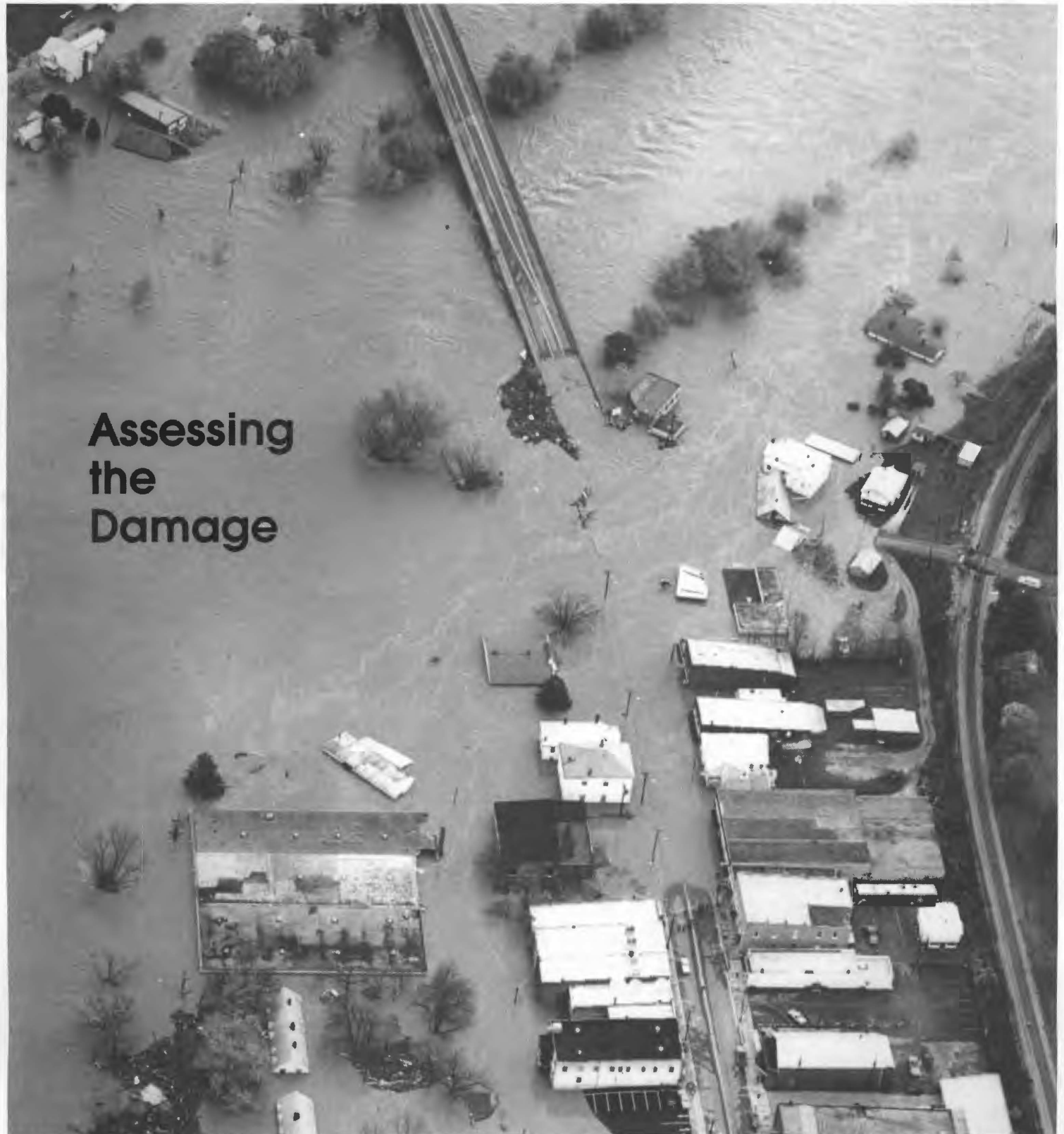


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VIRGINIA EXTENSION

THE VIRGINIA COOPERATIVE EXTENSION SERVICE MAGAZINE

Vol. III, No. 4 1985



**Assessing
the
Damage**

COMMENTARY



October is the month of the World Series, football, the annual color festival in our forests, and the time to finish up the fall chores before winter arrives. This year, that month also signified the first observance of Extension Week.

During that special seven-day period in the middle of the month, the staffs of the ninety-five county and twelve city Extension units used every means of communication at their disposal to inform the citizenry about how their programs are aimed at helping those across the state.

It was a significant effort. There were several hours of radio broadcasts, special newspaper sections and stories, appearances by Extension representatives on television, open houses for the general public, breakfasts and luncheons for local governing bodies, special displays in stores and businesses, special messages placed on marquees and other outdoor signs, demonstrations in computers, home economics, and other subjects, and a variety of other efforts geared to the residents in a unit's locality.

All reports indicate that the local Extension efforts were successful. Many potential new clients became aware of Cooperative Extension and several who had used its services before were made aware of programs that they did not know about. Many think of Extension only in terms of a single program area when, in reality, it has comprehensive offerings in agriculture and natural resources, community resource development, home economics, and 4-H.

As I traveled across the state attending various Extension Week activities, I was again reminded that most Extension programs would not be possible without the help of the volunteers. They are the ones who enable the local agents and specialists at Virginia State and Virginia Tech to reach the people across the state with their educational information.

During Extension Week, the volunteers were everywhere.

They helped at open houses; they talked to local government officials at special breakfasts and luncheons; they manned displays and exhibits in stores, schools, and shopping malls; they helped Extension clients by answering questions about local programs; and they did many other things which make them so indispensable to our programming efforts.

The value of the approximately 20,000 volunteers who help make our programs successful was emphasized at an Extension Volunteer Appreciation Luncheon at the Northern Virginia 4-H Educational Center. One hundred and twenty-one of the Northern District's outstanding volunteers were presented certificates of appreciation for their efforts.

While thumbing through the program that listed the Extension accomplishments of these volunteers, I wondered when some were able to work in time for their jobs, homes, and families. Some volunteers were not content to work on one, two, or three projects, but had become involved in as many as ten. Some were husband-and-wife teams that worked together on some programs and separately on others.

Why do these volunteers do it? Perhaps Rhoda Maddox of Fredericksburg, a charter member of our state Extension Advisory Board, put it best in her response at the volunteer appreciation meeting.

She noted that many volunteer jobs benefit someone else. In Extension, "volunteering benefits self and family as well as the audience being reached." Through such assistance, the Extension volunteer helps everyone.

Being reminded of how we in Extension need the volunteer, if for no other reason, made the week worthwhile. Those of us in Extension, however, possibly received as much benefit as did the citizens of the state as Extension Week gave us an opportunity to take stock of our programs and evaluate them. It was a successful effort.

VIRGINIA EXTENSION

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James River floods Buchanan. Story on page 8. (Roanoke Times & World-News Photo)

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Patrick County youngsters have been battling on the radio for years, to the delight of the local audience.

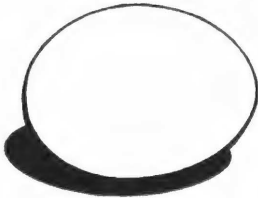
Articles without by-lines are by the editor.

IMPACT

DOLLARS AND SENSE FROM EXTENSION

Virginia Tech researchers have found egg production from turkey hens is significantly greater when the hens are exposed to high-intensity light during their pre-breeder stage.

R.M. Hulet and T.B. Brody, poultry science researchers at Tech, have examined the influences on egg production of light intensity, of hen age at exposure to fourteen hours of light a day, and of the energy content of breeder diet.



"The recommendation for pre-breeders has been to use low-intensity light, but our recommendation is to use high light intensity prior to 30 weeks of age and use a higher fat diet," Hulet says.

The research shows that hens exposed to high-intensity light have greater egg production (79.49) than those exposed to low-intensity light (75.35). Egg production was greater from hens photo-stimulated at 30 weeks of age (80) than at 26 weeks (76) or at 32 weeks (74).

A high-energy diet did not increase the number of eggs produced, but it did result in significantly heavier eggs compared with eggs from hens given a lower energy feed.

□

In less than a year, a new Chesterfield County 4-H program, financed by special funds from the U.S. Department of Agriculture, has made an impact on the young people and residents who live in what is called the "urban corridor" along Interstate 95. Originally the program was begun to help young people in the area in which 70 percent of the families have only one parent and 90 percent of the housing is subsidized. Now it has grown far beyond that goal.

Only nine months into the program, its success prompted a shift from part-time to full-time status for 4-H technician Cathy Winchester. County school officials showed their enthusiasm for the program by allowing two of the clubs organized by Winchester to meet at school after hours. Such permission is a rare occurrence.

Winchester's 4-H program along the "urban corridor" began as a survival skills program: teaching young people what they should and shouldn't do while they are at their apartments waiting for their parents to return from work. Constructive use of their free time was also stressed.

The first club to be organized was Bermuda Run, named for a complex of apartments in which it was located. Soon afterwards, clubs were organized at Bensley and Beulah schools, and total membership climbed to forty-five. Moving the young people's interest from their homes to their immediate surroundings was the next step.

The result is the Adopt a Building program. Each Saturday, members of a club pick out one of the buildings in their apartment complexes and pick up the litter and trash around it. Each week a different club member is assigned the responsibility of distributing a flyer explaining the program to each tenant. Three times a week, thirty-six participating 4-H'ers work in teams of twelve to clean the adopted project.

Club members also work with residents in the Chesterfield Nursing Home, taking puppies and other pets for the residents to pet and love. The members help make Christmas and Easter a little brighter through their participation.

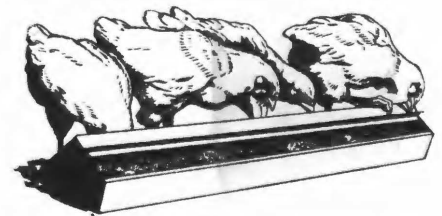
"4-H is making a difference in the community," says Chesterfield agent Richard Nunnally. "The members have become more aware of the community and who is in it and, more importantly, they want to make it a better place in which to live."

□

Increased concentrations of a common preservative in chicken feed may diminish the effects of mycotoxicosis in chickens.

Researchers in the Virginia-Maryland Regional College of Veterinary Medicine say that carefully controlled levels of butylated hydroxytoluene (BHT), an antioxidant commonly used in feeds to prevent spoilage, can minimize the weight gain and feed efficiency problems associated with aflatoxin toxicity in chickens.

Aflatoxins and other mycotoxins are relatively common contaminants of animal feeds throughout the United States, but climatic conditions in Virginia and surrounding states have made it more likely that feeds (especially corn) produced in this region will be contaminated with aflatoxin, says Marion Ehrich, an associate professor in the college and one of the authors of the study.



Decreased growth rates, feed efficiency, and egg production, and reduced immune responses exhibited by poultry who consume aflatoxin contaminated feeds cost producers an estimated \$100 million per year in the 1970s, says Ehrich.

The detoxification method is also important because weather conditions in 1983 and 1984 significantly reduced feed production, causing the FDA to relax standards for mycotoxin-contaminated feeds and making it very costly for producers to reject contaminated feedstocks.

The preliminary results from the study suggest that carefully controlled levels of BHT can minimize detrimental effects of contaminated feed, Ehrich says.

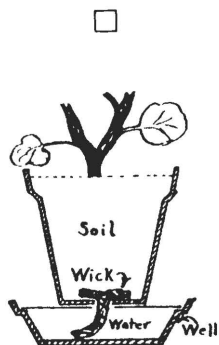
Sponsored by the Virginia Corn Commission, Marion Ehrich, Calvert

T. Larsen, W.B. Gross, and third-year veterinary student Cindy Driscoll are conducting the study in an effort to determine the most efficient level of BHT to use in feeds.

During the investigation, the research team provided young chicks with feed containing concentrations of BHT at three, eight, and eighteen times the normal levels found in poultry feed. The ability of the BHT to reduce the debilitating effect of the aflatoxin-contaminated feed was measured by weight gain and feed efficiency over six-week study periods.

The researchers found that while weight gain and feed efficiency were suppressed in all cases by aflatoxin-contaminated feed, the degree of that suppression was significantly diminished when supplemented with levels of BHT as low as three to eight times its normal concentration.

"It is likely that unintentional use of contaminated feeds will continue in the future so it is very important that we develop methods for detoxification," says Ehrich.



Known as the "biological link between the plant world and the soil world," a group of fungi that live in the roots of most plants hold great potential for the future of agriculture.

Richard T. Johnson, a Virginia Tech assistant professor of horticulture, is studying ways in which the fungus can be used to improve the growth and survival rate of plants. He explains that the mass of threadlike filaments the fungi extends into the soil serves as an extension of the plant's root system.

"This gives the root system access to more water and nutrients, which is especially important in soils poor in certain minerals," he says. The fungi filaments contribute greatly to plants' abilities to gather phosphorus, a vital nutrient for plants. The lack of this mineral makes some soils of marginal value for agricultural production. It is in cases such as this

that mycorrhiza—the relationship between the root system and the fungus—is most useful.

Plants are naturally mycorrhizal, but not always with the species of fungus that is the most beneficial, Johnson says.

"Part of the research now is to tailor the right relationship for a particular condition," he says.

□

Virginia Tech researchers are working to implement technology associated with an inexpensive and safe source of nutrients for farm use being produced in Virginia's urban areas.

Farmers are clamoring for sludge, residual solids with varying amounts of water generated during waste water treatment. The treatment reduces or eliminates disease-causing organisms and most odors. Because of the demand for land applications of sludge, farmers in the Roanoke area are having to wait two to three years to get the nutrient-rich product.

The reason for this demand is easy to see. "The results are savings of several million dollars in nutrient costs every year," says Thomas Simpson, an agronomy professor at Virginia Tech.

"And it's a partnership between the cities and the county. This is the most economical and environmentally sound method for municipalities to handle their sludge," says Simpson, who has been researching land applications of sludge for several years.

Other acceptable methods of sludge management are incineration or placing it in a landfill. The incineration method has problems of cost and air pollution, while landfill use takes up valuable and scarce capacity. Again using Roanoke as an example, Simpson says the city has reportedly saved millions of dollars since going to land applications of its sludge.

However, sludge will never replace chemical fertilizers in Virginia, Simpson says. Even if all the sludge in the state was used, it would only be able to fertilize 5 percent of the land planted in corn.

□

At one time, eastern forests were filled with American Chestnut trees that went for lumber, fence

posts, railings and railroad ties. An extract from the wood was even used in tanning leather.

But in the past 80 years, chestnut blight has killed 3.5 billion trees, more than 99 percent of this valuable species. The few trees which survived the blight's destructive path have assumed a value far greater than the dollars they would have brought at the sawmill.



It is these survivors that Virginia Tech researchers, including Gary J. Griffin, professor of plant pathology, physiology and weed science, are studying. They are searching for clues as to why a few trees were able to withstand the blight and what that could mean for restoring the once-mighty American Chestnut.

Researchers have found a "virus-like particle" in the blight fungus on surviving trees, and Griffin believes this may be the key. This natural organism seems to weaken the blight fungus. Although the fungus still attacks the tree and may cause limbs to die, the tree is able to survive, Griffin says. Research also has found that most surviving chestnut trees have a low level of blight resistance.

Virginia Tech researchers are inoculating seedlings with the virus-like organism to determine if it will offer long-term benefits to the re-emergence of the American Chestnut.

They also are investigating use of the organism in conjunction with genetic resistance to improve the species' chances of survival.

□

Ag Experiment Stations

Increasing State Service

Susan Trulove

The newest addition to the twelve facilities that make up the Virginia Agricultural Experiment Station also is one of the oldest. Although the Virginia Truck and Ornamentals Research Station at Virginia Beach and Painter did not officially join the experiment station family until July 1, it has been serving Virginia for more than three quarters of a century.

The Virginia Beach branch of the truck and ornamental station was established in 1907 to help nursery and commercial vegetable growers, seven years before the next oldest permanent location, the Tidewater Research and Continuing Education Station at Holland, opened its doors. In fact, work at the Eastern Shore branch began a

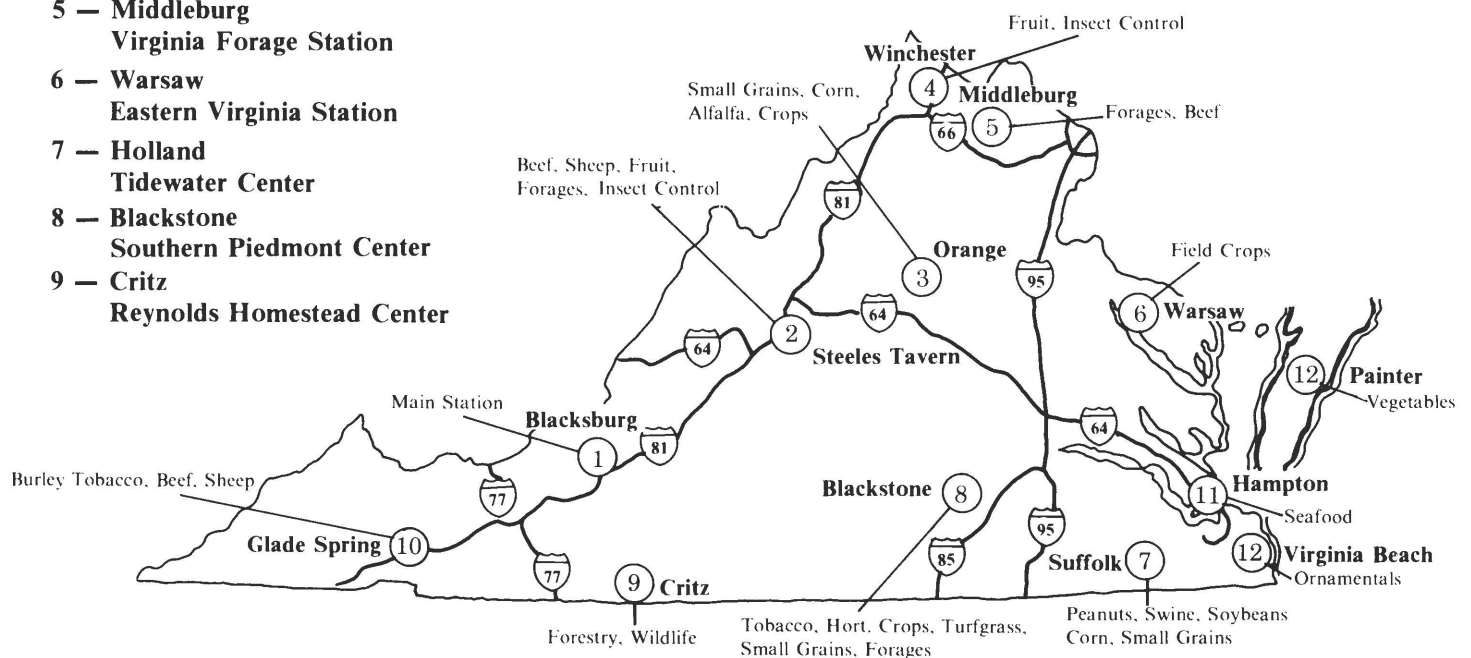
year prior to the 1914 opening of the Tidewater station.

The first research work on the Eastern Shore began at Tasley in 1913. Five years later, the research was moved to Onley, where it stayed until the mid-1950s when the present Painter facility opened.

Purists may argue that the research station at Chatham, which opened in 1906, was the oldest, but it closed when the Southern Piedmont Research and Continuing Education Center at Blackstone was opened. In addition to Tech, Blackstone, Holland, and the new ornamental addition, the experiment station has facilities at Steeles Tavern, Orange, Winchester, Middleburg, Warsaw, Critz, Glade Spring, and Hampton.

AGRICULTURAL EXPERIMENT STATIONS

- | | |
|---|--|
| 1 — Blacksburg
Virginia Tech | 10 — Glade Spring
Southwest Virginia Station |
| 2 — Steeles Tavern
Shenandoah Valley Station | 11 — Hampton
Seafood Station |
| 3 — Orange
Piedmont Station | 12 — Virginia Beach and Painter
Virginia Truck and Ornamentals Research Station |
| 4 — Winchester
Winchester Fruit Lab | (joined statewide system effective July 1, 1985) |
| 5 — Middleburg
Virginia Forage Station | |
| 6 — Warsaw
Eastern Virginia Station | |
| 7 — Holland
Tidewater Center | |
| 8 — Blackstone
Southern Piedmont Center | |
| 9 — Critz
Reynolds Homestead Center | |





Greenhouses are a common sight at the new station.

Although there may be some doubt as to the oldest, there never has been any question about the importance of the truck and ornamental station to the growers. To help growers become more competitive by overcoming production problems, an organization of truck crop growers and market gardeners in the Norfolk area helped establish the research station by providing land and facilities along U.S. 13 in what was then Princess Anne County.

While the Virginia State Board of Agriculture provided salaries and operating funds, the station was governed by a board that included representatives from Tech and commodity groups. In 1920, the facilities were deeded to the state, but the governing board continued to represent university and grower interests. The board soon recognized that the Norfolk and Eastern Shore areas were different and established a substation across the Chesapeake Bay.

One of the first contributions made by the new research station was the development of blight resistant spinach varieties that saved a large industry from virtual extinction. Other contributions have included treatments to protect vegetable seeds from decay until they sprouted, a control for mildew in snap beans, introduction of a new wilt resistant watermelon, and perfection of a means to forecast when blight was likely to become severe in Irish potatoes and tomatoes.

Plant breeding efforts in the station's first fifty years also resulted in development of superior kale and collard varieties, sweet potatoes adapted to eastern Virginia, the still popular Pungo potato variety, and the Pocahontas strawberry that provided more than half of Virginia's crop within four years of its release.

Today, station researchers continue to share the latest knowledge and technology with agriculture. "Our emphasis at Virginia Beach is on research with ornamental plants with some research being conducted on vegetables and small fruits," says Edward A. Borchers, the station director.

Two years ago, with support from the Virginia Nurseryman's Association, the station began a tissue culture laboratory under the direction of Thomas Banko. Ornamental species which have been successfully propagated included hosta, rhododendron, yucca, and daffodils. "The benefit of tissue culture is that many more plants can be produced in a short period of time," Banko explains.

Plant physiologist Daniel C. Milbocker conducts genetic studies with ornamental plants, and is responsible for the arboretum, and plant introduction nursery, as well as various propagation and cultural studies.

The plant introduction nursery contains one of each kind of plant that the National Arboretum has acquired from all over the world. "A mildew-resistant crepe myrtle

and a fast-growing evergreen, the Leyland cypress, were successfully introduced in this program," says Milbocker.

Managing insect pests of ornamental plants with reduced pesticide usage is the research goal of Peter Schultz, entomologist. He has already identified landscape plant varieties resistant to insect pests. Now he is identifying azaleas and garden chrysanthemums with insect resistance. He has identified and introduced parasites that will reduce oak lecanium scale, a pest of oak trees, and thus the need for routine pesticide treatments.

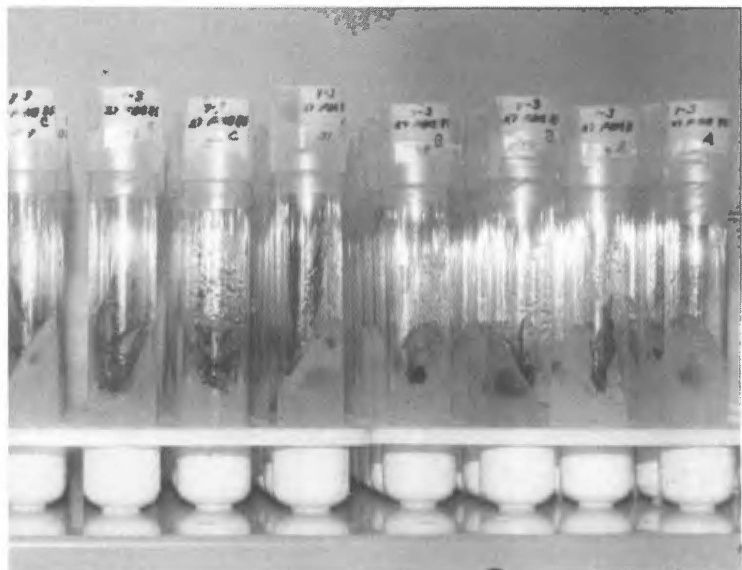
The horticulture program directed by Susan Sterrett considers vegetable production problems, new crops, and technology. She is also studying early melon and cucumber production, the use of trickle irrigation in asparagus, and the feasibility of growing herbs as an alternative crop.

Entomologist Geoffrey Zehnder is cooperating with the U.S. Department of Agriculture in developing a "biological approach" to controlling Colorado potato beetles by integrating new insecticide treatments with parasites and a fungus that attacks hibernating beetles in the soil. Zehnder also is collecting beetles from potatoes in the Eastern Shore to map areas of pesticide resistance; and he is studying populations of beetles in no-till and conventionally tilled tomatoes.

Eastern Shore growers use conservation tillage more often, so soil scientist Greg Evanylo is attempting to determine optimum fertilizer placement, timing and rates of application using different tillage practices.

Since the sharing of research developments has been an important activity at the station for decades, the Extension function is already part of the operation. In addition to field days and responding to direct queries, the researchers in Virginia Beach and Painter educate their audiences through publications and short courses.

James R. Nichols, dean of the College of Agriculture and Life Sciences at Tech and director of the Virginia Agriculture Experiment Station, says the new addition "has expanded the scientific and technical expertise. The two research facilities, through their locations and by the concentration of knowledge and experience with commercial vegetables and ornamental plants, have enhanced our ability to serve the state's diverse agricultural industry. All of Virginia is benefiting from this new addition." ❧



Tissue cultures stand awaiting use.

Susan Trulove photos

IN BRIEF

NEWS OF INTEREST FROM ACROSS VIRGINIA



A twenty-four member Japanese study team visited western Virginia during the summer to learn ways to improve dairying in their country. While in Virginia, the team of teachers, agribusinessmen, agriculturists, veterinarians, and dairymen visited three farms and Virginia Tech to learn about innovations in dairying. Charles Stallings, Tech professor of dairy science, hosted the group during the Virginia visit.

Koichi Ito, a trip coordinator and a U.S. Feed Grains Council director from Tokyo, says dairying is a growth industry in Japan and that currently, there are more than two million cows in that country. After the visits in Virginia, the Japanese visitors made informational stops in Maryland, New York, Minnesota, and California before returning home.

□

Five Virginians participated in this year's International 4-H Youth Exchange (IFYE) program. Rickie Welch, Buchanan County, and Amy Milton, Charlotte County, are IFYE representatives while Jennifer Dempsey, Fairfax County, and Ray Wyant Jr., Albemarle County, were IFYE ambassadors. Lydia Barrett, Fauquier County, was a 4-H Exchange Delegate to Thailand.

Milton's six-month stay in Denmark ended in November while Welch is in India through December. An IFYE representative is between nineteen and twenty-five years of age and generally spends up to six months in a country, living with host families.

Dempsey visited Botswana and Wyant was in the United Kingdom between mid-June and early August. Ambassadors must be between fifteen and nineteen and travel as part of a group with a qualified leader. They explore the international aspects of their 4-H projects or concentrate on the culture of the country.

Barrett was one of ten U.S. delegates who spent six weeks in Thailand, participating in a special youth conference in Bangkok and then living with host families in rural areas.

□

This year's Friend of Extension Award was presented to an Extension volunteer, a leader in the poultry industry, and a radio public service director. Patricia Beck, Fairfax County; Charles Wampler Jr., Rockingham County; and Alden Aroe, Richmond, received recognition from the Virginia chapter of Epsilon Sigma Phi, the national Extension honorary fraternity, at the annual Extension conference in Petersburg.

Beck, known as "Virginia Extension's Tree Lady," has most recently contributed to the Fairfax County Arbor Day programs. She is responsible for the program's growth and the involvement as chairpersons of such people as U.S. Sen. John W. Warner and Mrs. George Bush. Through her efforts, the Virginia Cooperative Extension Service has gained public and political support.

Wampler, a 4-H All Star and former president of the Dayton High School 4-H Club, served for twelve years in the Virginia General Assembly, for ten years on the State Board of Agriculture and Commerce, and for six years on the Virginia Tech Board of Visitors. The Wampler Foods, Inc., executive also worked for three years as chairman of the Virginia Poultry Festival and for twenty-five years as president of the Rockingham County Fair Association.

Aroe, the public service director for WRVA in Richmond, has used his voice to promote Extension since

1950, both broadcasting Extension messages and assisting Extension agents in the preparation of radio program announcements. His radio broadcasts have resulted in as many as 600 clientele responses to Extension offices from one radio broadcast. More than half of those attending one Extension meeting heard about the program from an Aroe broadcast. Among his other services to Extension, he has also served as a judge in 4-H contests.

□



Virginia 4-H'ers received a personal "thank you" from the governor of Santa Catarina, Brazil, for their assistance to that South American state in recovering from severe floods last year. Mitchell R. Geasler, vice provost for Extension at Virginia Tech, and Bonnie S. Braun, associate director of 4-H youth and home economics, received an engraved commendation of appreciation from two Brazilian workers, Enriberto Buchmann and Jacy Dalponte, 4-S representatives. 4-S is the Brazilian equivalent of 4-H.

The engraved certificate from Virginia's partner state in South America expressed appreciation to Virginia 4-H'ers for sending more than \$3,000 in seeds to help replant crops that were destroyed by the flooding.

□

Virginia Extension's associate director of 4-H and home economics is one of 43 outstanding young American professionals chosen for W.K. Kellogg Foundation's

National Fellowship program. *Bonnie Sue Braun*, who also is associate dean in Virginia Tech's College of Human Resources, was selected by a panel of educational civic leaders from 765 applicants.

A native of Missouri, Braun, thirty-seven, earned a bachelor's degree and a master's in child development and home economics education from Central Missouri State University. She received her doctorate in family economics and management and home economics education from the University of Missouri in Columbia.

Before coming to Tech in 1983, she worked as co-director of the Oklahoma Energy Program in Stillwater. She is a member of numerous state and national 4-H and home economics associations. Since 1976, she has received several honors, including an award from the Administration on Aging Fellowship and selection by the governor as an Oklahoma Observer to the White House Conference on Aging.

As a Kellogg Fellow, Braun will participate in six seminars which will examine national priorities relating to quality and equality in human resource development, technology and growth, food supply, basic health care, economic revitalization, and international interdependence.



Teen students from the Monroe Vo Tech Center in Leesburg taught Loudoun County Extension homemakers how to make such garnishes as birds from apples and roses from radishes so that the representatives could return to their Extension homemaker clubs and pass on the information to the other members. The role reversal of teens teaching adults appeared to have been very successful.



Fourteen persons received nearly \$10,000 in scholarships

during the annual meeting of the Virginia Extension Homemakers.

Receiving the two \$750 Maude E. Wallace scholarships were *Blair Harrell, Pittsylvania County*, and *Theresa Ann O'Donnell, Montgomery County*.

Recipients of the six \$750 Ella G. Agnew scholarships were *Deedra Anne Bass, Wise County*; *Karen D. Baylor, King and Queen County*; *Phillis L. Brown, Franklin County*; *Leslie R. Rollins, Warren County*; *Sharon D. Shoemaker, Pulaski County*; and *Lisa R. Turner, Accomack County*.

The \$750 Mrs. Guy Roop scholarships went to *Debra K. Cole, Russell County*; *Anne D. Insley, Gloucester County*; *Patricia W. Wilson, Roanoke Valley*; *Anne M. McGowen, Loudoun County*; and *Pati A. Tichenell, Culpeper*. *Beth A. Parker, Amherst*, received a \$200 scholarship for a photography project.



Certificates of appreciation for distinguished service to Virginia agriculture were presented at Agri-Tech '85 to *Robert H. (Twig) Strickler*, chief executive officer of Rocco Enterprises, *Harrisonburg*; *Elmon T. Gray, State Senator, Sussex County*; and *Roy F. Heltzel, Culpeper County Extension Agent*.

The citations were issued on behalf of the College of Agriculture and Life Sciences, the university administration and Board of Visitors, the Virginia Cooperative Extension Service, Virginia Agricultural Experiment Station, and the state's agricultural industry.



Leading preparation for the 1986 State 4-H Congress is the new president, *Kevin J. Sutton* of *Nickelsville*. Working with him are *Tammy Newland, Powhatan*, vice president; *Christina Van Balen, Annandale*, secretary; and *Paula D. Orndorff, Woodbridge*, reporter/historian.

Representing the six Virginia Extension districts are: East Central, *Rita Williams of Bedford*, and *Brandon Hudson of Halifax*; Northeast, *John Dickerson of Hanover*, and *Cliff Walton of Powhatan*; Northern, *Michael S. Williams of Fauquier*, and *Tommy Mims of Page*; Southeast, *Linwood K. Christian Jr.* and *Melanie Jackson*, both of *Petersburg*; Southwest, *Earl Bradshaw of Bland*, and *Sharon Stevens of Buchanan*; and West Central, *Teresa Mitchell of Floyd*, and *Ernie Lyle of Bath*.



Easley Smith, retired Extension specialist at Virginia Tech, has been a fixture at the Eastern 4-H Engineering Event at the Virginia State Fair. He has been in charge of the tractor driving contest for thirty of the thirty-five years of contest's existence. Contest officials honored Smith at the annual awards banquet for his service to the event and 4-H.



A trust established in the memory of northern Virginia dairy farmer *Philip M. Digges* will fund four \$1,250-per-year continuing scholarships to be awarded to northern Virginia students who are majoring in dairy science at Virginia Tech.

Priority will be given to qualified applicants from the *Arlington, Alexandria, Fairfax, and Fredericksburg* areas, including the counties of *Loudoun, Clarke, Prince William, Fauquier, King George, Stafford, Caroline, Spotsylvania, and Frederick*.

The first scholarship was awarded this fall and may continue for four years, assuming satisfactory academic performance of the recipient. The other three scholarships will be added one at a time over the next three years.

Information concerning the scholarship can be obtained from *John White*, head of Virginia Tech's dairy science department.

After the Flood, What ????

M. Michael Jones should be a very old man, since as Patrick County Extension agent he has seen two one-hundred-year floods. However, both floods have occurred within the last six years, making Jones an expert on the state's initial damage assessment report for outside aid.

His county was hit by once-every-hundred-year floods in 1979 and again last August. In addition, the farmers of Patrick County suffered two droughts during that period and Jones and representatives from other U.S. Department of Agriculture (USDA) agencies were involved in conducting drought assessment reports that determined whether or not the local producers were entitled to financial assistance.

The task of providing damage assessment reports is not unique to the Patrick County Extension office. Extension, through its network of local offices across Virginia, has been judged by the state as being the best prepared to help local governments assess the damage that a flood, storm, or tornado has caused.

And it is certain that some will occur each year. Last year, nine Virginia localities had major damage from flooding, storms, and tornados. In one month, Buchanan, Dickerson, Tazewell, Washington, and Wise counties in Southwest Virginia experienced more than six million dollars damage in flooding while across the state, Colonial Heights, Hopewell, and Petersburg reported nearly eight million dollars damage from tornados.

H. Bland Franklin, Jr., Extension community resource development specialist in Richmond, coordinates Extension's responsibilities in the damage assessment program, making certain that local representatives receive the necessary training to conduct the damage assessment program in the event of a disaster. His office, along with the State Department of Emergency Services and many other state agencies, is poised to provide damage assessment assistance to a locality that needs help following a disaster.

"Virginia emergency legislation," Franklin says, "places responsibility for planning, preparing, and responding to local disasters on local governments. The state helps local governments, though, by providing assistance through various assigned agencies."

Franklin says, "Extension is assigned the task of helping the local governments if they need it." The three areas of Extension's responsibility are to:

—Inform local governing bodies whenever agricultural conditions are present which would warrant assistance and provide them and local producers with information concerning federal and state disaster assistance.

—Serve as a member of the local USDA Food and Agriculture Council (FAC). This involves supporting USDA in its natural disaster missions as well as providing educational material to farmers, rural residents



County agent Mike Jones, and county administrator Barnie Day look over damage figures from flood.

and others on what they can do to protect themselves and their property against damage. This also involves giving advice on damage recovery.

—Provide state-promised help to local governments who need assistance in planning, training, and organizing local representatives to ensure that an accurate initial damage assessment is made and reported following a disaster.

Last year, Extension provided Virginia's ninety-five counties and forty-one cities with information on making an initial assessment following a disaster and provided training in cooperation with Emergency Services to 496 county and city officials on how to carry out such an operation.

The August deluge in Patrick County did more than ten million dollars in damage, about half that reported in 1979. Jones notes that there was more warning for this year's flood than six years ago when "the heavy rains just came all at once. That flood also cleaned out some of the river and creek beds which prevented damage this year."

The August rain, remnants of Hurricane Danny, soaked the ground on a Friday and Saturday. Saturday night the deluge came, pouring between five and fifteen inches in twelve hours at the five weather stations in the



Waters were continuing to rise during the night.

county. The ground could hold no more moisture, and the rain could only run off into the streams.

The Mayo River that flows through the heart of Stuart couldn't hold the influx of water and reached more than two hundred yards beyond its banks. The resulting flood struck much of the town's industry, its sewage treatment plant, several businesses, private residences, and bridges and roads. The advanced warning, however, prevented a repetition of 1979 when sixty employees' cars in one plant parking lot were washed away by the river.

Jones first contacted **Barnie Day**, county administrator, and **Carl Hill**, the county director of emergency services, while the rain was still falling Saturday night and planned how the damage assessment would be made. Early Sunday morning, they met with the board of supervisors who classified the flood a disaster. Along with county personnel and the FAC representatives from the offices of the Agricultural Stabilization and Conservation Service, Soil Conservation Service, and the Farmers Home Administration, they divided into teams to gather the damage figures.

"This was where the 1979 flood helped," Jones recalls. "Most of us had worked on the 1979 flood and this made it easier. Working in teams we quickly had to get an initial figure for the twenty-four-hour report. The local radio station, **WHEO**, really helped by putting a public service announcement on every thirty minutes asking persons to call in their reports of damage. We received more than 160 calls in eight hours because of those announcements."

Following the compilation of the initial assessment, the local teams continued to gather the information for the seventy-two hour report and to categorize the damage to private property, business and industry, public property and agriculture, telling whether damage would be classified as major or minor.

In a rural locality like Patrick County, the damage figures for private property and agriculture are the



John Wood, cold-storage plant owner, looks over damage at lower level of his business.



The building that was once the office and warehouse for a gas and oil firm withstood the 1979 flood but failed to withstand the Mayo River for a second time.

hardest to collect, Jones says. The homes and farms are more isolated and more difficult to reach, especially when there is highway and bridge damage and many phone lines are out. Many of the industries and businesses are able to compute and supply their own figures.

Jones and other Patrick County officials have nothing but praise for the assistance provided by the State Department of Emergency Services and other agencies. **Charles Sawtelle** of the Richmond office remained on the flood scene for as long as he was needed, Jones says. The state was quick to respond to requests for such help as a helicopter to survey outlying areas.

A major portion of the damage from the flood came in Stuart, the county seat, but there was significant road and bridge damage in the county. Farmers lost more than \$500,000 in crops. Minor flooding in the fields, Jones says, created additional problems for farmers by leaving debris that damaged harvesting equipment.

Local insurance agents also helped in the assessment of damage, giving figures on insured and uninsured property. About ninety-eight percent of the agriculture and private property damage was uninsured.

Before making the final report, Jones, Day, Hill, and the others involved with assessing damage met again with the supervisors to go over final figures and make any needed adjustments. "You never have a final damage figure," Jones says. "We still were getting reports from various producers more than three weeks after the flood."

And for the second time in six years, the 17,000 residents of Patrick County found that there are numerous agencies and representatives throughout the state who were willing to work with them to return their lives to normal as quickly as possible. One resident may have expressed it for everyone when he said, "It was nice to know that there were people out there who cared and who would help you if needed." ❧



Someone's oil tank was washed downstream until it was lodged against a guardrail.

Bull Mountain Bugle photos

PEOPLE

Tommy Crittenden:

Hardyville's Cantaloupe King

Tommy Crittenden, the self-proclaimed cantaloupe king of Hardyville, has a dream. He would like to see the producers in his native Middlesex County switch from the traditional grains, soybeans, corn and livestock to truck farming.

The 24-year-old farmer is striving to be an example to the other producers in the county, showing them that there is money in growing such crops as cantaloupes, pumpkins and tomatoes.

This year, the Randolph-Macon College graduate who originally had planned to go on to law school planted twenty-eight acres of cantaloupes on the farm of his grandfather, T.H. Crittenden and father, Fred Crittenden. The elder Crittendens are the owners of Riverdale Farm in Hardyville.

He has some experience in growing the crop. His grandfather had grown a few while Tommy was a youngster and he had helped him with the crop. In addition, he had grown a few acres of cantaloupes each summer while he was in college to help with his expenses.

None of that, however, was on the scale of this year when he raised 4,000 cantaloupes per acre. He sold his 112,000 melons to markets in the Richmond-Petersburg and Norfolk areas.

Crittenden sold the melons through an aggressive marketing policy that sold his potential buyers on the fact that he could deliver quality cantaloupes sooner than his competitors. It's all right to make



Tommy Crittenden sees a future in truck farming.

Bill Burlison photos

promises if you deliver and Crittenden did.

This fall, he harvested eight acres of pumpkins which he sold to the same outlets. Despite some weather problems which caused the pumpkins to ripen in the field too soon, Crittenden managed to harvest more than 20,000 that were stored for a few weeks in sheds to prevent them from rotting.

Crittenden is doing this work under the banner of Heart Seventeen Enterprises. He claims the name has no special significance although he chose the seventeen because that was the number he wore when he pitched for Randolph-Macon.

He estimates the cantaloupes cost him \$1,000 an acre to grow, including



The Crittenden sign is eye catching.

the eight pickers and three truckers he hired to get the melons to market. Through the planning and organization, he was able to deliver the produce on time.

He is planning to go to Baltimore this winter and try to nail down buyers for the tomatoes he will plant next spring with his cantaloupes and pumpkins next year. "You have to go to where the potential buyers are and talk to them. The more advance work you do, the less hectic it is when the crop is coming in."

Crittenden thinks truck farming of vegetables is the way to go in the future, at least in Middlesex County.

Crittenden also sees a market in the three metropolitan areas near the county for watermelon and sweet corn. "You can't expand too rapidly," he cautions, "because you have to make certain you can handle what you grow. When a crop ripens, you have to get it to the market quickly or you are the loser."

Crittenden, who has worked closely with local Extension agent W.D. Edwards and specialist Herman E. Hohlt at Tech's Virginia Truck and Ornamental research facility at Painter, has shelved plans, at least temporarily, to go to law school. He took pre-law in college and thinks he may some day get that law degree.

But on the day he was interviewed, he was more concerned about the black plastic he used in his pumpkin patch. "Ask your readers," he grinned, "if any of them know an easy, efficient way to get the plastic out of the field after the crop is harvested. I would be interested in knowing."

Cilla Brown: A People Saver

Cilla Brown believes in preventive medicine. Although not a doctor, the director of Campbell County's Department of Social Services believes that educational programs should be aimed at helping people avoid situations that require costly solutions.

Consequently, the soft-spoken Campbell County native has spent the past decade working with other agencies in putting together programs which help residents to support themselves as well as teach them to avoid pitfalls in the future.

"The prevention-type programs are what we stress," she says. "You have to stop people from falling into the many traps that can keep them down and dependent. If you don't try to do that, you spend all of your time providing temporary relief that will have to be repeated again in the future. Prevention is the only way to go. That way, you help people get the most from what they have."

With this philosophy, it is no surprise that Brown's department works closely with Extension and other agencies. She feels a special kinship for Extension, however, from childhood memories of her father meeting with the local Extension agent in their Gladys store. She also is no stranger to 4-H, having been involved with them for nine years, including one as president of the county 4-H Council.

Her department works closely with local Extension agent Phyllistine Moseley in the county Expanded Food and Nutrition Education Program, teaching low-income families how to buy nutritious foods at a reasonable cost. The department also works in cooperation with the other local agencies that work to improve the health and welfare of county residents.

Brown enlisted Extension help on her small farm in Campbell county. The agency helped her to plan a four-acre pond, and is in the process of helping her complete a land-use plan.

And yet, she would be the first to tell you that her initial plan in life



Cilla Brown believes in preventive medicine.

was not to live in Campbell County. "I was like a lot of young people," she says. "I could not wait to get away from home after I finished school. As soon as I received my sociology degree at Virginia State University in 1964, I worked as a caseworker while continuing my studies in graduate school."

Brown holds two master's degrees—one in professional education from Seton Hall University and another in social policy from Rutgers University. She has done additional post graduate work at George Washington University and the University of Alabama.

She got her first true taste of public service in New Jersey, working on a



Brown dictates a letter to her secretary, Robin Wells.

Bill Burleson photos

sixty-four-million-dollar grant to make a start at providing needed health and housing services in Newark. Its aim was to "redo Newark," and make it more responsive to its citizens.

While in New Jersey, she met and married an aerospace engineer who was on the faculty at Brooklyn Polytechnic Institute. They had one daughter, Stephanie, who is now 15 years old. Brown was widowed in 1974, one year after buying the farm upon her husband's disability retirement.

Just prior to leaving Newark, Brown worked as a health program consultant for Newark. In 1973, immediately after moving, she worked as project director for the Health Planning Council in Central Virginia, a position she held until she became director of the Campbell County Department of Social Services.

The first black to head a department in the county government, Brown is proud of the strides that have been made by her department in the ten years she has been at the helm. "We have developed a comprehensive program that includes a broad range of housing and volunteer services," she says. "We have increased the department's capabilities to respond to a broad range of human needs. With this approach, we have been successful in reaching those families who need assistance and getting them to take measures that prevent them from becoming totally dependent."

She seems to never stop thinking of ways to help improve the lot of her fellow Campbell countians. She talks of working with low-income families to help winterize their homes, to improve their homemaking capabilities, find ways to stretch the buying power of their Social Security payments, prevent child abuse and neglect, use food stamps wisely, and to plant experimental gardens showing families how to grow the most beneficial vegetables.

"Our work aims at developing a strong family with good nutritional habits and wise spending practices. A strong sense of family is important. With it, you can overcome a lot of obstacles.

"Our program tries to reinforce and strengthen family life as well as help those who must face life alone. Although we are making progress, I don't think we will run out of clients in the near future," she says.

Page County Has Special 4-H'ers

In Page County, Linda Janes has found bowling is a tool that helps the handicapped young people who are members of the Special 4-H'ers club.

The eleven club members meet twice a month at the local bowling lanes for ninety minutes of fun and fellowship. The program was arranged through an agreement between Ed Painter, owner of Luray Lanes, and Janes, the club's volunteer leader.

"We were trying to find a program that the young people are good at and one they enjoy," Janes says. "Bowling not only did those things, but it contributed to their growth.

"The club members have grown tremendously since they have been participating in the program. They have gained self-confidence and are willing to try new things. In fact, they are trying so many new things, they are wearing us out," she says with a grin.

Janes has been working with the Special 4-H'ers since the organization began two years ago. She was a natural selection as a volunteer leader, having been active in various 4-H projects for more than a decade. Currently, she is president of the local volunteer leaders association and is on the county Extension advisory committee.

Janes is assisted by Dorothy Frazier, a local homemaker who handles many arrangements and secretarial duties. Betsy Campbell, Page County 4-H agent, is also available for help.

In addition to bowling twice a month, club members participate in other activities such as learning cardiac pulmonary resuscitation (CPR) and attending dances and other events. Exercise classes, especially aerobic dancing, have also been popular with the 4-H'ers.

Although the 4-H program is not affiliated with the Special Olympics, the members of the Page County 4-H club have a very close link with that organization. Janes hopes that the members, through their participation in 4-H, will be more willing to participate in other sports.

Like other 4-H organizations, there is a constant struggle to raise money to do everything that the members want. This spring, the members held a bake sale and made potholders and other items to help raise funds to finance a possible stay this summer at the Northern Virginia 4-H Educational Center in Front Royal.

The only difference between the members of Special 4-H'ers and other clubs is their ages. The ages in the Page County organization span from the teens into the early thirties. The organization has its rules, customs, and officers, like all other clubs.

Dennis Johnson serves as president. Other officers are Robert Runyon, vice-president; Gary Bowman, secretary; Bobby Bowman, treasurer; and Janet Frazier, reporter.

Janes hopes to be able to identify other 4-H groups across the state that are composed of handicapped young people so that they may come together periodically in

joint activities. "I have talked to 4-H leaders and volunteers about our effort, and there does seem to be some interest in forming other groups."

Her constant worry is volunteers. "We never seem to have enough. Our young volunteers have been wonderful. They have their own activities, however, and are only able to help out for a short time. In the bowling program, for example, the teens help the 4-H'ers by showing appreciation, hugging them, or by just keeping score.

"The 4-H program has really helped these handicapped young people. They have received so many benefits from it. Of course, we who have worked with them have also benefited from our contact with them," she says. ☞



Donna Bailey tries that old reliable, body English, in picking up a spare.



Paul Brumback lines up on the pins prior to releasing the ball.



Volunteer Kenny Janes awards achievement pin to bowler Dennis Johnson.



Frances Wood applauds herself after making a good first roll down the bowling lane.



Duck pins scatter after ball sets chain of events in action.

Page News and Courier photos

INNOVATIONS

RESEARCH TO BENEFIT VIRGINIANS



A paraplow, a new kind of plow, is currently being tested at Virginia Tech.

The minimum tillage tool combines features of the conventional moldboard plow and chisel plow.

"The paraplow fractures and loosens the soil without turning it upside down," says Glen H. Hetzel, Extension agricultural engineer. "This leaves plant residue on the surface where we want it, and allows for air and water movement and nutrient transfer down in the soil."

Hetzel is testing the paraplow at depths ranging from 12-20 inches in no-till corn fields.

"It's being tested on some of the heavier soils in the state," he says. "We expect some results shortly after fall corn harvest."

The Tech specialist has already discovered that a fairly large tractor is needed to pull the machine—approximately 30 horsepower per shank.



A collaboration of entomology and dairy science researchers began when Sarah Whitman, a dairy science graduate student studying with professor Dick Saacke at Virginia Tech, became interested in the possibility of learning what makes some insects freeze-tolerant, and introducing this ability to embryo transfer technology.

Embryo transfer makes it possible for dairy cattle offspring from a superior cow to be produced simultaneously by transferring fertilized ova from that cow to several host

mothers. However, if the recipients are not at the same stage as the donor, the attempt is frustrated. Freezing the embryos to transplant them when the host is ready is the solution, but only 50 percent of the embryos survive freezing.

Meanwhile, a number of insects are able to survive freezing, such as the wood roach. Don Mullins, entomology professor, and graduate student Bob Hamilton are working with a wood roach found in the Mountain Lake area near Virginia Tech.

Mullins and Hamilton have maintained the wood roach at 30 degrees below zero for weeks, thawed it out and watched it walk away.

The insects' hemolymph was mixed with the solution in which the embryos were frozen. At a 50 percent mixture, Whitman and Saacke found neither benefits nor problems.

Although Whitman has graduated, she is continuing her research at Tech. She will try higher concentrations of hemolymph in the solution in which embryos are kept, but salts which would be harmful in larger proportions must be removed and other problems solved first.

"We're not expecting to find just one compound in hemolymph. There are a number of strategies that nature uses to enable the insects to survive this tremendous change in their environment that freezing involves," Saacke says.



Better grass with less mowing? Plant growth regulators and their effectiveness on turfgrass and grass pastures are under study at Virginia Tech.

S. Wayne Bingham, professor of plant pathology, physiology and weed science, is testing chemical plant growth regulators on cool-season grasses, such as Kentucky 31 fescue and bluegrass.

"I'm primarily concerned with stopping seed head development on highway turfgrasses," he says. "Growth regulators do not allow the plant to flower."



For the state highway division that translates into fewer required mowings, added savings, and safer driving conditions for motorists.

Another benefit is greener, more attractive plants since energy normally used for seed head development is channeled into foliage production.

Livestock farmers may also benefit from the application of growth regulators. Harlan E. White, Extension agronomist, and H. John Gerken, Extension animal scientist, are testing the product on grass pastures in hopes of maintaining higher quality feed for cattle.

On-farm demonstration trials are underway at eight locations throughout the state with commercial beef cattle—both purebred and crossbred heifers and steers.

"We're comparing the performance of cattle on treated areas versus untreated areas," Gerken said. "At the end of the growing season, the cattle will be weighed and results compiled."



One of the earliest science lessons any student receives is on photosynthesis. As the connecting link between the sun's energy and all life on earth, photosynthesis is one of the world's most essential phenomena.

Virginia Tech researchers are looking for ways to regulate this process and improve the productivity of various plants.

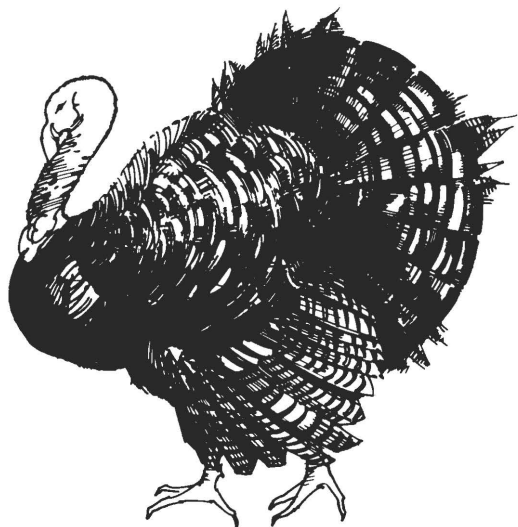
Often this research is designed to increase photosynthesis, thereby causing the plant to produce larger crops. John Barden and Ross Byers, Virginia Tech horticulture professors at Blacksburg and Winchester, respectively, are taking a different approach.

Since apple and peach trees usually bear far more fruit than can reach marketable size and quality, excess fruit must be removed; this is often an expensive and time-consuming operation done by hand.

Barden and Byers are exploring the removal of excess fruit by temporarily inhibiting photosynthesis at a critical stage in early fruit development. The goal is to inhibit or stop photosynthesis long enough to thin the crop and then have photosynthesis return to normal.

"The results look promising and the work is continuing," Barden says, "but it's too early to predict widespread commercial applications."

□



Virginia Tech researchers have been studying ways to improve turkey feed to add the most body weight to the birds on the least amount of feed.

Lawrence M. Potter, M.E. Blair and J.P. Blake, researchers in Tech's poultry science department, studied the effects of various amounts of fat and protein added to the diet of 900 large, white male turkeys, between eight and 20 weeks of age.

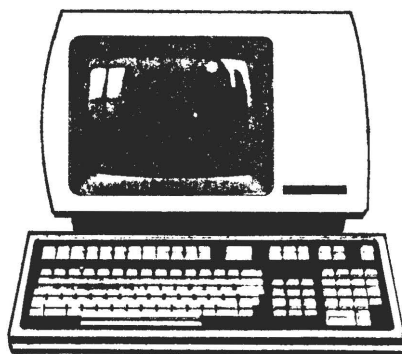
For every 1 percent of fat added to the diet there was a corresponding 2.1 percent increase in food efficiency,

meaning the birds gained extra body weight on less food consumed.

Diets low in protein resulted in less cumulative body weight gain, less feed consumption, and less food efficiency. Fat added to the low-protein diet increased body weight gain and feed efficiency nearly as much as when fat was added to feed with medium or high levels of protein.

"The bottom line is add fat to feed for the maximum rate of growth and feed efficiency," Potter says. But, he adds, "Fat added to the feed results in increased fatty deposits in the bird, a result not wanted by either turkey producers or consumers. By adding more protein to the feed the fat deposits can be maintained at low levels."

□



Matching a Virginia apple grower with a store buyer in New York takes hours of time on the road or telephone. With computer technology, however, the two persons could make a deal and go on with other business in a matter of minutes.

Virginia Tech researchers have developed a computerized system for marketing livestock and are working on a system for grains. A system for fruits and vegetables could be a next step.

A computerized marketing system could help a Virginia apple or peach grower find a good price for his fruit although an abundant supply has driven the price down locally. He could put a description of his produce on the system where it could attract the eye of a buyer in another state.

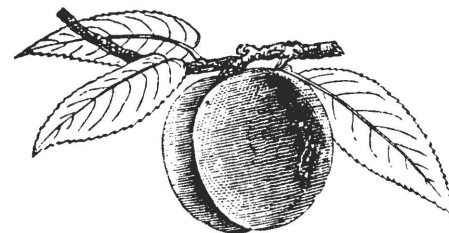
The out-of-state buyer also would benefit because he has instant access to markets without sending someone to the Virginia orchards and without spending hours on the telephone trying to find the product he wants at the price he wants.

A buyer could have the computer search the list of offerings for the price he wants, for a specific geographic area, for a particular

mode of transportation, and for a delivery date.

"It can be a powerful tool. It could cut down on spoilage and the multiple moves that cost money. And if it allows the producer or buyer to cut costs, that could eventually reach the consumer in the form of lower prices," Wayne Purcell, professor of agricultural economics at Virginia Tech, says.

□



Softening in fruits is desirable in ripening, but there is a narrow line between what is desirable and what is too much. Excessive softening is the biggest reason for rejection of fruits and vegetables in the market place. Researchers in Virginia Tech's food science and technology department are learning what causes softening and how to control it.

Associate Professor James Palmer says Tech's scientists have discovered many details of the actual structure of the cell wall in fruits and vegetables and how they break down. "The amount of degradation is much smaller than thought," he says.

There is some evidence that enzymes appear in some fruits to break down the pectin—the glue that holds the cells together—while in other fruits the pectin seems to become less solid. The result is that water, which is a major component of the shape and texture of fruit as it is trapped within a network of sugars, is able to move around more.

"People in the past looked for a big change in the structure, but we think probably all we are talking about is a few changes of critical interacting bonds."

Palmer cites two possible applications for what is being learned—genetically engineered varieties with fewer of the enzymes which cause pectin breakdown, if that is the cause of softening; and development of techniques to prolong firmness. There are techniques for prolonging the firmness of apples.

□

Patrick County Youth They Know the Answers

Mary Ann Johnson

You're so nervous that you have forgotten your parents' names, and you write them on a piece of paper so that you will have the right answer when you are asked. This is the method used by one Patrick County youngster in the finals of the Sunshine Classroom competition.

Patrick County Extension agent Michael Jones says young people have used a number of methods to help them overcome the anxiety of appearing in public. He has watched them develop self confidence as they have appeared as part of the 4-H Sunshine Classroom.

Sunshine Classroom is a weekly contest that is offered through the 4-H program in the Patrick County schools. An academic question-and-answer competition, the program is broadcast live on the local radio station, WHEO.

The program, now in its sixth year, has provided the experience of being on radio for about 300 youngsters, says Jones, who organized the county program.

Sunshine Classroom begins in the fall with finals held in the spring. The youngsters, working with their teachers, form three-member teams representing each of the county's five elementary schools. "The youngsters do a lot of work just to become members of their class teams," says J. E. Cobbler, Stuart Elementary School principal. His school has been a regular winner in the countywide contest.

Through thirteen weeks of the school year, the teams compete with each other in a series of eliminations until only the two top teams are left.

"We got involved because we saw how good it was for the youngsters," says John Lambert, who is general manager for Primlumber, Inc., the major sponsor of the program. "Because we provide that support, the radio station, which has always been an enthusiastic supporter, is able to broadcast the program during school hours so that teachers can use the program in the classrooms as part of the learning experience for all the students.

"And it gives these youngsters some of the fun of being well known in their community—like the sports players," Lambert says.

In addition to Primlumber, several other county businesses support Sunshine Classroom and Panel Knitting provides sweatshirts for the winners. L. E. Hutcheson has also provided sweatshirts and even a vacation trip to Myrtle Beach for listeners.

"We can't go to any event in the community any more without seeing a number of alumni of the program wearing their shirts," says Jones. Yellow shirts go to those who are participants on the radio program. White shirts go to youngsters in the listening audience who correctly answer a special question for the listeners. A name is drawn from all the correct answers sent to the program.

The radio station owner, James Litten, says that Sunshine Classroom fits nicely into his station's



D. D. Galtjeon

Mary Beth Martin and Andy Bowman stand ready to be the first to press the button and answer the question.

philosophy of community involvement. Besides broadcasting the program and providing personnel to do the remote work, the station donates the trophies that go to the first and second place teams.

The school system also gets a great deal of benefit from Sunshine Classroom. For the first years of the program, it was tape recorded and broadcast on Saturday afternoon. Then, so that the teachers could use it as an educational tool for all the students, the school board allowed the program to be offered during the school day and to be broadcast live from the school.

School board chairman H. Nelson Witt, an avid listener, finds time to leave his veterinary medicine practice to award the trophies at the end of the season.

The youngsters themselves have fun being on Sunshine Classroom, but say it also takes a lot of work. They practice together, using old questions, and make sure they keep up with current events. "Lots of the questions come from the news," says one team member.

All members of the final teams agreed that the cheering by the audience helps.

It takes a lot of individuals to get the show going each week. In addition to Jones who asks the questions, co-host Richard Rogers interviews the youngsters and keeps the radio audience informed of the action. Keeping it all official is county elementary supervisor Susan Rea who serves as judge.

Last spring finals saw the Stuart Elementary School's sixth grade team defeat the school's seventh grade team. Members of the sixth grade were Lee Bowling, Gayle West, and Andy Bowman while the seventh grade team was made up of Shannon McGroary, Bill Carter, and Mary Beth Martin.

This year, the students at the county's other four elementary schools are vowing that they will wrest the crown from Stuart. ☛

DID YOU KNOW?

The General Education Board of New York financed the first Extension work in Virginia in 1907. The 1908 Virginia General Assembly appropriated \$3,000 to begin the work. From that small beginning, Extension has grown to where it has offices in all ninety-five counties and twelve cities in the Commonwealth.



Extension's community resource development (CRD) program has been conducted almost since Extension has been in existence. There was a 1918 circular that looked at the county community. Known first by the name rural development and then rural area development, community resource development has been the common name since 1965.



The first community 4-H club in Virginia was the Sunnyside Club in Nottoway County. It was organized in 1903. A year later, it also became the first club whose members cooperated in marketing a product—eggs.



Ella G. Agnew became the the first female field worker for the U.S. Department of Agriculture when on July 1, 1910, she accepted the job of being an Extension agent in Virginia. Her work laid the framework for Extension's 4-H and home economics programs.



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