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VIRGINIA EXTENSION

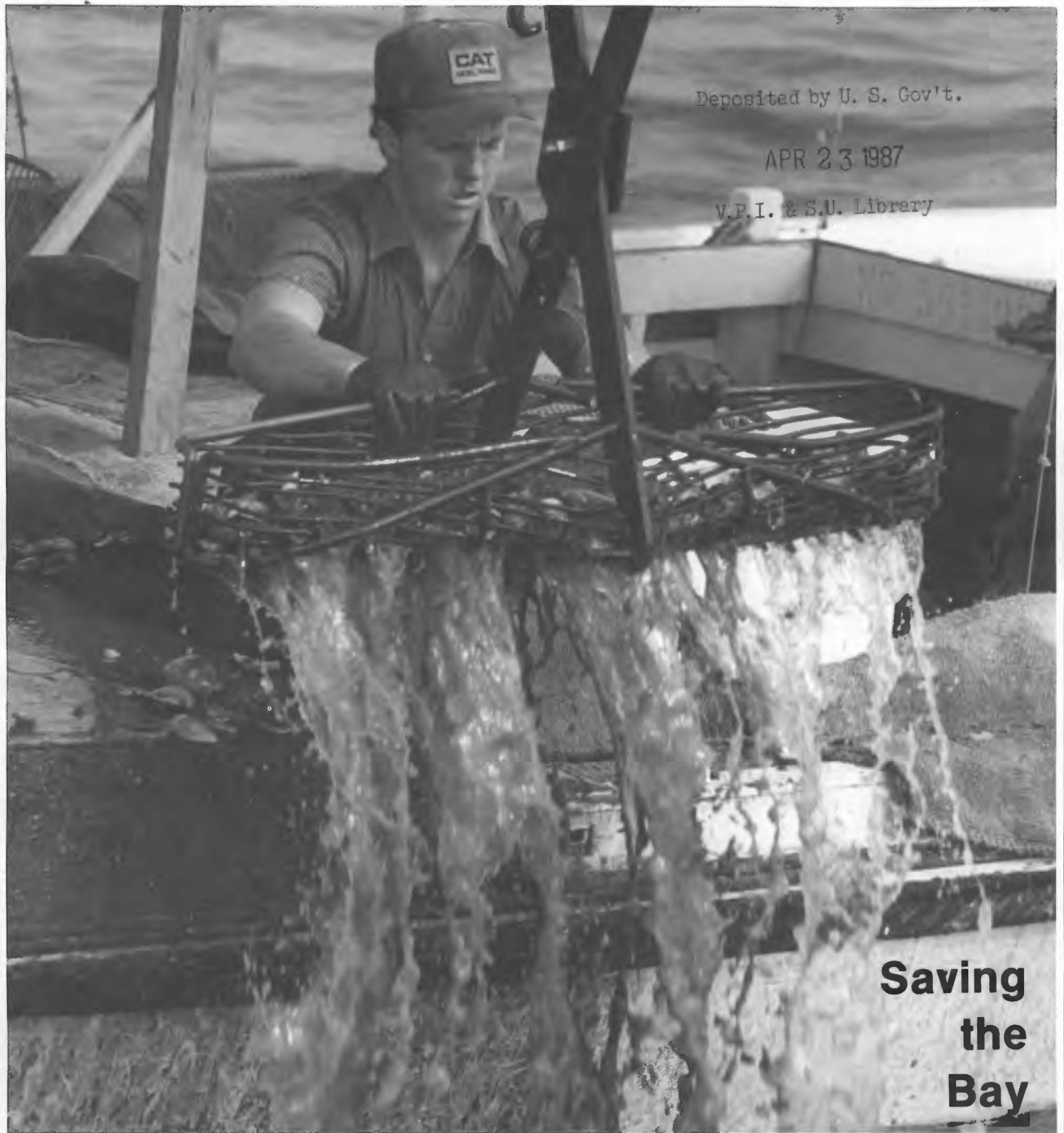
THE VIRGINIA COOPERATIVE EXTENSION SERVICE MAGAZINE

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**Saving
the
Bay**

COMMENTARY



Mitch Geasler

M. R. Geasler
Vice-Provost
Extension Division

Finding The Right Priorities

If you have had any dealings with Virginia Extension staff members recently, you probably have heard the words "priority programming." These two words are very prominent in the extensive planning process that will set our plans of work for the next four years in Extension. Local, district, and state staffs are spending a considerable amount of time developing program objectives that will meet clientele needs as we move toward the year 2000.

It has been my goal since becoming director of Extension in Virginia to have programming drive the system. This premise has guided our attempt to change the scattered efforts across the state into programming that is systematic and direct. This is the purpose of the "priority programming" concept.

Priority programming is our way of identifying the greatest needs of our clientele across the state and matching those needs with our capabilities to deliver programs. Priority programming will enable Extension staff to:

LIMIT what we do and for whom, allowing staff members to stop trying to be all things to all people;

DIRECT programming efforts at preventing and/or solving significant, practical, or persistent problems and concerns of those persons with the greatest needs;

CHANNEL human, fiscal, and educational resources to support the ongoing priority programming; and

MAKE a greater impact on the lives of those we serve so that, if the work is known about by the decision makers, we will continue to be worthy of private and public investment.

The priority programming concept has caused staff members to rethink the programming concept. In years past, it was common to think of programming in terms of "I want to teach" or "They (meaning clientele) want me to teach." Emphasis was placed entirely on subject matter. The impact of

the results was difficult to measure.

The priority programming procedure allows the planner to focus on the clientele who have been or are affected by the problem. The targeted audience becomes the key to determining the appropriate method of delivering information. This is different from the way staff looked at program delivery in the past.

Staff members tended to focus upon the subject matter and then determined the appropriate methods for delivery. The priority programming procedures encourage staff to look at the target audience and determine the delivery processes that are appropriate to it. Extension's priorities in the coming years are the following:

- **Restore profitability to agriculture by** offering marketing options, stimulating alternative enterprise development, improving farm financial management, and fostering production efficiency.
- **Strengthen the economic base by** revitalizing rural Virginia, teaching sound family resource management, stimulating strategic community planning, improving commercial food processing, providing skill development programs to youth, and improving hotel and restaurant management.
- **Improve nutrition, health, and safety by** diminishing disease risk, disseminating safe pesticide management information, teaching farm operations safety, improving food habits, and reducing infant mortality.
- **Develop human capital by** developing leaders, improving citizenship, recruiting and developing volunteers, improving public sector decision making,

(continued on inside back cover)

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FRONT COVER

Chesapeake Bay has provided watermen with good living over the years (Photo by Bob Veltri).



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INNOVATIONS

RESEARCH TO BENEFIT VIRGINIANS



Using flies to fight flies is a technique that promises to save Virginia poultry producers a substantial amount of money each year. E. Craig Turner Jr., professor of entomology at Virginia Tech, is using "the black garbage fly" or the *Ophyra aenescens*, as a biological control agent against house fly maggots breeding in the manure of deep pit caged layer houses.

Turner says the small fly lays its eggs in the same areas as the house fly lays its eggs. Its maggots hatch in the manure and can complete development the same as the house fly. "They are predacious, however, and proceed to kill and feed on any house fly maggots they encounter," Turner says.

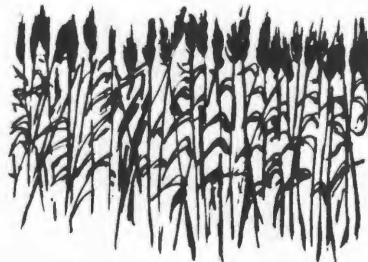
The entomologist says the trick is to mass rear the little flies and release them in the caged layer house when house fly numbers are naturally low or have been reduced by insecticides. The "garbage fly," which does not range too far from the manure pits, has been released in several poultry houses across the state. Each time, the number of house flies has decreased.

The accompanying reduction of house flies not only makes for more sanitary conditions, Turner says, but there is a reduction in the amount and cost of larvicide

treatments. At one location, the savings were two cents a bird, and "when you multiply that by 575,000 birds, you have a substantial saving." He believes the savings could result in as much as four cents a bird when all houses at a location are treated and there is "no reinfestation pressure."

Turner hopes to expand the research, which has been supported by the Virginia Agricultural Council and individual commercial egg producers, to other livestock areas where manure accumulates and fly breeding occurs.

□



The drought-resistant and disease-resistant traits of wild grasses could be the key to food production in the world's arid regions. Virginia Tech associate professor of botany Khidir W. Hilu is using genetics to prepare for transfer of these traits to millet and other plants in arid regions.

In the vegetation world, grasses dominate, making up one-quarter of the vegetation on earth and first in the amount of area covered. Hilu says that seven of the top 10 crops in the world are grasses. The top three crops, all grasses, are wheat, rice, and corn.

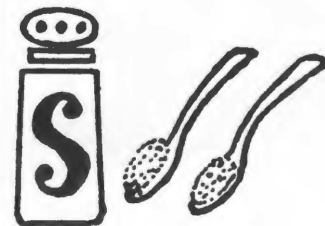
Hilu is looking at the classification of grasses, the structure of whole families, how they group into sub-units, and how they relate to one another. He also deals with cultivated grasses, having worked with wheat, corn and related

species, and finger millets, one of the smaller grain cereals.

Hilu uses several methods to classify the plants, including the computer numerical and molecular methods. So far, he has analyzed more than 240 genera of grasses for ninety characteristics to see the types of relationships among them.

He thinks such studies ultimately will lead to the creation of new hybrid grasses through a process called "protoplast fusion." In that process, genetic material from one plant's cell is combined with that from a cell of another plant. In such a way, traits to survive desert conditions could be transferred from wild grasses to cultivated plants, and countries with dry conditions could have greater stability in farming.

□



Salt may impede the body's ability to eliminate cholesterol as a waste product or even stimulate the production of more cholesterol. This speculation took place after a recent study in the Virginia-Maryland Regional College of Veterinary Medicine on how dietary salt and cholesterol react in the body.

John Lee, a professor and noted cardiovascular researcher, and colleagues Victoria Rowe, Craig Thatcher, D. Phillip Sponenberg, and Geoffrey Saunders, devised a three-month experiment to deter-

mine possible relationships between dietary salt and cholesterol and the increased serum cholesterol and triglyceride levels which are known to promote atherosclerosis or hardening of the arteries.

At the study's end, laboratory animals on a high dietary salt and cholesterol diet had a significantly higher level of coronary atherosclerosis than any of the control group. "This study appears to be the first to demonstrate the interaction between dietary NaCl and cholesterol intake, blood cholesterol, and the development of coronary atherosclerosis," the authors reported at a meeting of the American College of Nutrition.

The study underscores the wisdom of American Heart Association recommendations that the public reduce its intake of cholesterol, salt, and fat as a means of reducing the risks of heart diseases.



Most Virginians are having trouble making ends meet. A three-year study by Glen H. Mitchell, Virginia Tech Extension specialist in consumer education, and Phyllis Zalenski of Birmingham, Ala., a graduate student in housing, interior design and resource management, found a large number of people who reduced luxury buying and changed bank accounts to save money.

The study found those over sixty were more likely to comparison shop, be less wasteful, drive less, and spend more time with the family while those between thirty-three and forty-six were more likely to pay bills late. Medical checkups

or treatments were postponed more by those between forty-seven and sixty.

The Virginia Agricultural Experiment Station study that began in 1983 with 537 Virginia families across the state found that rural residents were more likely to be frugal with money, postpone major purchases, comparison shop, drive less, and do their own automotive maintenance. Urban residents were more likely to have changed bank accounts, started an IRA or Keough plan, and used the income tax long form.

Mitchell says those surveyed during the three years remained constant in their belief that the future would be better, even though their income expectations of five years previously had not been met.

Animal waste often will do the job of supplying nutrients for their crops. Fred Givens, a conservationist with the Soil Conservation Service, is one who is trying to spread that gospel. He is heading an Extension nutrient management project at Virginia Tech.

Givens' effort is part of the Chesapeake Bay program and is aimed at reducing the amount of nitrogen that enters that body of water. "Many farmers use more nitrogen than they need and they don't take advantage of the nutrients in animal manure," he says.

He hopes to determine exactly what is in the manure, its nutrient value, specific crop needs, and application rates that will assure farmers that animal waste can be used without reducing crop yields. Plot studies are planned for the Shenandoah Valley, Suffolk and coastal plains farms to demonstrate the result of varying nitrogen levels.

In 1985, Givens conducted a preliminary study on four Rockingham County corn plots. One plot was fertilized with manure only, while varying amounts of nitrogen were applied to two other plots. The fourth plot was provided to a Rockingham grower to farm in his usual way. With the carry-over of nitrogen, the farmer had

about 250 pounds of nitrogen on his plot.

"After the corn was harvested, we found the yields to be practically the same on all plots," Givens says.



Most of the 270,000 mishaps that occur each year in the bathroom involve the elderly. Many of these injuries could be prevented if the elderly's needs were met by safer designs.

Virginia Tech associate professor of architecture Robert Graeff is working toward that goal. Using grants from American Standard and the Center for Innovative Technology, the industrial designer has designed a bathroom with a configuration of equipment and space and integrated safety features particularly geared to the elderly.

The bathroom, a thirty-six-by-130-inch modular utility wall concept that can be added to any existing room at minimal installation costs, features a shower seat with an integrated douche and therapeutic shower massage, non-skid floors, a built-in magnifying glass for quick identification of medicine labels, ample storage space, ceiling and floor lighting, and grab bars integrated into the overall design.

"This design, with its safety features, offers the elderly considerably more independence in taking care of their hygienic needs, making it possible for them to continue an independent lifestyle that standard bathrooms may not make possible," Graeff says. American Standard will build a prototype of the bathroom for display at a major plumbing and sanitary show in New York.

Donkeys Keep Sheep From Going to Dogs

by Mary Frank



Virginia's largest sheep farm was literally going to the dogs—but that was before the donkeys arrived.

Russell County sheep and livestock producer W.A. "Zan" Stuart says dogs killed as many as 300 sheep a year at Stuart Land and Cattle Company. Stuart is president of the family-owned corporation, which counts 22,000 acres of rolling hills and steep mountainsides among its holdings.

Stuart put up with the dog problem for over three decades. Then, about two years ago, he read a magazine article about using donkeys to protect sheep and decided to give it a try. It's a decision that he doesn't regret.

He says his donkeys have practically eliminated a problem that had become intolerable. "I don't know what the donkeys are doing, but the lambs aren't getting killed and the sheep are being protected," says Stuart.

Stuart has witnessed the donkeys' strong dislike for dogs. He recalls when a couple of his own Scotch border collies tried to bother the donkeys only to be promptly chased into a fence. "They just hate dogs. They don't tolerate them and they won't let them come around," says Stuart.

Still, Stuart thinks the donkeys' effect may be more psychological than physical. "I think the dog comes in and says, 'Here's something that's not running from me. I'm not sure what I ought to do . . . so I think I'll just go to the next-door neighbors and bother them instead.'"

An advantage that donkeys offer over guard dogs is that they can live and feed with the sheep. "When we feed the sheep," says Stuart, "we feed the donkey so he'll feel he's a member of the family and stay with them."

Stuart prefers to use only one donkey with each group of his mostly purebred Suffolk and Hampshire sheep. "As long as we've got one donkey per unit,

then the donkey doesn't have anything to do but worry about his sheep. They're his family and that's the way it works best," says Stuart.

Stuart Land and Cattle Company is hardly unique in its battle with dogs. In fact, dogs are a major obstacle for sheep producers in Virginia, according to Steven H. Umberger, Extension sheep specialist at Virginia Tech.

With favorable market conditions and the state's ideal forages as evidence, Umberger has been demonstrating advantages of sheep production in Virginia. "One of the major reasons for people either not getting into the sheep business or getting out of the sheep business is problems they experience from dog attacks," says Umberger, adding that domestic pet dogs are the bulk of the problem.

Umberger says the best way to control dogs is probably with high-tensile electrified fence; but he concedes that it's not very practical on farms like Stuart's, where 1,800 ewes are often scattered miles apart. And so researchers are testing other control measures—like guard dogs and now, guard donkeys.

Sheep at Virginia Tech and at the Glade Spring and Steele's Tavern agricultural experiment stations are also under the watchful eye of donkeys. Umberger says he wanted to be sure that no inherent problems would be created by having the donkeys and the sheep together.

"We found that they work quite well together," says Umberger. "For donkeys that have never been around sheep before, it takes about six weeks to become acclimated to each other. From that point on, wherever the sheep go, the donkeys go as well."

Umberger says donkeys range from \$100 to \$300 each, depending on the market. He doesn't recommend any particular breed of donkey—just one that's big enough to ward off a dog. ☞

Effort Aimed at Restoring Bay to Former Glory



Bob Veilri



Bill Burleson photos

Roscoe Wine and his wife, Virginia Ann, enjoy a few minutes with their son, Garland.

Roscoe Wine lives more than a hundred miles from the Chesapeake Bay. And yet, what the Rockingham County farmer does with his land affects the body of water that is considered one of this country's natural treasures.

The bay, even after centuries of intensive use, remains a highly productive natural resource. It provides millions of pounds of seafood, functions as a major hub for shipping and commerce, supplies a huge natural habitat for wildlife, and offers a wide variety of recreational opportunities for residents and visitors.

Therefore, it is no surprise that the bay is valuable to all American citizens, and not just to the residents who live on its Maryland and Virginia shoreline or those who live in the 64,000 square miles in five states whose waters drain into it. Its beauty, products, and opportunities are there to be enjoyed by everyone.

But the Chesapeake Bay is in trouble. It is considered an ecosystem in decline. Polluting activities occurring throughout its drainage basin affect the water quality in the bay and its tributaries. This decline has led to Maryland, Pennsylvania, Virginia, the District of Columbia, the Environmental Protection Agency (EPA), and the Chesapeake

Bay Commission agreeing in 1983 to cooperate in their efforts to improve and protect the water quality and living resources of the bay and its environs.

Wine is one of several farmers in Rockingham County who have adopted various better management practices (BMPs) that are designed to eliminate or reduce runoff of pollutants into streams that feed the bay.

Much of the phosphorus and nitrogen reaching the bay is draining off croplands. By voluntarily changing their tillage, cropping, chemical applications, manure storage, and water management practices, farmers can preserve their valuable topsoil while reducing pollution.

Wine, whose 330-acre swine and cattle operation lies just outside of Bridgewater at the southern end of the county, built a 125,000-gallon waste holding facility for his hogs. The gravity-fed facility lies just below his slatted-floor hog house at the top of a hill. Gravity also allows him to fill the truck to spread the manure across his fields. He saves time, too, as the gravity flow allows him to fill a truck with manure in one minute. The facility was built under a cost-sharing agreement in the Chesapeake Bay Agricultural Cost-Share Program.

Wine, a 1972 Virginia Tech graduate, says he could previously go only two months before having to clean the animal waste from the house. The new facility, with its six-month holding capacity, gives him more flexibility in the management of his manure program.

He no longer must spread the manure when the ground is frozen or saturated with water. Both conditions lead to excessive nutrient runoff and stream pollution. "It gives me more flexibility and allows me to better manage my fertilizer practices," Wine says.

Wine, who finishes 2,000 hogs and raises about 500 beef cattle a year, spreads about one truck load of manure per acre. Before getting the new facility, his fertilization program often led to excessive nutrients on his pastures. The manure, which he calls "too valuable to waste," was distributed when the hog house had to be cleaned.

Wine and the other Rockingham County farmers who are participating in the program first heard of the effort through Virginia Extension. The agency was given the lead role in coordinating and implementing the educational program through the



Roscoe Wine examines his new waste water facility that lies just below his hog house. Gravity does the work of getting the waste from the hog house to the 125,000-gallon facility and, eventually, to his truck for spreading on the fields.



Paul Davis, left, coordinator for the Chesapeake Bay Educational Program, reviews statistics concerning how Virginia farmers are joining the effort with Gene Yago, water control engineer with the Division of Soil and Water Conservation.

Division of Virginia Soil and Water Conservation. The division is responsible for the overall nonpoint source pollution control program in Virginia and assists Extension in the development and distribution of program materials.

The educational program is clearly a team effort. Other agencies which have been involved in local educational efforts include the Soil Conservation Service, Agricultural Stabilization and Conservation Service, Virginia Division of Forestry, Virginia Farm Bureau, Virginia Agribusiness Council, and the Virginia Tech's College of Agriculture and Life Sciences.

Virginia's conservation effort isn't limited to the Chesapeake Bay. The Chowan River Basin drainage area has been included in the bay effort for two reasons. One, the pollutants flowing into this almost dead river have been studied so that improvements caused by the program can be measured. Two, portions of some counties in the basin also have waters that flow into the Chesapeake Bay.

The multiple agency approach is necessary because the Chesapeake Bay's drainage area includes sixty-eight counties or two-thirds of the state. The large area explains why, during only six months last year, there were nearly 3,000 individual farm visits to explain the program to producers and another 3,200 farmers reached with bay information at various educational programs.

Such a program needs close coordination. This is the job of Paul H. Davis. As Extension's Chesapeake Bay Educational Program coordinator, who is housed in the Richmond offices of the Division of Soil and Water Conservation, Davis keeps in close contact with the agents and programs in the counties that are in the bay's drainage area.

"Virginia's program has made progress over the past two years," Davis says, "but we have come a very short distance when you look at how much more there is to be done. Unfortunately, we do not have all the money we need so we devised a plan to make the funds go as far as possible."

The result is a cost-sharing program that supports certain BMPs in certain areas. The practices of minimum till cropland, no-till cropland and pasture land, grass filter strips, vegetative cover on critical areas, and reforestation of erodible land are allowed in the entire program area.

Also, twenty-four counties have been designated as a cropland priority area and farmers there can receive assistance for such BMPs as strip-cropping, protective cover for vegetable cropland, terrace systems, diversions, contour farming, sod waterways, and sediment retention, erosion, or water control structures.

Farmers in the seven counties that primarily produce livestock and poultry can share costs in the basic six BMPs, and in building animal waste control facilities and grazing land protection. Those in the Chowan River drainage basin can share costs in constructing sediment retention, erosion, and water control structures and receive assistance if they incorporate the basic BMPs.

Important elements in Virginia's program are two research/demonstration projects. Two small agricultural watersheds have been selected, based on their high density agricultural use, for studying the relationship between BMP implementation and their effects on water quality.

The projects, contracted by the Division of Soil and Water Conservation to Tech's department of agricultural engineering, are in Northern Virginia and the Northern Neck. In Fauquier County, Owl Run and its 2,800-acre drainage area are being monitored to determine the pollution coming from ten large animal farms.

The Northern Neck project in Westmoreland County involves twenty-six farmers in the Nomini Creek watershed that includes 3,715 acres. The "before" monitoring program to measure nitrogen, phosphorus, sediment and pesticide runoff almost is completed since monitoring began almost a year earlier than that at Owl Run. This year's drought slowed the monitoring process, however.

Also a ten-year project, the program is aimed at finding nonpoint pollution of cropland and the effect of the BMPs. Both projects will give researchers a good working knowledge of the effectiveness of BMPs



Water literally rushes from portion of field which has not been the subject of conservation practices.



Rainfall simulator can demonstrate to farmers how water runoff can affect their fields.

in typical animal and cropland areas.

The four square miles of the Owl Run area are being monitored until late next year to determine the nitrogen, phosphorus and sediment runoff. Then, various BMPs will be put into effect and monitored to determine their effectiveness. It will take more than three years to install the practices.

During its first three years, the agricultural cost-sharing program convinced 357 producers to use animal waste BMPs and another 2,169 farmers to install cropland BMPs. As in most agricultural operations this year, the figures are lower because of the drought.


Although only in its infancy, the impact of the Chesapeake-Chowan Basin program is impressive. Nearly 2,200 farmers have been helped by the program while soil loss has been reduced by nearly 520,000 tons and the number of tons of animal waste being treated was almost 117,000 tons.

It also is estimated that the runoff of nitrogen and phosphorus has been reduced by more than one million pounds. The cost to the farmers and to state and federal government has not been cheap. More than \$2.3 million has been spent to get the better management practices used by Virginia farmers.

A rainfall simulator, developed in Tech's department of agricultural engineering, is being used extensively around the state to show the public how runoff can cause soil loss as well as pollution. This year, for the first time, the simulator was used in northern Virginia to illustrate how special asphalt can significantly reduce runoff.

"We try to get the Chesapeake Bay-Chowan Basin program mentioned at almost every farm gathering," Davis says. "We want to keep the program before the public. We want the farmers to know something is being done and that even those who aren't participating are benefiting because of the BMPs being used by their counterparts."

Davis concludes by noting that although nonpoint pollution is not the only problem hurting the bay, it is a significant one. "In only three years, with the cooperation of so many federal and state agencies, we have made a good beginning. By the end of this decade, we will have made a significant impact. Other state and federal programs also are making progress.

"There will be no overnight cure, but I believe the patient is starting to show signs of recovering." 

IMPACT

DOLLARS AND SENSE FROM EXTENSION



U.S. aid overseas does benefit this nation's farmers. This is the conclusion of a study on exporting southern agricultural technology by Carol Conway, associate director for research and programs of the Southern Growth Policies Board; Brady J. Deaton, associate director of international agriculture at Virginia Tech; and Farrokh Langdana, a Tech Ph.D candidate in economics.

The study refutes claims that technologies created at American universities and transferred overseas create foreign competition for American farm products. "Evidence indicates that university research aimed at helping developing countries achieve self sufficiency is vital to the health of the U.S. farm sector," the report states.

Analysts at Virginia Tech recently estimated that agricultural and forestry exports generate about \$2.5 billion in the Virginia economy, much of it from agriculture's demand for such export support services as insurance, banking, packaging, processing, and transportation.

The paper, which has been sent to all southern governors, urges states to increase efforts "to internationalize both research and education across southern campuses" and certain southern eco-

nomics development officials "to become better acquainted with the intricacies of global agricultural trade."



Eliminating death or serious injury from chemicals and poisons is a major aspect of the program being conducted by Virginia Tech's chemical, drug and pesticide unit. The unit, headed by Michael J. Weaver is heavily involved in preventing any accidents involving chemicals and poisons from occurring in the home and on the job.

Extension's flexibility allows the local units to work alone, with neighboring counties, or on a statewide basis. For example, last year the Lynchburg Extension office cooperated with a local cable television system in preparing and broadcasting a series of poison prevention programs into area homes four times each week. At the same time, a statewide effort resulted in all 107 Extension units receiving poison prevention kits for use in campaigns in their individual localities.

Weaver notes that the chemical, drug, and pesticide unit staff, along with Glen H. Hetzel, Virginia Tech Extension farm safety specialist, reached more than 20,000 persons during a thirty-six-month period, instructing the participants in pesticide application training, poison prevention, or farm safety.

Each of the six Extension districts has a pesticide training library of twenty-six slide/tape sets and a film on pesticide safety. One set of slides on poisonous plants is used throughout Virginia in 4-H, master gardener, home economics, and agricultural programs.

The unit also developed the Virginia pesticide information retrieval system (VPIRS), a computer system used to disseminate pesticide and chemical news, fact sheets, and other pertinent information statewide to all counties and two state agencies.

"Last year," Weaver says, "the chemical, drug, and pesticide unit alone had nearly 50,000 contacts, 3,000 of which were by telephone. With a staff of two professionals and a secretary, these are impressive figures."

Intensive wheat management pays off. Dan Brann and his cohorts on Virginia Tech's wheat research team report that even with the 1986 drought, they were able to increase wheat yields more than enough to pay for the extra inputs of intensive wheat management.

Five field-size plots at various locations across Virginia yielded at least sixty bushels per acre. More importantly, the Extension grains specialist notes, net income increased almost twenty-five dollars per acre when compared to standard management.



Instead of automatically applying fertilizer or insecticides, the research team established thresholds to help determine when inputs were necessary. For example, spraying insecticides for aphid and cereal leaf beetle control was deemed unnecessary after close monitoring revealed insect numbers to be below the danger level.

"Intensive wheat management is simply looking at a field and making informed decisions," Brann explains. "If there aren't problems that need to be corrected, you can go on about your business."

□

Two million hours of community service by the members of the Virginia Extension Homemakers Council (VEHC) show what impact they have in their respective communities. A study involving 1,061 Extension homemakers, 111 Extension home economists, and 100 community leaders looked at how the VEHC worked to better communities across the Old Dominion.

The survey found that VEHC members volunteered nearly two million hours of community service in 1984 with an estimated value of nearly twelve million dollars. It also was determined that the number of recorded certified volunteer units earned increased from 8,000 in 1983 to 15,000 in 1984 to 45,000 in 1985.

VEHC members raised more than \$100,000 for charitable causes during the year, including \$10,000

for scholarships. Nearly 10,000 children were fingerprinted in identification programs while one county's crime prevention program resulted in eighty-two persons being arrested and convicted. The training of leaders is an important part of VEHC, with nearly 250,000 persons being reached by educational programs annually.

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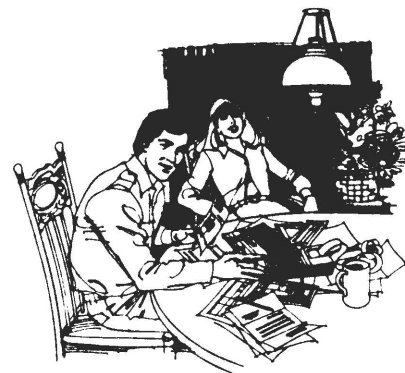
Livestock may be eating a little better during the hot, dry summer months. Research by Virginia Tech agronomists could reduce by fifty percent the cost of planting switchgrass, a native grass that offers great promise for providing hay and grazing during the summer.

Switchgrass grows well in low-productive or disturbed soils with little fertilization, but it is difficult to get started because a significant percentage of the seed is often dormant.

Tech agronomists have discovered a seed treatment that breaks dormancy and has resulted in a 108 percent increase in seedling establishment. Commercial availability of the treatment would make it possible to plant switchgrass in late spring, which would provide more effective weed control and reduce fungal damping off of seedlings.

□

Virginia's farmers appear to be spending more time and energy on their financial situations than ever before. In a recent Virginia Tech telephone survey, sixty-two percent of the farmers were projecting cash flows—over half of them on a monthly or quarterly basis.



"I was pleasantly surprised that so many farmers were spending time on financial management," says Gerald W. Warmann, Extension farm management specialist. "There's still a need, however, for more financial management education, especially among those who are not currently giving it much thought."

Even those farmers who are using some form of financial management cite it as their least preferred chore. Growing or production was overwhelmingly the favored task, followed by marketing and selling farm products. When asked what activities earn them the most money per hour of time spent, however, the farmers on average ranked marketing first and financial management second. Production was ranked last.

Ninety-eight farmers who had gross farm sales of more than \$40,000 annually participated in the survey.

□

Mountain Lake and the U.S.-Canadian border have one thing in common—similar soils. Thomas W. Simpson, Virginia Tech Extension agronomist, says the similar soils are not too surprising, considering the climate at the 4,000-foot lake is similar to that in the more northern latitudes.

Soil scientists at Tech have found a soil, however, that should not be found in Mountain Lake's current climate. It is a deeper, highly developed clay soil which should not have developed over a long time in a warm climate with distinct wet and dry cycles.

□

Clarke County Claims Oldest 4-H Club

The twenty-eight members of the Hout 4-H Club in Clarke County believe that theirs is the oldest 4-H club in Virginia. And with 47 years of continuous service, it looks as though they are right.

The club's existence can be traced back to 1939, and there are county residents who say they were members of the club even before then.

"They didn't keep too many records back then," says county 4-H agent Florence Vickers, "so we have to depend on people's memories. There does seem to be ample evidence that the club was in existence in 1939."

Patsy Burner and Camilla Welsh have been adult leaders for the club for the past five years, and they can remember that the club was very active when they were growing up in the county in the 1960s. They weren't members themselves, but each had several relatives who were.

"The question we most often get is how the club got the name Hout," Burner says. "We frankly didn't know and had some difficulty in finding out where the name came from." After doing some research, they found that the club was named for an old school house in the northwest corner of the county. "The school property was donated by Henry and Urillah Hout and so the school bore their name. The building is still standing."

The 4-H'ers, however, haven't met at the old Hout School for a number of years. They currently meet in member homes and at the Crums United Methodist Church in Berryville.

The club, like any other organization, has had its ups and downs over the years. Membership for the community club has ranged from around forty-five to less than ten. The membership has represented all segments of the community. Ten of the current members, for instance, are enrolled at the Grafton



Clarke County Extension agent Florence Vickers talks with volunteer leaders Camilla Welsh, center, and Patsy Burner, right, about the history of the state's oldest 4-H club.

School and are autistic or have learning disabilities.

This year's leadership corps in the club includes president Dean Burner, vice-president David Welsh, secretary Cindy Burner, treasurer Joy Stonestreet, reporter John Stonestreet, and historian Paul Coffman. And they oversee a lot of activities.

In addition to being involved in individual projects, the members deliver cookies each month to the residents of the Rose Hill Nursing Home, provide coloring books at Christmas to the young patients at the Winchester Medical Center, pick up litter in the Keep Clarke County Beautiful campaign, deliver favors each month to the Clarke County Senior Center, provide food baskets and gifts to needy families at Christmas, and host a yearly skating party for the other 190 community 4-H club members in the county. There are four community and four special interest clubs in the county.

And one club project has attracted three certificates of appreciation from the Armed Forces Mail Call. Each Christmas the club sends more than one hundred cards and messages overseas to members of the armed forces who otherwise would receive no correspondence during the holiday season. "Each year we get letters of thanks from places around the world that we can't even find on a map," says Burner.

There is no doubt that the members of the Hout 4-H Club have left their imprint on the people in Clarke County and around the world. ☐



Joy Stonestreet checks her citizenship project book before turning it in during Hout Club workshop.



Timmy Wolfe receives help from Hout Club teen leader Dean Burner as Mike Burner listens.

PEOPLE

Ernie Lyle:

A Team Player

It's easy to tell that E.D. "Ernie" Lyle Jr. is interested in athletics. The president of the Virginia 4-H Congress Cabinet talks in terms that also would apply to athletics when he explains how he and his cabinet members are preparing for next summer's state congress at Virginia Tech.

"We have a good mix of experience and new ideas on the cabinet," he says. "Each of us has a different background and has worked in 4-H in a variety of projects so we have our own ideas about what we want Congress to be. But that 4-H service has also taught us to be members of a team that is working together to have the best program possible."

The Bath County native also credits the other cabinet officers who also are instrumental in formulating next summer's congress program. They are vice president Linwood Christian of Petersburg, secretary Melanie Papierniak of Frederick County, and reporter/historian Tris Carpenter of Fairfax County.

It is easy to understand why the nineteen-year-old Ferrum College sophomore talks like an athlete—he has been one for most of his life. In high school, he played football, basketball, and golf and during his freshman year at Ferrum he played football. Follow-up surgery from an automobile accident injury prevented him from playing football this year.

Ernie says 4-H has been a part of his life for as long as he can remember, even before he was old enough to be a member, and he has been a member for eleven years.



Ernie Lyle says 4-H has been a part of his life for as long as he can remember.

During that time, he has participated and competed in a variety of projects, including leadership, the chicken-que, wildlife, hunting, and fishing. He served for two years as president of the Bath County High School 4-H Club and has been to state congress five times.

It is the latter experience that he believes has equipped him to serve on the congress cabinet. "I have seen a lot of things attempted at congress," he says. "Some were successful and some were not. My experiences, coupled with those of the others on the cabinet, should allow us to put together an outstanding program next summer."

Ernie also points to a year of service on the West Central District 4-H Cabinet as being invaluable. "I learned that

everyone doesn't think the same. When you are working with people from different backgrounds and communities, you have to compromise and have some give and take. I think these experiences will help me in the future."

Being president of the 4-H Congress Cabinet is just one of several experiences Ernie would not have had if it were not for his involvement in the youth organization. "4-H has helped me so much," he says. "It has taught me how to meet and relate to people. I have met so many people that I would not have met otherwise. I have worked with so many people and had so many good experiences because of my membership in 4-H." He added to his experiences this fall, being one of eight Americans who attended the National Canadian 4-H Conference in Toronto.

For ten years Ernie has assisted at a camp in his county for approximately thirty young people who have special needs, first as a helper and then as a teen counselor.

"It's a good program that provides those who are in it with experiences they could not get otherwise. Not only do I learn a lot, but I enjoy doing it." One of the greatest rewards is the great big smile of pride from someone who has just learned to do something new.

During his freshman year at Ferrum, Ernie tried to organize a 4-H Club, but he may transfer to Virginia Tech and enroll in its hotel management program before he gets another chance to start a club.

"It is a good field which appears to have many opportunities. And, like 4-H, it is a career field in which you meet and work with people. I would like that."

Lewis Ashton:

Showing by Example

After nearly a decade of managing a farm in Goochland County, Lewis Ashton decided it was time to begin farming for himself. So, in 1983, he worked out an agreement with an uncle in King George County to lease his Waterloo Farm and begin his own operation. In slightly more than three years, Ashton has built a successful farming operation on the banks of the Potomac River.

Waterloo, the hub of the five properties that Ashton has put together for his operation, is the oldest family farm in Virginia. It has seen few failures since its fields began yielding to the plow in 1653.

A 1969 Virginia Tech graduate in animal science, Ashton established a different type of operation than the beef cattle and feed lot enterprise he had been managing in Goochland County. "My uncle grew crops rather than livestock," Ashton says, "so most of the fences were gone. It just wasn't feasible to grow livestock." The result is a 405-acre operation that produces small grain and soybean seed, though he plans to add livestock.

It's an operation that requires good management as there are "fairly strict regulations" to get Virginia Crop Improvement Association seed certification. Growing certified seed also requires that the combine and other equipment be thoroughly cleaned before it moves from one field to another. The operation also has its rewards. Ashton gets paid a premium if his seed passes all the tests and gets certified.

In addition to growing seventy-two acres of wheat and barley and 125 acres of soybeans for seed, Ashton also plants about 110 acres of corn which he sells. He also keeps forty-five acres of steep land in grass. He sells two cuttings of hay each year from his managed grassland, which gives him another cash crop.

King George Extension agent Anne D. Edwards calls Ashton an "excellent manager," noting that



Bob Veitri photos

Lewis Ashton has a strong desire to "leave the land a little better than I found it."

his budget decisions are "based on fact," not guessing. Ashton was the only farmer in the county last year who was willing to use Extension's computer program to budget for the year. Ashton admits that the program helped him with "a couple of management decisions and told me to put off buying a new cultivator I was going to get. It also saved me some in herbicide and fertilizer purchases."

Edwards hopes that many of the management practices that Ashton uses will be picked up by other county producers when they see his success. Next year, he has volunteered to participate in a Virginia Tech nutrient management program that will demonstrate that less nitrogen and phosphorus is needed to fertilize the crops than previously was believed by most farmers.

He also has a strong desire "to leave the land a little better than I found it. I found it in pretty good shape and would like to leave it better for those following me." So, he participates in the Chesapeake Bay cost-sharing program by leaving green filter strips along the lower edges of his fields to reduce runoff. He also got help from the

Soil Conservation Service to prevent soil runoff by alternating row crops with those planted by a drill.

He didn't use conservation till practices on his corn and soybeans this past year because he applied sewage sludge on his fields and the material had to be worked into the soil. He normally practices conservation tillage practices, however.

He is an advocate of soil testing and tissue sampling, saying "you have to believe in them though." This past year, he did what the soil test showed and did not add nutrients even though he was convinced they were needed. "It turned out that when we got a little rain, the corn did beautifully. I was sure it needed fertilizer. You can save some money if you just believe in your tests," Ashton says.

The Ashtons find the personal computer to be a useful tool. Ashton's wife, Diana, keeps the books when five-year-old Alex and three-year-old Todd allow her the time to do so. Both Diane and Lewis strongly believe that many unpleasant surprises can be avoided by keeping good records.

Ashton, who holds a master's degree in animal breeding and genetics from Iowa State University, does not like the status quo. His willingness to look at new ways may be why he is chairman of the county Extension agricultural advisory board. "Agriculture is not like it once was. You have to look at your practices carefully and be willing to change when it is needed," he says.



Lewis Ashton and Extension agent Anne Edwards discuss upcoming meeting of county Extension advisory committee.

Chesterfield Supports Waste Disposal Effort

Chesterfield County is a safer place to live this winter as the result of the county's first Household Hazardous Waste Disposal Day. More than 230 persons took time out from their other chores on an October Saturday to deposit their hazardous materials at the collection site at Manchester High School.

The day to collect unwanted pesticides, paints, used batteries, and assorted chemicals was planned and implemented by the Keep Chesterfield County Clean Corporation, a volunteer organization that is under the leadership of the Chesterfield Extension office.

The program originated last year from a suggestion by a local committee looking for possible community resource development (CRD) projects. County Extension CRD agent Suzan Craik took the suggestion, enlisted the aid of a task force of state and local representatives, and, with the assistance of Carolyn Lohr, assistant litter program coordinator, raised \$24,000 in private and local funds to support the program.

More than sixty residents dropped off material before 10 a.m. and continued to bring material in a steady stream all day. The satisfaction might be exemplified by one woman who, when dropping off cans of furniture stripper, shellac, paints, and a variety of aerosol products, said, "I got rid of a lot and was mighty glad to do it."

The total collection effort resulted in material that filled forty-one fifty-five-gallon drums, 150 gallons of used oil, twenty propane gas tanks, seventy-nine used batteries, and fifty-five gallons of kerosene.

GSX Corporation was hired by the county to have representatives on site, collect the materials, package them safely, and dispose of them safely. Most of the



GSX representative checks waste material brought in by a resident.



Suzan Craik photos

Worker closes one of the forty-one fifty-five-gallon drums of waste that was collected during the day.

collected waste was taken by the firm to one of its landfills near Pinewood, South Carolina, as there is no Virginia landfill that can legally accept hazardous materials.

The Chesterfield County Board of Supervisors sanctioned the project in a two-fold effort to educate the public about proper use and disposal of hazardous materials and to prevent illegal dumping in its landfill.

The Board helped local residents in getting rid of the potential hazards in their homes by appropriating \$15,000 for the disposal operation. An additional \$9,000 was obtained from Dupont, Philip Morris, C&P Telephone, Virginia Power, Shoosmith Brothers, Ukrop's Supermarkets, Safeway, ICI Americas, and Johnston Willis Hospital.

To publicize the event, the Keep Chesterfield Clean organization printed thousands of direct mail flyers, obtained newspaper, radio, and television coverage, and produced a thirty-minute program on cable television about the dangers of hazardous waste and how the day was an opportunity to get rid of potential problems.

From a survey taken on the spot, it was found that sixty-eight percent believe that the day should become an annual event. Seventy-three percent said they would have continued to keep the material if there had been no collection effort.

Craik calls the project "worthwhile and a good example of close cooperation between the private and public sectors in the county." ☐

State 4-H'ers Celebrate 25 Years of Galloping

Those associated with the Virginia 4-H Horse Show are not willing, as did many a western film hero, to ride quietly into the sunset, but are more likely to emulate the Light Brigade and charge to the forefront. And it has been quite a charge.

The show that was held this fall at the State Fair bears little resemblance to the one that started it all twenty-five years ago. Then, thirty-six riders with between thirty and forty horses gathered at Timber Lake in Bedford County for the first event. The twenty-fifth edition last fall drew 374 entries and 1,600 horses to compete in 110 events. And unfortunately, still other 4-H'ers were prevented from entering the event because of space restrictions.

Those who helped bring about the growth of the show during its twenty-five years were honored during the final night of competition at the fair. Arden N. Huff, Virginia Tech Extension animal scientist who is known as "Mr. Horse" to many in the Old Dominion, was honored for his contributions to the event during most of its existence.

Huff received a giant poster card signed by almost all of those associated with the show, a plaque, and much praise. He also received a check for \$2,000 which was donated by former and present 4-H'ers from across the state to be used to improve the state 4-H horse program.

The highlight of the presentations to Huff, however, was a "Phil Harris" handmade saddle which carried two silver emblems commemorating the show's silver anniversary and Huff's name engraved upon it. The saddle was presented by Mitchell R. Geasler, vice provost for Extension at Virginia Tech, who commented that Huff had



Mitchell R. Geasler, left, director of the Virginia Cooperative Extension Service, congratulates Virginia Tech Extension specialist Arden Huff on the outstanding job he has done in guiding the state 4-H horse program for a quarter of a century.



Bill Burleson photos

Marshall Coffey, left, and Eddie Reynolds of Bedford, who rode the colors into the arena at the first state show twenty-five years ago, repeated the ride at the closing ceremonies at the silver anniversary edition. Both still are involved in the 4-H Horse Club and Drill Team in Bedford County.

touched the lives of everyone in the state's 4-H horse program during his tenure at Tech.

Huff, in turn, recognized the former and present show secretaries by presenting them with commemorative plates.

Nostalgia was the order of the evening as Marshall Coffey and Eddie Reynolds of Bedford opened the show by carrying the colors into the ring. The two had, as 4-H members, done the same at the opening ceremony for the show twenty-five years ago. Coffey's daughters, Shawn and Sherrie, followed them into the ring.

Reynolds says, "Horses just get into your blood."



Washington Irving's headless horseman made an unannounced appearance at the twenty-fifth Virginia 4-H Horse Show.

He is a volunteer with the same horse club and drill team that he belonged to as a 4-H'er. He also has a son who is a member of the group.

Also speaking at the show's silver anniversary was Wyndham B. Blanton Jr., president of the State Fair of Virginia. He termed it appropriate that the twenty-fifth anniversary was being celebrated on "the first year of the fifth decade of the Virginia State Fair on these grounds."

The ceremony was only a brief interlude and the show began as scheduled. There still was an evening of competition left and a lot of youngsters had worked long and hard to get ready for the event. No one wanted to disappoint them. ☒



Jay Dagenhart of Bedford County's Horse and Pony 4-H Club watches his father, Thomas Dagenhart, put the final grooming touches on Carnival's Pretty prior to going into competition.



Darcus Hunt of New Kent leads her horse Misty toward the show ring for the trail class competition. The fourteen-year-old 4-H'er, who had won a blue ribbon earlier in the week, was optimistic about her chances.



Tamara Carter of Culpeper guides Fancy successfully over an obstacle in the intermediate hunter horse competition.



A light shower fails to stop the competition.



Arden Huff watches 4-H'ers perform in the ring at the end of an afternoon of competition.

IN BRIEF

NEWS OF INTEREST FROM ACROSS VIRGINIA



Wade Colbert and Doug and Linda Lawson

Most people would think \$3,000 is too much to pay for a gallon of milk. But that was the amount *Doug and Linda Lawson* paid for a gallon of milk from the supreme champion dairy animal at the fifty-first *Loudoun County 4-H Fair*. The sale of the "Golden Gallon of Milk," a project of the Loudoun 4-H Dairy Club, generates funds for the 4-H-owned fairgrounds.

The price for a gallon of milk from the two-year-old Holstein easily set a record for the six-year-old sale and brought the total amount paid by bidders to \$7,875. Wade Colbert of Waterford, a twelve-year-old 4-H'er, is the cow's owner.

It was figured that if all the milk the cow produced would sell for \$3,000, then total receipts for a year's production would be more than five million dollars. An eight-ounce glass of milk would be worth \$187.57 a glass and each one hundred pounds of milk would be worth \$34,884. When asked why they purchased the milk, the

Lawsons, whose two children have been active in the program, replied, "because we believe in 4-H and its goals for young people."

□
The Virginia Extension Homemakers Council honored five counties for nine outstanding programs in their communities at its annual meeting at Virginia Tech. Receiving awards were the Extension Homemakers in *Arlington, Fairfax, Franklin, Rockingham, and Washington counties*.

Arlington won one top award and a second in a category in which no first was given. The first, which also went on to take a second place nationally, was for the homemakers work with the Southeast Asian refugees in helping them to adjust to this country in the international programs category. The homemakers also took the top second award in the housing, energy, and environment category for the project which offered recycled items to help the Asian refugees.

Fairfax County took first in the citizenship and community outreach and the safety and energy preparedness categories. The first, which also received a second place award nationally, was for the distribution of "Please Call Police" banners to be placed in rear windows of stalled vehicles and in the second for the safety program the homemakers conducted in conjunction with the distribution of the banners.



Charlotte Ganzert and Rebecca Ferrell

Franklin County Extension Homemakers received the top award in the family relationships and child development category for their work in making learning aids for pre-school handicapped children. Later, this project also garnered them a second place award nationally.

Rockingham County took three first-place honors—in the cultural arts, textiles, and clothing, family resource management and public relations categories. The first was for raising \$1,100 for Alzheimers disease research by making hand-made Christmas ornaments; the second was the variety of programs offered about resource management in the community; and the third was for the homemakers helping to sponsor a farm-home show in the community.

The Washington County Extension Homemakers were honored in the health, food, and nutrition category for having 300 members in twenty-two clubs walking nearly 31,000 miles.

COMMENTARY continued

improving international understanding, and strengthening personal and family relationships.

- **Manage natural resources by**

improving renewable resource management, protecting surface and ground water quality, instituting integrated pest management techniques, promoting minimum tillage, and stimulating mined-land reclamation.

- **Upgrade knowledge and skills in the workplace through continuing education by**

providing training and retraining for business, industry, and government, facilitating licensing and recertification of professionals, stimulating high-tech development, and disseminating research knowledge.

To a large extent, our future successes will depend on Extension's ability to alleviate the significant problems facing the people of Virginia. Since Extension is in the business of education, it is no surprise that we believe that education does make a difference.

Therefore, to influence change, we must educate Virginians in practical ways where they live and work. We educate young people and adults to help them earn a better living as well as to develop as leaders. We show them how to address, prevent and solve tough community and social issues.

To be truly effective, Virginia Extension must focus its effort on the problems facing the Commonwealth and the opportunities that point to a better tomorrow for all Virginians. Our priorities must be prescribed by Virginia's major concerns rather than by program traditions.

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