on program outcomes are generated by synthesizing the other two types of data.

TIS attempts to provide the information needed to carry out each step in the program development process successfully. The idea is that optimal execution of program planning, implementation, and evaluation depends at least partly on the quality and utility of information from TIS.

**Major Components of TIS**
In TIS, clientele information represents the environmental conditions and behaviors of a target audience at a given point in time. They reflect the learning, growth, development, and potential for improvement of this target group in a particular planning or subject matter area. County Extension agents obtain the information through personal interviews with persons selected at random within a particular target audience.

Data on Extension educational program operations in Tennessee come from the TEMIS Weekly Activity Reports. They help answer questions such as how many clients there are in a given target audience and what kind of services they receive.

Program outcomes refer to progress toward meeting the objectives of the educational program. Outcomes data are obtained from clientele inputs data. Traditional descriptions used in TIS have been changes in conditions and behaviors of the group (such as change in practices used, change in yield per acre or per animal unit).

**Developing Programs**
Tennessee Extension staff develop programs through (a) identifying problems, (b) specifying long-range (4-year) objectives, and (c) designing program strategy and actions to be taken. Eight separate processes can be identified and discussed briefly.

First, the social values of the client group and the legislative mandates to Extension must be understood. Second, Extension staff study environmental conditions and the behavioral situation of the client group to see to what degree their desired values are being achieved and Extension's legislative mandates are being fulfilled. Third, in needs assessment, the desired conditions and behaviors for the client group are compared with existing conditions and behaviors. The gap between desired and actual conditions and behaviors is the inferred need or problem.

Based on inferred needs or problems, the Extension staff identify the level of achievement (amount of change in conditions or behaviors) aimed at over a 4-year period, the fourth step or process.

From the program planning portion of TIS, Extension staff move into designing and implementing strategies to bring about the specified changes in the environment or behaviors of the client group—process five. Extension staff work closely with county agriculture committees, who approve all new staff and programs, and, in some counties, work also with study groups, commodity groups, and other lay leadership. In the sixth step, to learn program outcomes, Extension staff obtain data from each of the other data base components in TIS—clientele inputs and program operations.

The seventh process or step, is to evaluate impacts of programs, and the final step or eighth process involves communication and use of impact evaluation information internally.

**Not a New Idea**
Basically, this description of TIS and uses of TiS is an effort to explain how Tennessee has dovetailed routine staff reporting (TEMIS) with systematic clientele surveys to produce a more comprehensive approach to data collection than had been used before. These data are complementary and provide the basis for analysis and evaluation of the program development process and program outcomes.

**Uses of TIS**
Program evaluation, as viewed in TIS, includes obtaining, analyzing, interpreting, feedback, and application of information about clientele inputs, program operations, and program outcomes for purposes of program planning, program monitoring, and program impact evaluation. Thus, program evaluation takes place throughout the development of programs. TIS provides data for evaluation purposes before, during, and after programs are implemented, on a continuing basis, for all major subject matter areas.

TIS can be described as a data bank system. Data about staff inputs into Extension programs are available continually, summarized for program planning, analyzed to help monitor programs, and used to look at the relationships among clientele inputs, program operations and program outcome. The result is a systems approach to Extension program planning, implementation, and evaluation. □

# Programing Tomorrow's Tourists

*Michael W. Duttweiler*
*New York Sea Grant Extension Program Coordinator*
*and*
*Michael P. Voiland*
*Regional Specialist*
*New York Sea Grant Extension Program*
*Cornell University, Ithaca, New York*

Longer range planning and needs assessment implicitly involves projecting the future from current situations. It is exceptionally difficult to draw upon past experiences and current situation descriptions without becoming trapped in existing assumptions. We attempted an experiment in Extension program planning which included distinct efforts to break from preconceived assumptions. This program planning is meant as a supplement to formal needs assessment—not as a substitute for it.

**The Situation**
Tourism development is viewed as a viable economic development component by many Great Lakes communities. In New York, the Sea Grant Extension Program of Cornell Cooperative Extension and the New York Sea Grant Institute have assisted lakeshore communities in dealing with the boons and banes of tourism over the past 10 years. Primary clientele include tourism businesses, chambers of commerce, and local governments.

By early 1980, Sea Grant and other staff with responsibilities in recreation and tourism development identified significant changes occurring in New York's coastal tourism industry. These changes were the result of shifts in economic climate and dramatic increases in tourism promotion and development. Careful planning on the part of Sea Grant was necessary to maintain high impact programs. An effective advisory committee system, statewide situation statements, and strong plans of work were in hand but we were uneasy about our preparedness.

We sought a way of looking at ourselves, our capabilities, and our client's needs through the window of the future.

**The Approach**
Initial efforts were important but hardly innovative. A dual-purpose staff workshop was conducted to review organizational strategies, structure, and emphases, and to initiate planning specifically for recreation and tourism. Sea Grant and Cornell Community Resource Development staff participated—a total of 15 persons.

At our first workshop we critiqued how well we were delivering programs. General suggestions for improvement followed—such as need for more effecive use of media and audience multipliers and for increased emphasis on leadership development. In a followup meeting Sea Grant staff translated these into a collective "contract", which specified methodological improvements to be incorporated in individual plans of work. These commitments were reinforced through regular review and discussion during performance review.

While not solely related to recreation and tourism, these organization improvement objectives played a key role in helping to identify shortcomings in our programs and make commitments to do something about them. A healthy climate had been established for our primary project—developing an effective plan of action for tourism programing.

The approach derived for planning community development efforts related to tourism took a deceptively simple form. The following items became our primary planning tools:

- Review and critique of past efforts;
- Organizational improvement objectives identified through workshops;
- "Futurescapes" for 1985.

Analyzing these items together should add up to our revised situation statement and goals for the 3 to 5 years.

**Critique**
The critique of past efforts included compilation and analysis of all plans of work dealing with recreation and tourism, review of annual reports, review of more than 25 existing program evaluations, and compilation of program resources such as research reports and teaching materials produced over the past

seven years. Each aspect was summarized in a 1 to 3 page discussion document. These sources distilled into a general sense of major program themes, successes and failures in each, program trends and present capabilities clarified through extensive discussion.

**"Futurescapes" for 1985**

Futurescapes, the only new item in the formula, were meant to be "mind openers" to help anticipate programing circumstances in the future. The five specialists with tourism-related responsibilities independently developed written projections of the 1985 climate for tourism along New York's Great Lakes. General topics assigned included tourist businesses, recreational participation, access development, and environmental quality. Each used a variety of predictive documents—such as travel and tourism trends—and a healthy dose of professional judgment. We purposely did not prescribe a uniform format—to avoid prejudicing the writers.

Staff investigated the regional tourism market in 1985 and how it would be affected by such projections as the decline in regional population, and less frequent and more selective recreational travel. The transportation topic contained projections for personal auto use and the development of more public transportation. Other topics included communication (supply of visitor information and availability of computerized travel information) and destination areas (the formation of tourism associations and the group packaging of tourist attractions).

The futurescapes then were synopsized through group discussion that focused on primary trends likely to influence our key clientele. The tourist trends predicted for the Lake Ontario area were changes in recreational and tourism leisure needs such as use of smaller boats, longer stays within an area, and increased emphasis on physical fitness exercises. Critical importance was noted for tourism packaging and coordinated promotion. And water use conflicts between boaters and anglers and between sport and commercial fishermen were projected as increasing.

**Major Themes**

The summary of futurescapes was used to reformulate our longer range goals for recreation and tourism related programs. The mechanism was a third and final staff work session. Major themes that resulted were as follows:

- Knowledge about Lake Ontario recreational opportunities and associated technical and safety considerations typically is limited. For coastal tourism to be a true economic stimulus, such information must be readily available to a very broad population.

*Program Implication:* Increased use of media and multiplier organizations for distribution of recreation-related information.

- The economic role of tourism and the steps required for proper tourism management are poorly recognized by many coastal communities.

*The New York Sea Grant Extension program has formulated long-range planning for tourist development in that state's Great Lakes. "Futurescapes" are the tourist specialists' way of anticipating programing circumstances in the future.*

*Program Implication:* Tourism development programs must include a component aimed at clearly demonstrating economic impacts and management options.

- Efforts to expand use of coastal recreation resources while protecting their quality will require a broad constituency on their behalf.

*Program Implication:* Past educational programs that had emphasized angling interests must be expanded to a broader range of user groups.

- Existing marine trades facilities are inadequate to handle expected growth in need for recreational services.

*Program Implication:* Current efforts to assist marine trade businesses should be intensified, especially in the areas of business management and facilities design.

Specific organizational objectives and performance indicators were written for each theme by the program coordinator. These have served as primary tools for individual plan of work formulation and suggesting future research directions.

**The Real Products**

The planning documents generated were far from static. In the months after a "final" draft was prepared, significant modifications were made. Our detailed situation statement and program plan was revised and program strategies continue evolving.

In some ways, the key products of the process were outside the actual documents. Most importantly, everyone with major responsibility in our Great Lakes recreation and tourism programming had a direct and significant role in the review and planning process. Gains because of this corporate approach were:

- Discovery of a collective sense of purpose and direction in what had been a somewhat diffuse program unit.

- An increased willingness to shift from past program practices in anticipation of trends collectively identified.

- An increased ability to alert and counsel researchers about anticipated information needs.

- Creation of a broad framework for counseling staff in program development.

**A New Consensus**

An internal program planning procedure was described which utilized review of plans of work, annual reports, and program evaluations; organizational improvement objectives; and, futurescapes of program content five years hence. Needed program improvements were identified and resulted in extensive modification of plans of work and delivery strategy. The general procedures followed appear to be appropriate for a broad range of community development program planning situations. Perhaps the most significant outcome was staff consensus on program purposes and direction and increased willingness to critically evaluate efforts.

More detailed descriptions of procedures used and copies of key documents generated can be obtained from the authors as can copies of a formal survey of tourism businesses used to provide "outside" validation of trends identified by staff. This later project involving interviews with nearly 100 tourism industry leaders largely confirmed the "findings" of our internally generated futurescapes. It appears that major perceived needs of audiences can be effectively addressed through careful attempts to avoid dominance of current program assumptions. □

# Sampling The Best

*Michael Q. Patton*
*Program Director*
*Caribbean Agricultural Extension Project*
*University of Minnesota, St. Paul*

Evaluating the Caribbean Agricultural Extension Project presents an interesting problem. The solution to that problem involves a purposeful sampling strategy that may be applicable in other Extension evaluation situations.

The problem: how to provide the United States Agency for International Development (AID) with information on the long-term potential impact of Extension in the Caribbean.

It is important to understand the situational context within which this issue is being addressed. In 1980, AID funded the Caribbean Agricultural Extension Project. The project is a joint endeavor between the University of the West Indies and the Midwest Universities Consortium for International Activities (MUCIA) with the University of Minnesota as the lead university.

During phase I, from 1980 to 1982, project staff worked with Ministry of Agriculture officials in eight Caribbean countries to evaluate the effectiveness of their Extension services and develop plans for national Extension improvement. The countries involved were Antigua, Belize, Dominica, Grenada, Montserrat, St. Kitts/Nevis, St. Lucia, and St. Vincent. In 1982, AID funded phase II which is aimed at implementation of the National Extension Improvement Plans developed in phase I.

**Proving Cost-Effectiveness**

Shortly after the signing of the phase II contract a conference was held for directors of AID missions in Latin America and the Caribbean. The dominant view at that meeting, as reported to project staff, was that funding Extension projects in developing countries was not an effective use of AID funds. It is in the context of this skepticism about the cost-effectiveness of agricultural Extension projects in developing countries that the Caribbean project was asked to provide data on the long-term potential of agricultural Extension in the Caribbean.

The immediate problem is that the Caribbean Agricultural Extension Project is an institution building effort aimed at improving national Extension services through training, consultation, staff development, and program planning. During the current life of the project from 1982 to 1985, it is fair to expect major changes in the organization and delivery of agricultural Extension, and such changes can be evaluated. However, impacts on farmers will be marginal during this period. Many of the Extension staff will not return from training until late in the life of the project. Because changes in organization are timed to occur gradually throughout the life of the project, it will take some time for measurable changes in Extension organization and delivery systems to show up in changed farmer practices.

How, then, can the question of long-term Extension effectiveness in the Caribbean be addressed? At this point no data exist on the parameters of potential Extension effectiveness. That is, there are no reliable data on Extension impact from which future projections of effectiveness can be made. However, a "purposeful" sampling strategy within the current life of the project makes it possible to provide data that can be used to establish the needed parameters of effectiveness. Such data can help answer the question of what can be expected from Extension development over time.

**Measuring Maximum Impact**

Purposeful sampling is a qualitative methods approach aimed at carefully selecting for study a small number of cases that will yield a great deal of information for policy-making purposes. The strategy adopted in this case is aimed at measuring the maximum impact that Extension might have under fairly ideal conditions.

The sampling strategy begins with identification in each participating country of an "outstanding agricultural Extension agent." The outstanding agent is identified through a nomination and selection process directed by the National Planning Committee for Extension established in each country during phase I of the project. These committees include farmers, representatives of farmer organizations, Ministry of Agriculture officials, agricultural researchers, and others with interests in agricultural development. Following selection of outstanding agents, they are asked to identify the five farm families with which they have worked most closely and on which they have had the greatest impact. Case studies will then be made of each of these families to establish the nature and extent of the Extension impact.

**Sampling Strategy**
This sampling strategy will yield forty cases where agricultural Extension has had an important impact in the Caribbean. This sample is purposefully biased to establish maximum likely impact, or to establish the outside ideal parameters for Extension effectiveness. It can be expected that the typical Extension agent will have somewhat less impact than outstanding agents. However, by gathering data about the ideal that *might* be obtained, it is possible to establish the maximum that could be expected as an increasing number of agents begin to operate in the area.

In effect, this evaluation will provide AID with information about the maximum potential long-term impact of agricultural Extension programs on farm families in the Caribbean. The data will establish an ideal for Extension Service effectiveness. That ideal, and projections downward from that ideal, can then be used in policy discussions to decide if the level of possible impact is worth attempting to attain through projects that improve agricultural Extension services.

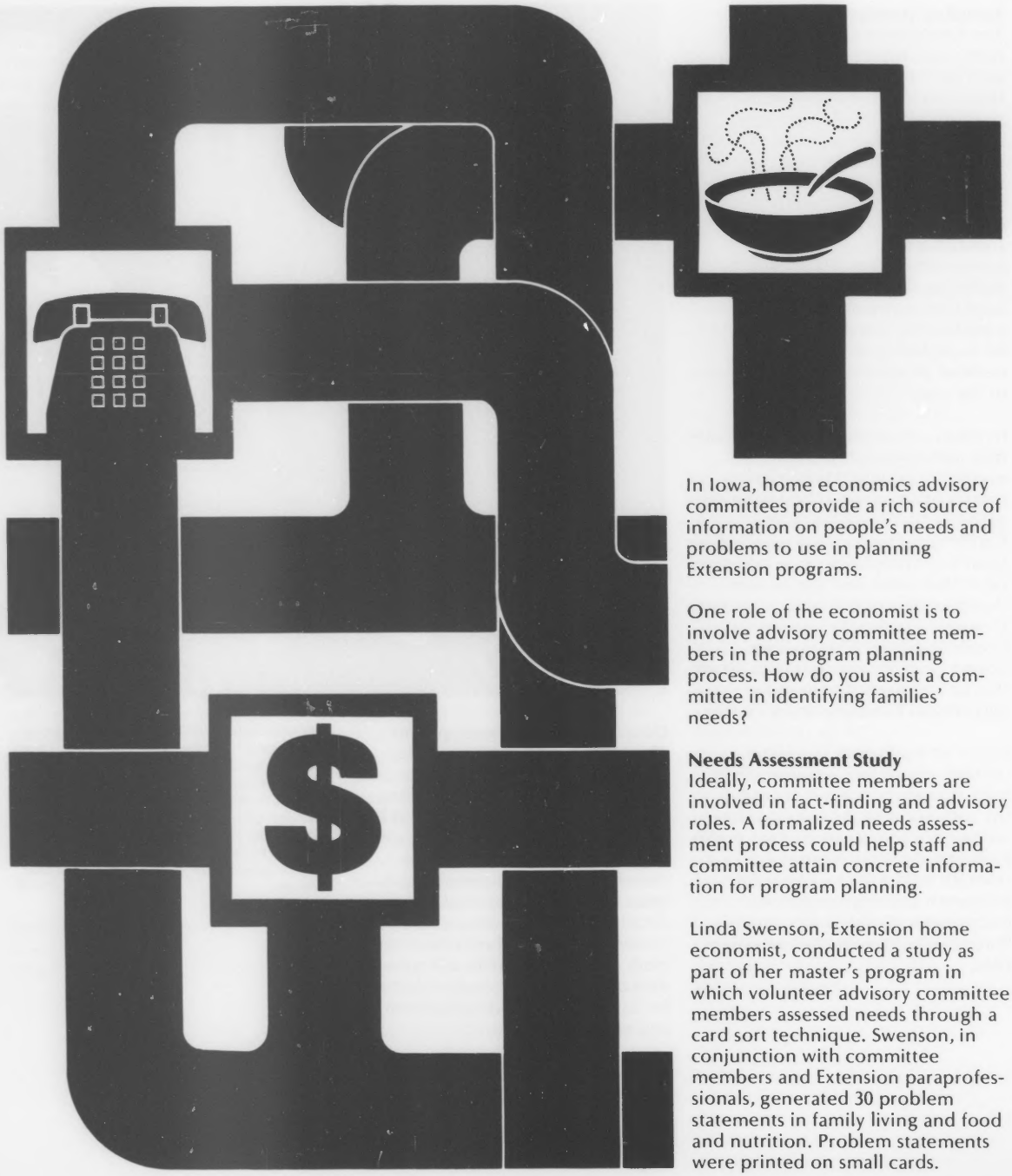
This is an evaluation sampling strategy where bias is purposefully built in at every stage to increase the usefulness of the information obtained. The purposeful bias in this kind of sampling becomes a strength rather than a weakness because it provides important information for the policy process that would otherwise be unavailable.

***To evaluate the Caribbean Extension Project a "purposeful" sampling strategy began by identifying an outstanding agricultural Extension agent in each of eight Caribbean countries. Here, Thomas H. Henderson, (right), project director, and director of Extension at the University of West Indies, congratulates Anthony Philgence of St. Lucia for being selected the outstanding Extension agent for the Extension Service of that country.***

**Data for Program Development**
The evaluation will also provide indepth information about the practices and methods of outstanding Caribbean agents. This data will be used in training and in efforts aimed at promoting increased professionalism and pride among Caribbean Extension personnel. Thus, detailed case study descriptions of model agents and their Extension work with farm families will provide data not only for evaluation but also for future program development and training activities. □

# Which Comes First— Problems Or Programs?

*Kathleen Beery*
*Assistant State Leader, CES*
*Home Economics Program*
*Iowa State University, Ames*



In Iowa, home economics advisory committees provide a rich source of information on people's needs and problems to use in planning Extension programs.

One role of the economist is to involve advisory committee members in the program planning process. How do you assist a committee in identifying families' needs?

**Needs Assessment Study**
Ideally, committee members are involved in fact-finding and advisory roles. A formalized needs assessment process could help staff and committee attain concrete information for program planning.

Linda Swenson, Extension home economist, conducted a study as part of her master's program in which volunteer advisory committee members assessed needs through a card sort technique. Swenson, in conjunction with committee members and Extension paraprofessionals, generated 30 problem statements in family living and food and nutrition. Problem statements were printed on small cards.

Swenson trained advisory committee members to interview clientele by use of the card sort technique. Each respondent selected his or her five major concerns from among the 30 cards and ranked these from the "greatest" to the "smallest" problem. Problems of greatest concern to clientele were used by Swenson and the committee to develop the home economics program.

The needs assessment became an action-oriented process. Committee members not only collected data upon which to build their program, but they also had direct contact with clientele in the county. Thus, the support base for Extension was extended. Clientele also had concrete statements to rank. The focus of this process was on *problems*, not *programs*. Programs became the end result of the needs assessment.

Another positive outcome was that advisory committee members felt ownership of the programs which evolved out of the needs assessment.

**Needs Assessment Across The State**
The process of using "problem statements" was expanded and adapted for use across the state. Alternatives for using this approach were developed and shared with home economists. Some of the alternatives reduced the time and travel commitment required of the committees and staff.

Additional problem statements were written to supplement those in Swenson's study. Those statements and the following suggestions were shared with home economists:

- Committee members could conduct a card sort interview with clientele.
- Home economists could conduct a survey in the monthly newsletter.
- Committee members could conduct a personal or telephone interview using a condensed version of the problem statements.
- Home economists could send a mailed survey to a random sample.

The county home economists adapted the "problem statement" approach to meet their needs. Some home economists modified the problem statements provided and others generated their own, based on problems expressed by the advisory committees. The advisory committees conducted card sorts or personal interviews.

**An Area Works On The Card Sort**
Home economists and advisory committees in the Cedar Rapids area developed a set of problem statements. To increase the awareness about other families' problems, the home economists presented data and trends concerning families in Iowa and the Nation. Committees brainstormed on problems in their counties. The home economics staff wrote a set of statements reflecting these problems.

The card sort technique was used with several groups: home economics advisory committees, Extension councils, and other community groups. Ann Harrison, Extension home economist, explains, "It is a less abstract process, so clientele could more readily give their opinions as to the greatest problems facing families."

**Committees and the Questionnaire**
Several committees helped develop questionnaires based on problem statements and tabulated the results. County home economics newsletters were also used to disseminate the questionnaire.

Sue McDonnell, Extension home economist, and her home economics advisory committee thought the questionnaire was useful. "The committee felt better about the programs for the year. They felt as if they were on firmer ground in the planning process," she says. "Programs which were developed upon problems strongly emphasized by clientele have had very successful results."

Weight control was identified as a priority problem. Attendance was high at programs developed for this problem and quite successful. "The committee would have predicted this. But preretirement planning also came out strong," McDonnell recalls. "We've had 125 participants in the past 2 years, a response we would not have predicted. We might not have developed these sessions if it hadn't been for the survey."

**Positive Results**
Committees and clientele were *actively involved* in the needs assessment phase. Committees also helped the programs and, often, they saw the benefits of building on sound information about families.

**Implications For Future Planning**
The home economists used various techniques, but some common threads increased the effectiveness of the planning process:

- Committees were involved in fact finding and analyzing the information.
- Committees helped develop the problem statements.
- Problems were expressed in a concrete form so that clientele could react.

Most important, the emphasis was on identifying problems first and then developing programs. □

# The Limits of Evaluation

*William C. Smith*
*4-H Extension Agent*
*Canfield Area Extension Center*
*The Ohio State University*

After I completed a week with nearly 100 teenagers at a nine county leadership development camp, I was asked—"Was it a success?" This is not easy to answer. Did everyone have fun? Yes, but is that a measure of success? Was there a major impact on their lives? Yes, I think so. What did the evaluations say? They said the participants felt it was worthwhile and they want a longer camp. But a question still

lingers. . . ."How do you measure success in situations where attitudes and long term value clarification is a goal?" How do we measure that counselor who was a camper 10 years ago and always caused trouble, but is now a school teacher and participated in this week's camp as a counselor? Did we help him turn his life around?

This is not an article about evaluation, statistical analysis, or research; it is one about people—young people—whose lives and futures are what 4-H is all about.

How much long-term impact do we really have through 4-H activities and particularly 4-H camping?

We in Extension are really being urged to measure success, use

evaluations, find the statistical relationships between dollars spent and numbers of members—all of which are necessary. But how do we know what influence a counselor had on a camper's life? We need to show numbers and measure many areas. But did we touch just one life to help a person see something about themselves that wasn't noticed before?

A young girl attended camp 1 year. She was not very outgoing, nor did she really want to be at camp. She seemed to be sitting most of the time. Then one evening a counselor

asked her to dance and then he got her to dance with a camper. The next day her cabin won a volleyball game and she was a major contributor to the success.

**How measure success?**
We can measure the number of 4-H members, the number of 4-H volunteers, the quality of the 4-H projects, the number of members and volunteers who return each year, the number of campers, and the amount of savings to everyone because of volunteers in 4-H, but can we measure the personal growth and long-term effect on attitudes and values on 4-Hers and campers?

There is no way to show on paper the number of lives touched each

year by 4-H volunteers, camp counselors, or professionals, but I can say it does happen. I have no statistics; only stories of young people becoming quality adults. No, I can't say they wouldn't have become what they are without 4-H. But I can say we were there to help and maybe that made a difference.

At another leadership camp many years ago, a young teenager was caught with alcohol. I talked with him and asked what he thought I should do. He said he should get a second chance. Yes, he should have been sent home according to all the rules, but he wasn't. He came back the next year and the following year he asked to be a counselor for me at junior camp. With some reservations he was selected. He became one of the very best counselors I have ever worked with. He was a big, burly character whom the kids really looked up to and became the "teddy bear" of camp. . . .being

hugged and admired by the young campers.

Was that leadership camp a success so many years ago? Yes, if that one person was given a second chance and grew and learned from the experience.

**Touching Lives**

We get so involved in 4-H *programs* or c*amp programs;* but we forget that the major measure of success is how well our people work with and guide young people. Programs come and go, campers forget that tournament or that camp carnival, but they seldom forget that counselor who got them up and involved when they were feeling so alone.

Was our senior leadership camp a success? Absolutely! We touched 90 young people and gave them new experiences and new relationships and provided leadership opportunities for them. Maybe 10 years from now *they* can tell me how successful we were. As of now, I measure success by the smiles, the tears, and the future families and friendships.

4-H is a growth experience for all those involved. It is people—young and old—growing and learning. If this growth is accomplished then we have been successful. □

# 4-H Priority Programs

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*Youth Extension Specialist*
*The Pennsylvania State University,*
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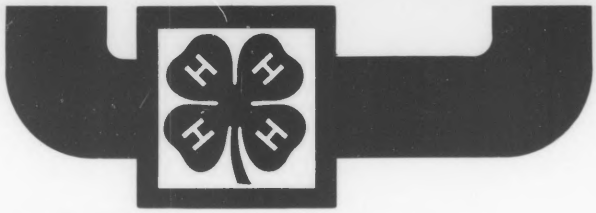

In 1981, the Pennsylvania Cooperative Extension Service launched a program planning effort designed to direct resources to high priority programs.

These priority programs were identified by the state program committees for Agriculture, 4-H, Family Living, and Community Resource Development. Extension agents and specialists formed task force committees in each area. These task forces then developed objectives, content, delivery, and evaluation methods—methods that were shared with Extension agents during a statewide program planning session.

These plans became the basis for county and state plans of work for the next two years.

**Priority Programs**
State 4-H youth specialists view these priority programs as an opportunity to increase and improve program evaluation in county 4-H programs; the priority programs require systematic evaluation to report program accomplishment. As similar programs were to be conducted throughout the state, evaluation assistance and training could focus on the four 4-H priority programs.

Over the years the Pennsylvania Extension Information Management System has required program evaluation in the county plans of work in order to report program accomplishment in end of year narrative reports. However, while individual county programs had been reporting program success stories, a more systematic approach to program evaluation was needed to monitor the priority programs.

A process for incorporating systematic collection of evaluation data into the entire "life" of a program, as well as the program planning, was needed. In this way, data would be in hand to include in the narrative reports. In short, concrete plans for program evaluation needed to be developed along with plans to carry out a program so data collection could be accomplished as a program proceeded. An increased emphasis on program evaluation had to fit into and be an integral part of regular programing rather than an additional step. A point for planning and carrying out evaluation needed to be inserted into the already-in-place program planning implementation and reporting system. Constance McKenna's article "Making Evaluation Manageable", provided the means to do this.

**Tool for Evaluation**
McKenna not only recommended the Provus Discrepancy Evaluation Model as a tool for evaluating Extension programs, but she translated the model into language familiar to Extension workers—language that could be applied to the Pennsylvania EMIS system. Since the McKenna-Provus model is designed to be applied to programs after they have been planned; either just prior to implementation or during the program, its structure could be used to insert systematic evaluation into prepared county plans of work early in the program year. After interpreting the McKenna model to reflect the Pennsylvania EMIS plan of work/task format, it was ready to be applied to "real" county plans of work.

**First Session**
A presentation was developed for use with county 4-H staff. The first such session was with 4-H agents in one region of the state. The region had selected the 4-H Adult Leadership Priority Program for emphasis during the program year. One of the tasks in leadership development was used as an example and the model was applied to it. In addition a handout sheet containing suggested evaluation methods for the particular task was presented.

A session similar to the one described was included in a statewide 4-H Evaluation workshop and on several other occasions early in the 1981-82 program year. Comments from workshop participants were quite positive. Several indicated using the McKenna-Provus model with the usual plan of work process helped them see program evaluation as part of the process, rather than as a somewhat mysterious extra step. Overall, the workshop participants found that the model helped them feel more comfortable with the whole notion of program evaluation.

**Clear Objectives**
The most immediate result was a noticeable improvement in both county plans of work (tasks) and narrative reports. When the means to accomplish program evaluation are planned and prepared for at the time the plan of work is being written more attention is given to writing clear, measurable objectives. Vague objectives cannot be tolerated when evaluation is to take place. This became quite clear and was recognized by agents exposed to the model.

County narrative reports submitted at the end of the program year contained the results of more systematic evaluation. Program accomplishment was supported by evidence of clientele reaction and, in some cases, knowledge gain. This constituted a marked improvement over narrative reports that simply indicated a program did take place.

Finally, for those agents exposed to the model, it not only has helped the individuals develop more positive attitudes to program evaluation, but has contributed to a more positive overall climate for evaluation. Such a climate will do much to further program evaluation in Pennsylvania. □

# Documenting Indicators

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One of the great challenges in evaluation of Extension programs is to document social indicators of program effect.

Since many variables affect how an individual experiences a program, it is usually difficult to identify social cause and effect relationships. However, correlational relationships can be documented.

In order to correlate indicators of intended effect with program input, desired learner behavior must be clearly identified in the program objective. Indicators of the desired learner behavior need to be defined in measurable terms. If the indicators are drawn from conceptual frameworks, the data gathered in assessment can contribute to theory construction and thereby strengthen our ability to explain social phenomena.

**Evaluation Roles**
State subject matter specialist roles are to define desired learner behavior in measurable terms; draw on conceptual framework to explain the desired change and the method of contributing to change; develop an instrument to record behavior so that the changes can be noted; analyze, summarize, and interpret data; and disseminate findings.

County agent roles are to identify desired change, state objectives in terms of learner behavior, assist in developing instruments to record behavior by reviewing drafts and providing field testing opportunities.

**Example: A Case Study**
Case study analysis can be used to describe participant behavior in educational programs where social indicators are used in objectives.

Prenatal classes provide an example. The literature on becoming a parent for the first time indicates that first parenthood is a crisis—a time of major life change. New parents lack confidence in themselves and do not understand their new role.

If Extension prenatal classes are designed to support adult learners by helping them feel capable in assuming parental responsibilities and able to understand the changes they experience during expectancy and early parenthood, then they should exhibit self confidence and understanding as new parents.

Concepts that might be used to describe the experience of transition to first parenthood are drawn from ego psychology and from learning theory.

Ego psychology differentiates coping behavior from defensive behavior. Theodore Kroeber, ego psychologist and author, found a way to measure specific kinds of coping and defensive behavior. Field theory describes learning as cognitive change: differentiation, generalization, and restructurization.

**Descriptions Are Important**
In order to determine program effect, adults can be interviewed by using questions that ask them to describe feelings about themselves and how they understand the transition they are experiencing. Clientele descriptions of self are valuable in describing program outcome.

Responses to questions can be analyzed for indicators of coping or defensive behavior. If the amount of coping behavior is as high or even higher after becoming a new parent as it was during the early prenatal months, participants did not exhibit crisis of major proportions on the examined behaviors. If the proportion of defensive behavior is higher than during early prenatal months, participants exhibited an inability to adapt to their new roles.

Field theory describes learning as cognitive structure changes. Responses to interview questions regarding understanding the transition can be analyzed for indicators of differentiation, generalization, and restructurization. Differentiation in this case means clarifying understanding of specific concepts. Generalization is defined as identifying relationships between concepts. Restructurization is defined as understanding of self using the newly acquired knowledge.

**Use of Two Bases**
Using indicators from at least two different theoretical bases strengthens the validity and reliability of explaining participant behavior.

Interviews that result in case studies can be analyzed for indicators of program effect. Responses to a set of interview questions can be used to identify program participant behavior or social consequences. Agents and specialists design the evaluation methodology together. Agents conduct interviews to collect data and state specialists analyze, summarize, and interpret data. The findings provide a basis for subsequent programming. □

# Obtaining Data

*Midge F. Smith*
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Needs assessment is a process which provides the basis for the ultimate criterion for program evaluation; did the program lessen the need? Needs assessments are also important to Extension in other ways:

- Program development involves designing and implementing a course of action to bring about change; needs assessment is a tool for deciding rationally what that change should be;

- An instructional design with measurable behavioral objectives provides the basis for determining if programs have validity—do they achieve what they set out to achieve? An effective needs assessment provides the basis for determining the additional criterion of utility—was the achievement worthwhile?

- Needs assessments can help in Extension's accountability and evaluation thrust. As citizens identify needs, specify required outcomes, and agree on resources needed to achieve the outcomes, responsibility can begin to be shared for the results. As all partners agree on what is desired and work to make that happen, accountability becomes a shared part of the overall activity.

**Bases for Program Priorities**
In 1973, the Extension Committee on Organization and Policy (ECOP) identifed the following four bases for educational program priorities:

- Expressed needs of people.

- Analysis of environment and other conditions of society.

- Emerging research results.

- Administrative response to recommendations and pressures of support groups.

While all four bases are important, it is the first two which must have input from the local situation. Extension agents in counties can depend on state and federal employees to keep them informed (at least partially) on new research results and on administrative responses. Their critical program development challenge, however, is to identify the problems, issues, situations, or concerns that need changing or improving. And that is no easy task. Communities constantly change as people move in and out, through births and deaths, and as individuals themselves change in response to social and economic forces. As a result, what was once an appropriate program can become inappropriate. What was once a defensible program, one to rally community and political support, can become the knell which rings decreased program support and funding. "Energy" and "environment" are examples of programs that have moved up and down in priority in the last decade.

Thus, determining public needs and making value judgments in selecting needs as a basis for program development may be the most important tasks of the local Extension agent. They may also be the most challenging and perplexing tasks.

**Needs Assessment Process**
In Florida, we have tried to decrease the perplexity by providing agents with a step-by-step checklist for identifying and prioritizing citizen needs. A functional description of the checklist has been published in a manual.

All steps are illustrated in the manual with examples from a comprehensive needs assessment conducted in a specific county. Agents are encouraged to work through all the appropriate steps during planning so that the full scope of the work and needed staff competencies can be identified. Agents check off the steps as they occur to make sure key procedures are not omitted.

Three methods for identifying information about citizen needs or problems are identified. Each method requires increasingly more resources and provides more credible data. The process is cumulative, too. Number 1, "Review Available Information," should be done as the first step to the other methods; and number 2, "Survey Key Informants," should be done before number 3, "Survey Target Population." The final step in each method is to decide if adequate information has been attained. If the answer is "YES", the next step is to begin to prioritize the needs. If the answer is "NO", the next step is to initiate the next higher level of data gathering activity.

The level at which the agent decides to stop in gathering data will depend on available resources and the purpose of the needs assessment.

The next part of the checklist describes procedures an agent can use with advisory committees, key informants, or others to prioritize the list of needs; such as Delphi technique, card sorts, scale ratings, paired-weighting procedure, and budget allocation method.

After the prioritization, the agent can select from the methods described the final selection of needs for development of programs. One such method—criteria analysis—seeks to educate

the user on important considerations in selecting needs for program development. Eighteen criteria are described which affect the choices; for example, correlation with Extension mission and support base; who and how many identified the need; expected community support, community barriers, and public interest; previous success, expected impact, and time to show results; and organizational support.

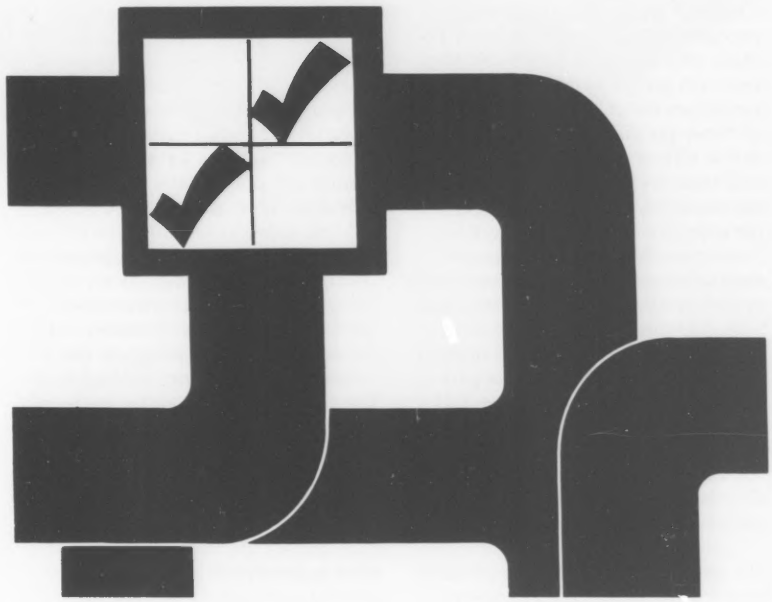
The top 10 or so needs are analyzed against each criterion. Current programs (or needs they address) are also analyzed on the same criteria and at the same time to put new needs in perspective with current programing efforts.

The final selection of a few needs for program planning completes the needs assessment process and begins the process for meaningful change to occur. Unless programs are planned and implemented, the needs assessment process will have been a wasted effort. It may have caused harm by raising the expectations of constituents. Be sure there is a commitment to a resulting program before starting the first step in identifying needs.

**Potential Errors**

Needs assessments provide important data for local program development and evaluation. Every effort should be made to secure data as free of bias as possible. Some pitfalls to avoid are the following:

- *Imposing our own orientations.* This is the problem of self-fulfilling prophecy; that is, what we go looking for, we find. The professional blinders we wear affect the questions we ask *and* what we attend to in the answers. The key is to be aware of our limited perspectives and to make every effort to be objective.



- *Paying attention only to surface problems.* These problems are the easiest to identify by clients. For more lasting change, needs assessments should provide input on the underlying causes of problems. Final selection of problems should reflect Extension agent leadership to assure that individuals and groups involved are well informed about community trends, new technology, and so on.

- *Collecting only negative information.* Focusing only on weaknesses may cause clients to feel hopeless. Strengths also need to be identified as a foundation on which to base the attack on problems.

- *Conducting the assessment without adequate support.* Support involves sanction by funding sources of Extension programs, legitimizing by targeted client groups, and direct resources. Many projects are not completed because unanticipated demands on staff time and dollars become too great.

Unfortunately, conclusions from incomplete studies may be inaccurate, yet harmful because they have the ring of credibility.

It is important for Cooperative Extension to identify and select needs for program development, so that Extension can help people solve their problems in an era of ever-shrinking resources. We can use needs assessment to determine valid, useful programs that are philosophically and practically sound. If we follow a rational process in which people and the organization reach consensus on how resources will be spent, that is, on which problems will be addressed, we ensure that our time and that of our participants is spent in mutually valued ways. □

# RAP Evaluates Inservice Education

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Cornell Cooperative Extension recognizes that people in New York State who make or influence decisions on program direction and resources need evidence on results of these publicly supported educational efforts. Staff at both county and state levels have been encouraged to take advantage, periodically and voluntarily, of inservice education in program evaluation, as well as graduate study opportunities outside the organization. Although national surveys indicate that Extension staff most often think of evaluation for program improvement purposes and less often for accountability, the surveys also point out that staff may not be sufficiently comfortable with planning, implementing, and reporting on program evaluations.

Two years ago, Cornell Cooperative Extension took initial steps to provide uniform statewide inservice education in program evaluation. Teams of state program coordintors and district administrators, having had hands-on experience with an evaluation process adaptable to local programing situations, have been training staff across the state.

The process selected, Reflective Appraisal of Program (RAP), is now demonstrating its potential for wide application across county programs. Its tested standard format includes questions focused upon a model indicating levels of Extension program results and a data collection process based primarily on telephone interviewing. In New York State, the RAP format adapts to most program activities, methods, and clientele within Cornell Cooperative Extension.

**Revealing Change**

Since RAP relies upon clientele's reflective evidence of results or changes brought about by a given program, it can also reveal participants' estimates of the extent of that change. When selected program activities are placed into the interview questions, Extension staff can fairly efficiently obtain participants' perceptions of the meaning or major value of a program to them. Levels of program results are particularly significant in this evaluation process.

The reflective appraisal approach is useful for either program accountability or improvement purposes. Staff are involving volunteers, who are leaders and/or program committee members, and colleagues at the county, district, and state level in planning and implementing RAP studies. Currently RAP is also proving helpful in determining outcomes of some similar programs across several counties.

**Who is Involved?**

What do the following have in common in New York State?

- Inner city tenants concerned about conditions in their housing project
- 4-H participants and private sponsors of livestock programs
- Farmers examining minimum tillage techniques
- Homeowners exploring solar energy practices
- 4-H members and leaders involved in community service projects
- Participants in urban home economics programs
- Parents of youth enrolled in a summer nutrition program
- Volunteers in food preservation
- Participants in safe wood burning seminars
- Volunteer Extension program committee members in several counties

All have been involved in evaluating Cooperative Extension programs at the county level during the past 2 years. They may have been randomly selected program participants, volunteer interviewers, or a committee of volunteers examining surveys and summaries of program results and identifying positive factors or action needed.

**Appraising Results**

What are some Extension program results documented through reflective appraisal? A few examples:

- Tenants improving shopping and management skills and relationships with neighbors and landlords;
- 4-H members identifying skills they will use on the family farm, in their schools, and in future marketing activities;
- Farmers becoming more interested in minimum tillage systems, both for dollar savings and for improving cropping practices;
- Energy tour participants gaining more knowledge about the practical aspects of solar heating and its potential application in existing structures;
- 4-H members learning to accept responsibility for themselves and for their communities;
- Limited income families changing the quality of their diets through improved planning, purchasing, and food preparation practices;
- Parents of young children applying skills that improve communications with their children;
- Urban families learning skills in preserving food and managing money;
- Parents saying, "Any (class) that increases my children's desire to consume vegetables is enthusiastically accepted;" "My child seems more conscious about what he eats now and how much he eats."

However, evaluation findings have little meaning of their own. Staff in New York find they must continually ask questions like these: What do decision makers want to know about our programs? What do

we do? Why do we? Who benefits? In how many ways can we use results of our program evaluation?

Involving people in the evaluation process is a major dimension of RAP. Volunteers, for example, provide an articular support base. Volunteer leaders have an added investment; programs being evaluated are often "theirs" and the results are important to them. They are helpful in collecting, interpreting and reporting on data. For example, volunteer, program committee members have completed 100 interviews in one county and 30 in another; volunteer program committees have identified areas for improvement and possible solutions for each, in—money management, marketing, and leadership needs in 4-H livestock programs. County, district, regional and state staff contribute to planning and carrying out of RAP studies. These RAP teams provide a means for program staff to be involved but to avoid judgmental roles.

**Program Selection**

Evaluation needs to be planned in the early program stages. It needs to occur at a time when clientele have had a chance to modify their behavior. It needs to fit the time constraints of staff. RAP is not a rigorous research procedure, but it does require effort. Experience with it in New York State indicates programs to be evaluated need to be carefully selected and levels of evidence identified that are most needed for the purpose of each evaluation. And, like other evaluation strategies, RAP should not be used for every program every year.

RAP provides a process for obtaining clientele perceptions of results important to them that occur from a variety of program efforts. However, one process does not encompass the total package of evaluation knowledge and skills useful for all needs. As we seek appropriate program tools for the 80s, we need to take care we don't overdo—or underdo! RAP may not be the most appropriate vehicle to generate documentation of Extension's worth to people unfamiliar with Extension, but it permits staff to "see" programs as participants do. An administrator in another state describes it as, "a simple, defendable approach to systematically gathering information for decision making. . . .much better information than what is generally used."

The designer of RAP considers it an evaluation method keyed to staff development; it extends knowledge and simplified skills to those in the Extension system who do not have opportunity or time to take resident instruction in program evaluation. County level accountability is an important component in Cooperative Extension's public support system and reflective evidence is generally acceptable to and understood by staff, volunteers, county and state legislators, and others close to the programing process.

**A Stimulant to Evaluation**

RAP assists Cornell Cooperative Extension staff at state and county levels to perform some immediate roles in evaluation. Its concepts and skills are easily grasped: program selection and description; involvement; levels of program results; respondent identification; survey design; data collection and interpretation; and reporting. Inservice education in RAP has stimulated evaluation action. Since county staff have been primarily trained to evaluate their highly locally financed programs, state staff provide guidance in selected multicounty evaluation efforts. Some studies will produce a regional perspective, and will strengthen documentation of program results.

Evaluation and accountability are "writ large" in Cooperative Extension's 4-year plan of work. The recently published *Extension in the 1980s, A Report of the Joint USDA-NASULGC Committee on the Future of Cooperative Extension* recommends that Cooperative Extension involve the public and decisionmakers in its evaluation efforts in order to create better understanding. Recommendations also suggest improved reporting to the public and to decisionmakers at all levels.

The expectation is that better informed decisionmakers will make better decisions about Cooperative Extension. People are usually more motivated towards program evaluation processes when they can see their relevance to program support and have appropriate evaluation tools. RAP can make a significant contribution to program evaluation in Cooperative Extension in the 1980's. □

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