Are too many minerals in water a bad thing for cows?

by Lois Caliri

Cows are thirsty and with good reason — they need to drink nearly 30 gallons of water a day to produce milk and stay healthy. That water needs to be of good quality because much of the ingested water becomes milk, which is made up of about 87 percent water.

Cows’ drinking water includes a variety of minerals that are beneficial for them. The various minerals provide the nutritional value of milk to calves and humans. But when that balance is off-kilter, the milk composition could be altered and that could cause problems for cows.

A potential for decreased availability of groundwater for dairy farming exists. Western dairy farms are already seeking alternative sources of drinking water to reduce the burden on natural groundwater reservoirs. High levels of minerals, including iron, may be in some water sources. That could be problematic.

Susan Duncan, a professor in food science and technology, Katharine Knowlton, a professor in dairy science and technology, and Andrea Dietrich, a professor in civil and environmental engineering, are leading research into how excess amounts of iron and other minerals impact dairy cow productivity and health, nutrient digestibility, milk synthesis, and dairy product quality. Duncan and Knowlton are in the College of Agriculture and Life Sciences.

This research project will provide preliminary data for establishing mineral recommendations for water reuse in dairy herd health. The project will benefit water and dairy managers in the U.S. and around the globe.

“Excess amounts of iron and copper in milk can lead to flavor problems in the milk, making it taste bad,” Duncan said. “Additionally, changes in the milk’s mineral composition may reduce the quality of manufactured dairy products, such as cheese and yogurt.”

How the cows’ health and milk composition are affected by high iron content in drinking water is unknown.

“But we do know that iron from feed sources can affect calcium absorption,” Duncan said. Calcium is stored in cows’ bones, just as it is in humans. In any species, a mother’s body can respond to dietary changes in order to protect the infant from harm. Many questions about how that relationship is affected remain.

The research seeks to answer several questions, including: Will the cow’s natural response to excess iron in the water protect the calf by maintaining the normal milk calcium content? If so, will this cause changes in the cow’s metabolic mineral balance at the expense of her bone health? Will iron from the water source change the way the cows synthesize milk proteins so that there are more iron-binding proteins in the milk?

Changes in milk composition can impact the quality of dairy products, which may be noted by a decrease in flavor, a change in odor and texture, and a shortened shelf life of milk and dairy products, Duncan said.

Georgianne Mann, a graduate student in food science and technology, is conducting the initial studies on milk composition and processing. Alii Wang, a doctoral student in dairy science and technology, is conducting the initial studies on milk composition and processing. Xin Feng, a doctoral student in dairy science and technology, is evaluating the chemistry of water on dairy farms in Virginia.

The College of Agriculture and Life Sciences Pratt Endowment at Virginia Tech partially funded this research project.

Georgianne Mann, a graduate student in food science and technology, is conducting the initial studies on milk composition and processing.
Dean's Update

The College of Agriculture and Life Sciences strives to serve Virginians and the global community with the knowledge and resources needed to meet the most pressing challenges of today and the future. The combined strength of our academic departments on campus, coupled with integrated research and the many local offices of Virginia Cooperative Extension throughout the commonwealth, allows the college to address critical societal issues. The college focuses its resources and efforts on improving agricultural profitability, environmental sustainability, and community viability. We add value and create new products through innovative bioprocessing technologies, investigate infectious and vector-borne diseases, and develop technologies and practices to combat plant and animal diseases. Our research efforts are focused on preventing chronic disease through the study of animal and human health and nutrition.

The National Science Foundation continues to rank Virginia Tech as a major U.S. university for agricultural research productivity, based on expenditures in agricultural sciences. This is truly a testament to the quality of our faculty, staff, and students and their programs.

Many of our faculty members have been recognized for their significant contributions through their teaching, research, and Extension programs.

Alex White, who earned his bachelor’s and doctorate degrees in agricultural economics from Virginia Tech, recently received the Outstanding Faculty Service Award. He is the David M. Kohl Junior Faculty Fellow, and he directs the Kohl Agribusiness Center to create experiential learning opportunities for our students.

Boris Vinatzer, associate professor in the Department of Plant Pathology, Physiology, and Weed Science, was awarded an NSF Early Career Award. He led a research team that sequenced the genome of a pathogen that attacked tomatoes.

Aames Herbert, professor of entomology and Extension entomologist at the Tidewater Agricultural Research and Extension Center, recently received the 2012 Friends of Southern Integrated Pest Management Lifetime Achievement Award.

Carl Griffee, a professor in the Department of Crop and Soil Environmental Sciences, was recently named the W.G. Wyor Professor of Agriculture by the Virginia Tech Board of Visitors. Griffee’s program has developed and released wheat varieties that have been grown in 16 states and Ontario, and barley varieties that are grown in eight states. He has brought more than $3.3 million in sponsored research funding and nearly $8 million in royalties to Virginia Tech.

Virginia Cooperative Extension and the Virginia Agricultural Experimental Station are also committed to Virginia’s land, people, and communities. More than 25,500 volunteers contribute their time, valued at more than $17.8 million, to Extension programs.

Extension’s programming has incubated agricultural and entrepreneurial initiatives that resulted in tangible social and economic benefits. For example, by facilitating the development of the Shenandoah Valley Produce Auction, more than $2 million of new farm income is generated annually within the farm community. This development has also been instrumental in moving more fresh fruits, vegetables, and whole foods into many school and university cafeterias.

Many of our significant accomplishments are made possible through philanthropy. Gifts from individuals, corporations, and foundation partners allow us to attract and retain the best faculty, staff, and students. Faculty members holding named positions have received awards for teaching and research. Students pursuing educational opportunities throughout the world receive scholarships that allow them to focus more on their studies and less on their personal financial challenges while at Virginia Tech.

The end of June 2011 marked the conclusion of our university’s successful seven-year, $1 billion fundraising effort, The Campaign for Virginia Tech – Invent the Future. The College of Agriculture and Life Sciences’ alumni, friends, and stakeholders certainly did their part in achieving this remarkable accomplishment.

In fiscal year 2010-2011, the college surpassed its $52.4 million campaign goal with gifts and future commitments totaling a record breaking $13.6 million. This success is a testament to the generosity and strong support of our alumni and friends. As we move forward, philanthropy will continue to give our outstanding teaching, Extension, and research programs the edge they need to become even better.

We thank you.

Sincerely,

Alan Grant, dean

The National Science Foundation continues to rank Virginia Tech as a major U.S. university for agricultural research productivity, based on expenditures in agricultural sciences. This is truly a testament to the quality of our faculty, staff, and students and their programs.
Extension to host Virginia Junior Livestock Expo

Virginia’s 4-H and FFA members will continue to have a place to show their livestock projects despite the fact that the State Fair of Virginia had to declare bankruptcy in early March. Virginia Cooperative Extension announced in April the establishment of the Virginia Junior Livestock Expo. The event will be held Oct. 11–14 at the Rockingham County Fairgrounds in Harrisonburg, Va.

“Virginia has a long history of strong youth livestock programs and events. Having an event that allows youth from across the commonwealth to come together to benefit from the educational process that youth livestock programs offer is extremely important,” said Ed Jones, director of Virginia Cooperative Extension. “We look forward to the opportunity to provide leadership to this activity and work closely with youth, parents, leaders, volunteers, and supporters.”

The Virginia Junior Livestock Expo will be open to all Virginia 4-H and FFA members and will offer market and breeding shows for beef cattle, swine, sheep, and meat goats, as well as a stockman’s contest. The crops contest, junior foresters, horticulture demonstration, and the agriscience demo will also be held. FFA will also offer the small engines, tractor troubleshooting, and the forestry field day events.

Show details and entry forms will be posted on Extension’s website, www.4-h.ext.vt.edu, as they become available. For more information and sponsorship opportunities, contact Paige Pratt, youth livestock Extension specialist, at 540-231-4732 or pjpratt@vt.edu.

Merging mind, body, and spirit

by Lois Caliri

During a semester-long internship, Kiley Petencin embraced holistic learning, where questions were encouraged and answers came from within.

A junior in Virginia Tech’s Department of Human Nutrition, Foods and Exercise, Petencin recently completed an internship at Heifer Ranch in Perryville, Ark. The ranch is one of Heifer International’s learning centers that promotes solutions to global hunger, poverty, and environmental degradation. It also engages in an alternative method of teaching called holistic learning.

“At Heifer, we don’t answer questions — we raise questions,” Petencin said. “It was a learning experience for me to communicate Heifer’s message and to listen to varied opinions from a broad-based scope of visitors.”

Petencin became interested in Heifer Ranch after spending a week there in the spring of 2010 as part of a one-credit class. The week inspired her to volunteer for a semester-long internship in the fall of 2011.

Heifer is a nonprofit that embraces the idea that giving a community a cow instead of powdered milk is a better way for poverty-stricken people to become self-reliant.

“Every family that receives an animal from Heifer is required to pass on the first-born offspring to another family in the community,” said Petencin. “This is referred to as ‘Passing on the Gift’ and is an underlying element in Heifer’s mission.”

As a volunteer, Petencin led visitors through activities such as making ropes and milking goats, as well as community-building exercises and overnight stays in the global village.

The global village replicates different communities throughout the world and immerses visitors in varying levels of poverty. Each house in the village is named for a different country such as Guatemala, Thailand, or Tibet. Other houses represent urban slums and refugee camps.

“The houses demonstrate that a lower standard of living may not correspond with a low quality of life,” Petencin said. “Some houses do not have running water, but a family can still be happy living there.”

Livestock, gardens, and appropriate technologies in the village demonstrated how different communities could utilize their resources. The Thai house, for example, had a pigpen with an attached biogas unit. The biogas unit converted the pigs’ manure into methane, a renewable energy source.

“After groups spent the night in the village, we would debrief the experience,” said Petencin. “Many would say it was an eye-opening experience when they compared the different lifestyles and reflected on the things they took for granted.”

Hokie takes experience by the reins

by Lois Caliri

For Kathryn Lacy, there was no hosing around.

Lacy, a senior in the Department of Animal and Poultry Sciences recently completed the Sporthorse Breeding Internship at the Middletown Agricultural Research and Extension Center. She integrated practical learning with the added benefits of working in an environment filled with 60 horses.

Lacy’s experience incorporated coursework, research, horse and facility management, handling and training horses, marketing and sales, event organizing, and field trips.

Combining a strong scientific program with practical, hands-on training, the MARE Center internship prepares students to be future leaders in the horse industry, academia, and the veterinary sciences.

As part of MARE’s research, Lacy assisted with animal health issues. She collected fecal samples, ran tests to diagnose parasites in animals, administered drugs to kill parasitic worms, assisted with placing and removing catheters, and helped with blood collection.

Lacy, who rides horses, broadened her horizons at the MARE Center by learning about the breeding industry.

“I got a peek into the industry of equine breeding and genetics,” she said. “I also got off campus and started something new.”

She especially appreciated a fellow intern and friend who loved to cook. The interns were responsible for preparing their meals.

“We developed a camaraderie,” she said.

Lacy gained invaluable research and industry experience that complement her undergraduate studies. Her coursework taught her about equine exercise and physiology. For example, she was involved in multiple mini-exercise studies, using the horse treadmill and multi-horse sweep exerciser.

Field trips gave her the opportunity to listen to guest lecture presentations from veterinarians and specialists in the horse industry.

The interns worked as a team to care for the farm’s 60 horses and to keep the MARE Center facilities and equipment in working order.

The internship also incorporated a herd management assignment into the curriculum. Each intern was responsible for the day-to-day care of a small herd of horses, including a routine assessment of the horses’ health and overall condition; the management of hoof care; vaccinations; deworming schedules; and the administration of medication and medical treatment.

“We made all decisions with our supervisors,” Lacy said, “but we got the chance to hone our related, problem-solving, leadership, and communication skills.”

She was also involved in the basic training of foals and young horses, as well as presenting sale horses to potential clients.

“As interns, we got great experience with marketing and sales within the industry,” she said.

Starting this fall, Lacy will attend the Virginia Maryland Regional College of Veterinary Medicine.
In the past, when diabetic of 35 years James Vaughan was asked how many biscuits he ate, he’d sport a mischievous grin and answer, “It depends on how much gravy I have.” These days, Vaughan is much more cautious and serious about managing his blood sugar and laughs when he thinks of his old eating habits. Ask him the same question about his biscuit consumption and his shining eyes and radiant smile show the proud look of achievement.

“Two. Two is enough,” he says.

Vaughan is one of 10 African Americans who recently participated in a three-month reunion that followed four weekly sessions in the Balanced Living with Diabetes program for people with Type 2 diabetes.

Kathy Hosig, associate professor in population health sciences at the Virginia-Maryland Regional College of Veterinary Medicine; Eleanor Schlenker, professor and Extension nutrition specialist; and Eileen Anderson-Bill, research assistant professor in the Department of Psychology in the College of Science, developed, implemented, and coordinated the Balanced Living with Diabetes program with a $2.1 million grant from the National Institutes of Health. The program was created for Virginia Cooperative Extension.

The Baptist General Convention of Virginia, a project partner, assists in delivering the program to 27 churches in nine locations throughout the commonwealth. The program targets medically underserved areas, using a community-based, participatory approach.

“The NIH grant is an excellent example of interface among Extension, research, and partnerships with public health agencies,” Hosig said.
**Future leaders of America start at Virginia Tech**

by Zeke Barlow

The job market is tough for anyone out there these days, much less for a recent college graduate. This is precisely why Virginia Tech Assistant Professor Eric Kaufman believes a minor in leadership and social change is all the more valuable. Students who minor in the subject learn how to become leaders in the business and social communities.

"In this competitive job market, it is increasingly difficult just to get an interview," said Kaufman, who teaches leadership in agriculture and Extension education within the College of Agriculture and Life Sciences. "Students who have a background in leadership have a leg up on the competition because it is an important and valuable skill to employers."

This could be one reason why the minor has seen a more than five-fold increase in students in the last four years. The minor moved to the College of Agriculture and Life Sciences in 2008 and has seen continuous growth in recent years. In 2008, there were 14 students graduating with the minor; in 2011, there were 92.

Beyond teaching students to lead in the traditional business world, the minor is also of interest to students interested in working in nonprofit or nongovernmental organizations that have an agenda for social justice and government.

"Team building and communication have been major areas of focus within the leadership and social change minor," said Kaufman. "Without these two components, our nation would be in trouble. I’ve learned the importance of building team cohesiveness and communication, and the importance that they play in the real world no matter which field you enter."

The minor has an interdisciplinary approach, drawing classes from a variety of colleges. It also incorporates real world no matter which field you enter."

The minor has an interdisciplinary approach, drawing classes from a variety of colleges. It also incorporates the Residential Leadership Community, where students live in an environment that fosters leadership in a residential setting.

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**EXTENSION**

**4-H teams prepare for trip across the pond**

Virginia’s 4-H Livestock Judging Team is getting ready for an incredible, once-in-a-lifetime experience — judging livestock at the Royal Highland Show in Scotland. The Dairy Judging Team from 2010 is also going.

On Nov. 15, the livestock team placed third in the National 4-H Livestock Judging Competition in Louisville, Ky. The team will represent the U.S. in the Royal Highland Show, along with the first and second place finishers. Though the dairy team took third place in the 2010 national contest, they were unable to go last year and are going this year.

For more information about the team’s fundraising efforts, contact Paige Pratt at 540-231-4732.

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College of Agriculture and Life Sciences

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Kids’ Tech University is not just for kids
by Kelly Robinson

Virginia 4-H helps teachers make learning about science, technology, engineering, and math fun for students. Hands-on workshops are part of Kids’ Tech University held at Virginia Tech.

“Virginia 4-H gives kids an opportunity for extended building of knowledge and skills outside the classroom, allowing them to explore at their own rate and interest level,” said Kathleen Jamison, Virginia Cooperative Extension 4-H youth specialist. “These workshops help teachers incorporate experiential learning strategies into a classroom environment.”

Kids’ Tech University is a program available to all Virginia students between ages 9 and 12. Kids’ Tech and the teacher workshops focus on encouraging students’ interest in the STEM fields (science, technology, engineering, and math) at an early age. Topics covered in the workshops range from ecology and environment to using math and computers to understanding cancer cells.

“We’re hoping to eventually create a more STEM-literate public,” Jamison said. “By igniting a passion for STEM early in life, we hope these kids will become motivated to pursue a deeper level of learning in these fields.”

In the workshops, university researchers work with teachers to expose them to cutting-edge research topics. Teachers learn about inquiry-based and experiential learning and how it can benefit their students. They then have the opportunity to participate in hands-on activities that relate to the research topic covered that day.

After the workshop, teachers are able to modify the activities they’ve learned and bring those activities back into the classroom. As a result of the workshops, students are exposed to current, relevant research and benefit from their teachers’ ability to connect that research to the class.

“I teach inclusions, so having material for students who are ahead of the others was one reason I wanted to be involved this year,” said Carla Barrell, an earth science teacher at the Gereau Center, in Franklin County, who participated in the Kids’ Tech Climate Change workshops in the fall. “Those students felt like they were part of a club and spent time after school working together and with me, which was fun! I’m going to have them show my other students how to do some of the labs and let them be the teachers, so to speak.”

Kids’ Tech University was first initiated in the United States by Reinhard Laubenbacher, a mathematician professor at the Virginia Bioinformatics Institute, who brought the idea with him from Germany. Laubenbacher, along with Project Director Kristy Collins, conceptualized the Kids’ Tech University program and provides much of the support for the teachers’ workshop portion of the program.

Extension specialist closes language gap
by Lois Caillir

Each year, Virginia fishermen fill their nets with millions of pounds of seafood. The crabs — along with shrimp, oysters, and other delicacies — go to the production plants where workers, who are mostly from Spanish-speaking countries, crack open the crab and nimbly scoop out chunks of meat. But that’s just the outer shell of the story. Most workers do not speak English.

Luckily, the processing plants found a solution in Abigail Villalba from the Virginia Seafood Agricultural Research and Extension Center in Hampton.

“Oftentimes, the workers do not understand something that is written in English,” she said, “so we give them the information in Spanish.”

Villalba, a bilingual Virginia Cooperative Extension food safety specialist and native of Puerto Rico, helps employees and their bosses talk to each other. Communication is crucial to the company managers and owners who face a myriad of state and federal regulations pertaining to seafood safety and quality, sanitation programs, and good manufacturing practices.

Villalba customizes the courses by the types of products, equipment, and processing operations. The workshop can include an evaluation of the company’s manufacturing practices and sanitation procedures, a customized PowerPoint presentation, and an evaluation of product safety.

“We try to take complex information and translate it into layman’s terms,” added Professor Mike Jahnecke, director of the Virginia Seafood AREC.

Villalba’s prior food safety experience working for the federal government ensures that the Spanish-speaking employees fully understand how to keep their products safe and in compliance with regulatory affairs. Companies can leave nothing to chance, as failed inspections can close their doors.

In addition, seafood processors sell to huge companies, including Walmart, which have their own requirements.

“All that adds to what we have to do,” Villalba said. “There’s intensive training, independent inspections, audits, and process control.”

Two bilingual doctoral students — Anibal Concha-Meyer from Chile and Raul Suredo from Panama — were tested and trained to provide ServSafe training at the retail level for Spanish-speaking managers. The students are in the Department of Food Science and Technology in the College of Agriculture and Life Sciences.

Bennett family inducted into Hall of Fame

There have been two constants at Knoll Crest Farm since James Bennett’s father started the Red House, Va., cattle operation in 1929. The first is that it has remained a family operation through the generations. The second is that the Bennetts have been leaders in the Virginia agricultural community.

On March 16, Virginia Tech’s College of Agriculture and Life Sciences recognized the Bennett family for its ongoing contributions to both the state and the university and inducted them into the Hall of Fame.

“We thank the Bennetts for helping this college continue to grow, expand, and be a leader in the agricultural community,” said Dean Alan Grant.

For more information, visit www.cals.vt.edu/alumni/awards.

Outstanding Recent Alumni in the College of Agriculture and Life Sciences

Mark Cline was named this year’s Outstanding Recent Alumni in the College of Agriculture and Life Sciences for distinguishing himself since graduation.

Cline — who received his bachelor’s degree in animal and poultry sciences in 1999, his master’s degree in 2002, and his Ph.D. in 2005 in the same field — is now a professor at Radford University. Cline has an exemplary history of securing grant funding, generating significant and important research scholarship, and mentoring students for subsequent success in top graduate and professional programs.

“I am very grateful to my past professors at Virginia Tech,” Cline said. “There, I learned to believe in myself and how to do science. I attribute my professional successes as a ‘teaching’ professor because I mimic how my past professors inspired me to reach for higher levels. Through my ongoing research collaborations with APSc faculty, Virginia Tech continues to inspire me.”

For more information visit, www.cals.vt.edu/alumni/awards.
Farm-based food safety training helps farmers compete

by Lori Greiner

Recent reforms of U.S. food safety laws have left farmers scrambling to comply with new regulations. What previously had been voluntary compliance by farmers and growers will soon become mandatory in order to produce and market fresh fruits and vegetables.

With training created and provided by Virginia Cooperative Extension, farmers in Southwest Virginia and adjoining states have become proactive in writing their food safety plans and having their farms audited for USDA GAP (Good Agricultural Practices) Certification. Wythe Morris, agriculture and natural resources Extension agent in Carroll County, has been developing and implementing the farm-based GAP educational training since 2008. The course helps participants understand the certification process and develop written food safety plans.

According to Morris, more and more buyers and supermar ket chains are requiring that farms be GAP-certified, and eventually the certification will become mandatory.

To be certified, handlers and packers must create a written food safety plan that is unique to their farming or business operation. The plan covers all aspects of their enterprise — from the field to the distribution center — and includes worker sanitation, water quality, harvest, and packaging, among other topics. The farms also need to be audited annually by a third party to ensure that they are implementing what is written in their plans.

What makes Extension’s program different from other available training programs is the hands-on component, according to Morris.

“We provide hands-on training during every session. Every plan is individualized. We work through the farm plan as we go through the materials,” said Morris. “Before participants complete the training, they will have 75 to 80 percent of their written plan completed. When they leave, they have ownership of the program.”

Morris also follows up with one-on-one visits to the farms before they are audited.

“The training manual outlined the process step by step,” said James Light, owner of Lights Farm in Laurel Fork, Va. “Lights Farm, one of the first to be certified in Virginia, grows broccoli, cabbage, pumpkins, and green beans. “It would have been very overwhelming to start from scratch and wade through the technical information to figure out what to do.”

To date, more than 300 individuals representing 220 farms located in Virginia, North Carolina, South Carolina, and Kentucky have completed the training. In addition, 48 Extension agents have been trained since 2011 to assist and train farmers in other parts of the state.

Morris points out that “food safety” and “locally grown” are marketing points for growers.

“If I hadn’t gotten my GAP certification, I would have been out the door with some of my buyers because they are requiring growers to be certified in order to do business with them,” said Light.

“Once the grower is certified and verified by the USDA, the grower’s name goes into a national database. Buyers can search by state or commodity. It is not only a food safety tool but an excellent marketing tool as well,” said Morris. “Three years ago, there were six Virginia growers in the database. Now there are more than 50, with more to come.”

Since 2003, the Smithfield-Luter Foundation has generously provided scholarship support to the children and grandchildren of employees of the Smithfield Foods family of companies. These scholarships benefit students attending Virginia Tech and six other universities across the country. Representatives from Smithfield Foods recognized this year’s Virginia Tech scholarship recipients during a reception held prior to the Virginia Tech vs. University of North Carolina football game on Nov. 17, 2011.

Alumni were a big part of Katie Frazier’s undergraduate education when she double majored in agricultural economics and political science at Virginia Tech.

“I had such great opportunities and experiences while I was on campus, not only with students and faculty, but also with alumni,” said Frazier, a 2004 graduate from Midlothian, Va. So when Frazier graduated, she wanted to be an alumna who stayed active with the university and, like the alumni who helped her, give back to her alma mater. Frazier is now on the Virginia Tech Alumni Association Board of Directors. She was recently named the new president of the Virginia Agribusiness Council, effective July 1.

The Virginia Tech Soil Judging Team finished in first place out of 21 teams and more than 225 contestants at the National Collegiate Soil Judging Championship in Morgantown, W.Va., in late March.

Individual winners were: Chris Heltzel, a junior crop and soil environmental sciences major from Mauretown, Va., third place; Kelly McMillen, a senior environmental science major from Chesapeake, Va., sixth place; and Heather Taylor, a senior environmental science major from Blacksburg, Va., 10th place. The team was made up of Heltzel; Taylor; McM I llen; Austin Gardner, a senior crop and soil environmental sciences major from Round Hill, Va.; Blake Krejci, a senior environmental science major from Vienna, Va.; and Melanie Latalik, a senior environmental science major from Fairfax, Va.
The Gerken Award helps Extension faculty hone skills

by Albert Raboteau

Emeritus faculty members and alumni John and Shirley Gerken have made a generous gift to support professional development for people with Virginia Cooperative Extension appointments on or off campus. “I think the success of Extension has been because it’s had a good cadre of dedicated and well-trained people,” said John Gerken, who retired in 1991 as a professor of animal science and now lives in Burlington, N.C. “It’s important that steps are taken to maintain that level of expertise.”

His wife Shirley, who retired in 1995 as an associate professor of public service, agreed. “While working at Virginia Tech, we experienced several budget crises,” she said. “Generally, one of the first areas to be cut was professional development. Recognizing the importance of continued development experiences, we decided to earmark the fund that we have established toward that purpose for Extension faculty at all levels.”

The first recipients of the John and Shirley Gerken Professional Development Award — Jeremy Johnson, Rita Schalk, and Cynthia Rowles — gave a presentation about their work on Virginia 4-H’s science, engineering, and technology curriculum during the National Association of 4-H Extension Agents’ October 2010 meeting in Phoenix. “It’s certainly helpful to interact with our colleagues from throughout the nation, share what we have learned, get their input, and see how we can possibly tweak our program,” Schalk said.

Subsequent recipients were Laurie Fox of the Hampton Roads Agricultural Research and Extension Center, who attended a conference on stormwater pollution prevention in Anaheim, Calif.; and Robert Clark of the Virginia Cooperative Extension Shenandoah County Office, who will attend a conference in Dearborn, Mich., on managing large-animal mortality.

John Gerken grew up on a dairy farm in Fairfax County, and enrolled in Virginia Tech’s animal husbandry program after a short spell in the military. He earned his bachelor’s degree in 1954 and got a teaching job outside the university, but he soon learned of a job within Extension and applied. After serving about 10 years as an agent in Clarke County, he returned to school and earned a master’s degree in 1966. He went on to earn a Ph.D. from North Carolina State University. His research played a key role in reducing problems with magnesium deficiencies in cattle, and he helped establish the Virginia Forage and Grassland Council.

Shirley Gerken grew up in a section of Virginia’s Princess Anne County that is now part of Virginia Beach. She graduated from James Madison University in 1957 with a double major in English and education, and was working as an assistant Extension agent in Chesterfield County when she met her future husband at a district-wide Extension meeting. When John took a tenure-track position, they moved to Blacksburg. She went on to earn a master’s degree in child development in 1973 and an Ed.D. in 1979.

“Obviously, we were provided many opportunities by being employed at Virginia Tech,” Shirley Gerken said. “We want to express our appreciation for those benefits by designating funds to help maintain top-notch programs and faculty.”

The Gerken Award helps Extension faculty hone skills