

CALS



Newsletter

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# Taking the Message to the Hill



Photo courtesy of Mattox Commercial Photography

**U.S. Sen. Chuck Robb** listens as Dr. Eluned Jones explains how CALS helps tobacco farmers. Looking on is Dean Andy Swiger, right, and Terry Meisenbach, with US-

Agricultural Economics Professor Eluned Jones took news to Capitol Hill of the efforts by the college and Virginia Cooperative Extension to assist tobacco farmers adjust to uncertainty in the wake of the tobacco settlement.

She staffed a display describing the program of regional workshops for farmers at an agricultural sci-

ence exhibit and reception at the Cannon House Office Building in Washington, D.C., in March. Among the dignitaries visiting the display was U.S. Sen. Chuck Robb.

The reception, sponsored by the National Association of State Universities and Land-Grant Colleges, included exhibits from institutions across the nation.

## Ag Tech Program Fills Need for Students and Industry

Virginia Tech's two-year Agricultural Technology program has filled an important need for students in the 10 years since its graduates began entering the workforce, according to a recent survey of graduates.

The program has also served the needs of the agriculture industry, said John Crunkilton, associate dean for the College of Agriculture and Life Sciences. The program graduated its first class in 1989.

The alumni survey, conducted by Dennis Duncan, an instructor in the program, and Adam Kantrovich, a graduate student, sought information from the 364 students who graduated

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## Homecoming Details Finalized

An afternoon program and a pre-game dinner will get Ag alums ready for an evening homecoming battle against Syracuse on Oct. 16.

The Ag Alumni Roundup begins with registration and departmental and club exhibits at 3 p.m. on the lawn in front of Litton Reaves Hall and in the building. The program, consisting of speakers, awarding of door prizes, children's activities, and other events, begins at 4 p.m. The homecoming dinner is scheduled to begin at 5:30 p.m., well before the 8 p.m. kick-off.

The night-time game time, however, is based on a broadcast agreement with CBS. Whether CBS in fact airs the game de-

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## FROM THE DEAN

# Plan to Serve At Critical Point

By Andy Swiger  
Dean

We in the college are positioning ourselves to better serve you in anticipation of a great wave of change brought on by the rapid evolution of the agriculture industry. Globalization, free market policy, changing consumer demands, emerging production and processing systems, and new technologies are among the elements behind the dynamic challenges facing agriculture.

Our clientele — students, producers, processors, and the people of Virginia — rightly look to us for leadership in meeting the coming challenges. Providing that leadership is itself a challenge, especially in light of budget cuts and the consequent shrinkage of our faculty and staff in the early part of this decade.

Today, this college is determined to fulfill the expectations of our clientele. In cooperation with them we have developed a blueprint to rebuild and re-orient the college — the Plan to Serve Virginia's Agriculture, Human, and Natural Resources, a new college — for a new agriculture — in a new century. The plan has

served us well so far, but the 2000 session of the Virginia General Assembly is critical if we are to keep to the course that will allow us to be effective into the first decades of the new century.

The plan identifies the faculty expertise we need in the college, in the Virginia Agricultural Experiment Station, and in Virginia Cooperative Extension, including our three sister colleges at Virginia Tech. It is more than that, however. It also is a guide to the staff support, facilities, and equipment needed to ensure those faculty members are effective. Already, the plan has helped us reduce the shortfall in faculty positions in the college from 48 to 34.

In recent years our state legislators have been very supportive. The budget boost they gave us in 1998 laid the groundwork for intelligently building our resources to the levels envisioned by the plan. The legislative session starting in January, however, is when the Assembly will have to overcome sticker shock if we are to be in a position to address the critical issues of today and tomorrow.

We're asking for \$3.3 million of new base budget for the budget year starting next July 1, and \$6.6 million for the following budget year. That will allow us to hire 29 new faculty members, 26 Extension agents, and will provide the staff positions and operational funds to support them. Of the 18 faculty positions for our college, all are related to agricultural production and processing opportunities and related environmental issues.

The state isn't the only source of funding we're seeking for the plan — we continue to increase funding from private sources and the federal government — but state funding for our moderate resource requirements is critical to the implementation of the plan.

I am encouraged by the vigorous support the plan has received from industry groups, legislators, alumni, and others. With this momentum we will be able to realize the promise of this plan: a better tomorrow for all Virginians.



**Dean Swiger:** The state isn't the only source of funding we're seeking for the plan

# A Stronger Alumni Organization

By **John M. White**  
Associate Dean and Director

Talk about lucky, I must be living right. I reported in the Spring 99 newsletter that Tom Dobbins, coordinator of our Virginia Tech Ag Alumni Organization (VTAAO), had returned to Clemson University as a faculty member. Well, who started July 1 as the new Ag Alumni Coordinator? None other than Brad Bryant, current president of VTAAO.

Brad is returning to school to study for his Ph.D. in Ag Education after having taught vocational agriculture for several years in South Hill, Va. We look forward to working with Brad to continue to develop VTAAO over the next couple of years.

Phil Fravel, also a Ph.D. candidate in Ag Education, who filled in so very

ably for Tom Dobbins during Spring semester, will also assist with the VTAAO program next academic year and will teach in the Ag Technology Program. We are very fortunate to have Brad and Phil in our two graduate assistant positions in the academic programs office.

Summer orientation for new freshmen took place July 11 to 30 on campus. The college welcomed about 350 very talented new students during orientation. The quality of our CALS majors seem to get better every year. Aug. 23 is the first day of classes for the Fall semester.

Over 140 collegewide scholarships worth almost \$200,000 were awarded to freshmen, transfer and returning students for the 1999-2000 academic year. The college benefits greatly from these scholarships and

we appreciate very much those who make them possible. Our annual scholars/donors banquet held in honor of those who contribute funds to support our scholarship program and the students who receive them will be at Custom Catering in Blacksburg on the evening of Oct. 15.

A couple of important dates to keep in mind are Oct. 7 and Oct. 16. Oct. 7 is the date for our CALS annual career fair on campus. Last year, we had 71 corporations and state and federal agencies on campus to visit with students about permanent positions and internships. Over 30 of them stayed over and held placement interviews the day after the fair.

For more information about CareerScope 99, please contact Margaret Jenkins, career services coordinator, at (540) 231-9666 or E-mail [jenkinsm@vt.edu](mailto:jenkinsm@vt.edu). Oct. 16 is the annual Ag Alumni Reunion on the Litton Reaves lawn. Make plans now to attend.

## Alphins Honored

By **Ike Eller**  
CALS Development Officer

University, college, and Department of Dairy Science administrators and faculty were on hand in May to honor long-time benefactors Col. and Mrs. Horace E. Alphin for their generosity, which has had a significant impact at Virginia Tech.

Alphin, DASC '34, and his wife, Nancy, of Clifton, Va., have been generous contributors to Virginia Tech over a 25-year period. The couple has given a total of \$2.2 million, greatly benefiting the College of Agriculture and Life Sci-

ences, the Virginia-Maryland Regional College of Veterinary Medicine, the Corps of Cadets, athletics, and the Class of '34 Endowment.

CALS has benefited the most, with two named professorships and two endowed scholarships, one each in the college and in the Department of Dairy Science. Major gifts toward the construction of the Virginia Tech Livestock Teaching Arena and support for other programs also have been made over the last three years.

Alphin is a native of Rockbridge County and is a Class of '34 Virginia Tech graduate in Dairy Husbandry. After graduation, he became an Extension agent in North Carolina.



**Bill Vinson**, right, presents a memento to Col. Ed Alphin. Looking on is Alphin's wife, Nancy.

He began a career with the U.S. Army during World War II, continuing in uniform until retiring in 1967. He then served 10 years as administrator of Columbia Hospital in Washington, D.C.

The Alphins were honored at a breakfast

held on campus May 20 hosted by Dean Andy Swiger. Mementos, including a milk bottle from the old VPI Creamery and a picture of Holsteins in front of Burruss Hall, were presented by Bill Vinson, head of the Department of Dairy Science.

# Faculty Excellence Recognized in 1999

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**Chester L. Foy**, professor of plant pathology, received two prestigious awards, the Gamma Sigma Delta International Award for Distinguished Achievement in Agriculture, and the Gamma Omega Chapter of Phi Beta Delta Faculty International Service Award. He was recognized for his excellence as an international research scientist, leader, educator, and scholar. He has established a reputation as a world authority on the physiology and biochemistry of the mechanisms of action of herbicides and adjuvants. He has collaborated on research projects with scientists from nine countries, and has presented invited lectures in 15 countries. He has had a leading role in international projects to eliminate crop devastation due to parasitic weeds. He earned his doctorate from the University of California at Davis.



**Robert Meadows**, 4-H youth development specialist, received the Alumni Association Extension Excellence Award. His leadership helped propel Virginia Cooperative Extension's 4-H camping program to the top rank of such programs nationwide. He has served as the director for the State 4-H Congress held at Virginia Tech each summer. He has been instrumental in the resurgence of the university's Collegiate 4-H Club. He is well known for his workshops on personality preference typing. He has been the chief architect of an expanded master volunteer program to equip key volunteers to assume management duties for 4-H. He earned his doctorate at Virginia Tech.



**Gary P. Dingus**, Extension agent in Dickenson County, received the Alumni Association Extension Excellence Award. Dingus was cited for his concern for the welfare of Dickenson County in all its dimensions. He is an agriculture and natural resources Extension agent with responsibilities in several counties, though his work doesn't end there. He has gained the respect of local citizens with the energy he applies to such community projects as establishing community healthcare facilities, improving the area's capacity to attract new industry, and bringing new employers to the county. He earned his bachelor's degree from the University of Kentucky, and has pursued graduate work at Virginia Tech.



**David Parrish**, professor of crop and soil environmental sciences, received the University Alumni Award for Undergraduate Advising. He is credited with being the driving force behind the turn-around in enrollment in the Department of Crop and Soil Environmental Sciences. Undergraduate enrollment in the department jumped from 37 students 10 years ago to nearly 500 today. Parrish helped revitalize the curriculum, and helped establish the environmental sciences major. He shouldered increasing responsibility for student advising as the enrollment burgeoned, spending enormous amounts of time with students. He established a student advising center, which streamlined the advising process for students and faculty. He earned his doctorate from Cornell University.



**J. Reese Voshell**, professor of entomology, received the University Alumni Award for Teaching Excellence. He is an innovative and enthusiastic teacher. He engages students in his classes, infusing them with the desire to master even the most complex subject matter. An aquatic entomologist, Voshell's impact extends beyond undergraduate and graduate students to elementary and middle school teachers from across the state who take his courses to fulfill re-certification requirements. He emphasizes hands-on, project-based learning in which students examine specimens, prepare extensive insect collections, and participate in field trips. He stresses one-on-one interactions with students. He earned his doctorate from Virginia Tech.

# Year of Accomplishments for Ag Alumni Org

By Brad Bryant  
President, VTAAO

For many of us, the College of Agriculture and Life Sciences is a passion. Even years after our first contact with the college, it remains an important part of our lives. One way to help promote the college is through the Virginia Tech Agriculture Alumni Organization, a group of alumni and friends.

We have an expanding network of supporters who assist in recruiting students, provide internship sites, and help graduates find jobs. Not everyone has a job opening, but we can all serve as contact people for student recruitment and for ag alumni functions.

Activities for CALS alumni is a top priority for VTAAO. To keep alumni informed, we hold two "area" meetings a year in different parts of the state. These allow alumni from a region to get re-acquainted and to keep up on the happenings at Virginia Tech. About 50 alumni and guests were at the spring meeting held in the Richmond area. For those unable to attend events in Blacksburg, the Ag Alumni Organization will

bring Virginia Tech to you.

The highlight of our year is the annual Ag Homecoming celebration, held in conjunction with the homecoming football game. The 18th annual Ag Homecoming will be Oct. 16, followed by the Virginia Tech vs. Syracuse game. Since this is a night game, registration will begin at 3 p.m. Several activities are being planned with plenty of time for socializing before the catered dinner at 5:30 p.m.

There is some uncertainty about the game time, however. A different game time could change the schedule for Ag Roundup, so everyone needs to be flexible in the event of last-minute changes.

Also, many CALS clubs and departments are planning alumni activities for the afternoon of Oct. 16 to coordinate with Ag Homecoming. You will receive further information and a registration form later this summer. Make plans now to join more than 350 fellow graduates and friends of CALS.

For further information regarding the Ag Homecoming or VTAAO, contact Phil Fravel or Brad Bryant at (540) 231-3773.



Reggie Nelson, left, chats with Reese McCormick during a regional ag alumni meeting



Ozzie Abaye with the Virginia Tech crops judging team at the Chicago Board of Trade.

## Connecting with Students Earns Abaye Teaching Award

Energy, compassion, and high expectations are among the attributes so successfully combined by Azenegashe "Ozzie" Abaye that she has been awarded the College of Agriculture and Life Sciences' 1999 Certificate of Teaching Excellence.

Abaye, an associate professor of crop and soil environmental sciences, also becomes a member of the college's Academy of Teaching Excellence.

"She is obviously an aggressive 'self-starter' who in her lifetime of teaching will have a tremendously favorable impact on hundreds of agriculture students," said John R. Hall III, department head.

Abaye has a reputation among students for setting very high standards, and for doing all she can to help students meet those standards. She strives to build rapport and mutual trust with her students, Hall said.

Abaye said a key aim of her teaching effort is to transform students into active thinkers, problem solvers, and decision makers, as well as to impart knowledge to them.

"I enjoy teaching and feel that undergraduate teaching is the foundation of a great university," she said. "A teacher who has energy, enthusiasm, and dedication brings more than subject matter to the classroom."

She generates an environment in which students combine knowledge with practical, hands-on experience. She also brings her research and Extension expertise in alternative crops to the classroom.

She has developed two new courses, and she significantly revised three others. In 1993 she established the Virginia Tech Crops Judging Team, and led it that year to a national 1st place award for grain grading.



David Winston with medals he awards to 4-H dairy competitors.

David R. Winston, coordinator of the Extension state dairy youth program, received the Young Agricultural Alumni Citation for his service to the university, to CALS, and to the Virginia Tech Agricultural Alumni Organization.

The award was presented by Brad Bryant, president for the Ag Alumni Organization, during the college's Ag Leaders Reception

## Winston Named Outstanding Young Alumni

and Banquet held July 8.

Winston earned his bachelor's degree in 1987 and master's degree in 1998, both in dairy science at Virginia Tech. He was an agriculture and natural resources Extension agent in Amelia County, and dairy agent for Extension's Central District.

In 1994, he was appointed Extension dairy scientist with 4-H Youth responsibilities. He is adviser to the Virginia Tech Dairy Club, adviser to the Virginia State Dairy Association's dairy youth committee, treasurer of the Virginia Tech Dairy Science Alumni Association, and treasurer of the Montgomery County Human Relations Council. He is also active in state fair dairy events and a number of professional and dairy industry organizations.

"One of David's good qualities is that he doesn't know how to say no," said Donna Kerr of Amelia County. "The 4-H dairy club he

helped start here is still going strong, and the Dairy Day program [he helped establish] at the elementary school is still in place."

She characterized Winston as "Mr. Organized."

"He's always in the trenches helping to get things done," Kerr said. "Like the saying about the duck swimming along — on the surface everything looks calm, but below he's paddling like crazy. That's David."

C. Clark Jones, university vice provost for outreach and former director of Virginia Cooperative Extension, said Winston has developed traits that have helped him organize successful programs that involve large numbers of youth.

"He has good technical skills and he has good interpersonal skills," Jones said. "He's bright, organized, and resourceful."

## Transgenic Tobacco Research Moves to Fields

Virginia Tech researchers are plowing new ground this growing season -- they are learning the best way to grow tobacco when the object is to extract pharmaceutical-producing enzymes.

"We're not looking at growing tobacco in the way it's been grown in the past," said Jim Jones, an agronomist and director of Virginia Tech's Southern Piedmont Agricultural Research and Extension Center in Blackstone. "In fact, what we've got is really a new crop."

The research in fields



University workers work with transgenic tobacco in a research field.

at Blackstone and at the Southwest Virginia AREC in Glade Spring is to support transgenic work being done by Carole Cramer, professor of plant pathology, physiology and weed

science, and CropTech, a biotechnology company located in Blacksburg.

Cramer and CropTech were the first to induce a plant to express a human protein with enzymatic ac-

tivity. That achievement has opened the possibility of using plants as factories to produce human proteins that can be used in pharmaceuticals.

The growing pattern of tobacco to produce leaf for tobacco companies is well established, Jones said. What Cramer is looking for, however, is the optimum cultural practices to produce protein. With that in mind, the transgenic tobacco is harvested multiple times during the summer at a point far earlier than tobacco is harvested for traditional uses.

# Student Achievers

## Landscape Team

Horticulture students gave a strong showing at the Associated Landscape Contractors of America's Student Career Days competition in March. The 40 Virginia Tech students took fourth place honors by the close of a grueling 25-event competition, coming out as the highest scoring team east of the Rockies.

Events ranged from business management to Bob Cat driving. More than 800 students from 47 other colleges around the country participated in the competition.

Andy Lohr and Jonathan Hamilton placed first in the truck and trailer event, Emily Givens was first in the interior landscape design event, and Angie Moore and Holly Chichester placed second in construction estimating and sales presentation respectively.

Other students placing high in various events were Carrie Jubb, Michael Johnson, Paul Westervelt, Tony Jackson, Cara Stilling, Travis Estes, Hope Gruszewski, Kelly Wilson, David Burton, Brian Ray, John Roberts, Jason Cooper, and Becky Turner.

## Soil Judging Team

The Virginia Tech Soil Judging Team brought home the third place trophy in the National Collegiate Soil Judging competition held in March in Tucson, Ariz. Eighteen schools brought a total of 108 students to the competition. Only 49 points out of a possible 1,360 points separated the Virginia Tech team from the winning team from Purdue.

Team members are Brian Jones, Emily Miller, Ryan Reed, Aaron Syracuse, Kim Burckle, and Adam Kappesser. The team coach is Pam Thomas, senior research associate in the Department of Crop and Soil Environmental Sciences.



Jodie Johnson (left) accepts the outstanding senior certificate from Charlene Shupp.

## Research Symposium

The Graduate Student Assembly's 15th Annual Research Symposium last spring brought students studying in CALS one-quarter of the 19 awards presented to students universitywide. There were four graduate student divisions and one undergraduate student division.

Tom Kuhar of Baltimore, Md., a graduate student in entomology, won third place with research on alfalfa weevil population ecology in Virginia. Natalie Thornburg of Pittsburgh, Pa., took the first place University Honors Award for Undergraduate Research. A major in biology, she did research in the Department of Plant Pathology, Physiology and Weed Science on modification of a fungal phytase gene for introduction into soybean.

Laura Good of Harrisonburg, Va., earned the third place University Honors Award for Undergraduate Research. A major in biochemistry, she is also doing research in the Department of Plant Pathology, Physiology and Weed Science on modifying soybean for improved phosphorus availability. Diana Hall of Galax, Va., took the fourth place Biological Sciences Initiative Award for Undergraduate Research. A biochemistry major, her re-

search poster was about the isolation and characterization of predator bacteria from the soil.

Jennifer P. Rice of Randolph, N.J., received the fifth place Biological Sciences Initiative Award for Undergraduate Research. The animal and poultry science major was doing research to determine whether adding genetically modified microbial enzymes to pig's feed will increase the availability of phosphorous and other nutrients from the feed.

## Outstanding Seniors

Jodie Johnson was named the college's outstanding senior during the Alpha Zeta annual banquet in April, and she was recognized for the achievements during graduation exercises May 15.

She earned a 3.99 grade-point average overall, and a perfect 4.0 in her major. She was on the dean's list for academic achievement for every semester she spent at Virginia Tech, and made the president's list for every semester except one. In addition to a major in crop and soil environmental sciences, she earned a minor in agricultural and applied economics.

"The competition was fierce," said John White, associate dean for academics. "Any one of these young people would have been a person we would be proud to call the college's outstanding graduating senior."

Each department nominated a student for the honor. Departmental outstanding seniors were D. Shane Horsley, animal and poultry sciences; Alistair Leon Kok, biochemistry; and Coleen M. Mowrey, dairy science.

Also, John J. Schurman, food science and technology; Matthew G. Sensabaugh, horticulture; William Taylor Hudson, agricultural and applied economics; Sandra L. Robinson, environmental science; and Kevin A. Moore, agricultural technology.



E. T. Kornegay

## Swimming Accident Claims Kornegay

E. T. Kornegay, an animal scientist of international stature and a professor in the Department of Animal and Poultry Sciences, died July 2 in a swimming accident near Wilmington, N.C., where he was vacationing.

A specialist in the area of swine nutrition, Kornegay was considered one of the top experts in his field. He was 68.

"He truly is irreplaceable," said Gary Minish, head of the animal and poultry sciences department. "He was one of the top three swine experts in the world. He knew 10 years ago that environmental nutrition was very im-

portant, and he directed his research program accordingly."

Kornegay pioneered the use of phytase, a genetically engineered enzyme, to cut by as much as 40 percent the phosphorus in swine and poultry waste. His research is having a profound impact on the competitiveness of the swine and poultry industries, while reducing environmental pollution.

In 1998 Kornegay received the American Society of Animal Science's Morrison Award, recognized as one of the most prestigious awards in animal science worldwide.

He was a faculty member at Virginia Tech for 33 years. His work was recognized by academia and industry. He was a recipient of the Virginia Tech Alumni Research Award, the Gustas Bohstedt (Mineral) Award, and

## College Leads University Minority Intern Program

Thirty-three minority and women students from colleges across the Eastern U.S. spent their summer at Virginia Tech in summer research internships as part of the Minority Academic Opportunities Program.

Eight of those students paired with professors in the College of Agriculture and Life Sciences. The universitywide program is administered from the college by Randolph L. Grayson, and Larry Moore, both professors of plant pathology, physiology and weed science.

During the summer program the interns spend 10 weeks on the Virginia Tech campus, working a week on original research projects supervised by faculty advisers. The research is on a subject of the students' choice within one of the university's six colleges that are part of the program.

The basic requirements are that students should be in the first generation of their families who will graduate from college; or they must be studying in fields under-represented by minorities or women; or they must demonstrate financial need.

The program works to increase the academic competitiveness of the students, resulting in their scores on the Graduate Record Examination improving by an average of 200 points. The program pays for the student to take the GRE test. Additional benefits include free room and board and a stipend. Some interns can receive credit hours at their home colleges for their research work at Virginia Tech.

Grayson, founder of the Minority Academic Opportunities Program and co-director of the summer internship program, started

the program in an attempt to provide the tools minority students need to pursue advanced degrees.

"The interns are part of a mechanism to bring about change — to get minorities into the mainstream of scientific and technological society," he said. "This program is flourishing because the faculty here take a very active interest, serving as advisers to these talented young people."

The intern program is one of three legs of the Minority Academic Opportunities Program. The other two parts consist of undergraduate scholars, who initially enroll in Virginia Tech, and graduate scholars, presently in the pipeline for advanced degrees. The program prepares minority students for graduate school and for science careers in academia, business, government, and industry.

## Jobs for Alums at CareerScope '99

CareerScope, the premier job-placement opportunity CALS provides to students, is available to alumni, too.

"Alumni job-seekers don't need to register," said Margaret Jenkins, the college's career services coordinator. "All Virginia Tech alumni are invited to attend."

With more than 70 organizations and corporations at last year's event, CareerScope is a rare opportunity to meet with employers looking specifically for CALS and College of Natural Resources graduates. This year's event is scheduled for Oct. 7 from 10 a.m. to 4 p.m. at Squires Student Center.

In addition to CareerScope, alumni can take advantage of a variety of career services provided by the university. Among them are career advising, posting resumes in the Alumni Resume Notebook, candidate referral service, and access to 1 million employers in the career search database.

Alumni job search questions can be E-mailed to [leisla@vt.edu](mailto:leisla@vt.edu), or sent to Virginia Tech Career Services, Attn: Alumni Coordinator, Top Floor Henderson Hall (0128), Blacksburg, Va. 24061. Information is available on the Internet at <http://www.career.vt.edu>.

Assistance is also available from Jenkins at (540) 231-9666, or by E-mail to [jenkinsm@vt.edu](mailto:jenkinsm@vt.edu).

Due to a recent scheduling change, the date for CareerScope '99 reported in the last issue of CALS Newsletter is incorrect. The correct date is Oct. 7.

# GULF WAR TROOP EXPOSURE TO PESTICIDES TO BE STUDIED BY CALS

Virginia Tech researchers will investigate the possibility that troops exposed to insecticides during the Persian Gulf War could be at increased risk of developing Parkinson's Disease, through a \$543,000 grant from the U.S. Army.

"Insecticides are unique among environmental pollutants because they are designed to be neurotoxic and are deliberately placed in the environment," said Jeff Bloomquist, a neurophysiologist.

The three-year project will provide information of benefit to civilians as well as military personnel, he said. The Virginia-Maryland Regional College of Veterinary Medicine will join in the study.

Service members serving in the Persian Gulf could have been exposed to insecticides in several ways, said Bloomquist, an associate professor in the Department of Entomology. Insecticides were used around field encampments and in housing areas. Uniforms were also impregnated with insecticides to protect service members from disease-carrying insects.

Parkinson's Disease is a degenerative disease affecting the central nervous system. About 1 percent of the population suffers from the dis-

ease, the onset of which is thought to involve both a genetic pre-disposition and exposure to an environmental toxic trigger. Bloomquist is investigating whether insecticides can be among triggering toxins.

"Parkinsonism may be a result of long-term exposure to these compounds," Bloomquist said. "If we show this connection, it likely will be years — maybe 20 years — before any symptoms of the disease begin to appear. We know enough about the disease that there are some interventions that could be devised. We will also be looking into the extent of reversibility of the toxicant's effects."

The studies, which Bloomquist described as "very basic research," will investigate the neurochemical changes in mice when they are exposed to insecticides in various dosages and various combinations.

The loss of motor skills, resulting in symptoms such as muscle rigidity, shuffling gait, and a rhythmic tremor, has been linked to loss of dopamine production in the brain. That loss of dopamine is the major neurochemical expression of Parkinson's Disease.

# Showing Our Manners

Nearly 1,000 students and professionals from across the country converged in Roanoke in April for the three-day Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) national meeting.

Phil Haynie III, a senior in agricultural and applied economics, welcomed participants to the meeting as president of the hosting Virginia Tech chapter. Co-hosting the event were MANRRS chapters from Virginia State University and North Carolina A&M.

Among those working on nervous energy leading up to and during the conference was Larry D. Moore, professor of plant pathology, physiology and weed science and co-director of the Virginia Tech Minority Academic Opportunities Program.

"This is the biggest conference ever held by MANRRS and the biggest conference ever held at the Hotel Roanoke," Moore said. "A great deal of work went into this, and we've heard nothing but rave reviews from everybody we've talked to."



Phil Haynie III, above, welcomes participants. Below, participants get a tour of the Fralin Biotechnology Center from Lab Manager Kristy DeCourcy.



## AG Tech

*continued from page 1*

from the program over the past 10 years.

Ninety-seven percent of survey respondents said the program was worthwhile; 85 percent secured their first jobs in their option of study; and 95 percent indicated the internship was a valuable part of their program. In addition, 80 percent said they secured their first job within a month of graduation.

More than 15 percent of the respondents indicated their current salaries are in excess of \$40,000. The average starting salary for the spring 1999 graduates was \$23,000.

The two-year course of study leads to an associate of agriculture degree, a practical option for students who desire an agricultural career but who don't want a four-year program.

Class instruction has evolved from an animal- and crop-production curriculum to a specialized program with four options of study: landscape and turf management, animal agriculture, agricultural business, and crop production.

The college added an emphasis in urban pest management within the agribusiness option at the request of the state's pest management industry. "This is one exam-

ple of how we can help not only students who need very specific skills, but also meet the needs of the industry and the needs of the state," said Crunkilton.

Students learn through classroom and lab instruction in subject areas such as agricultural mathematics, computer applications, and communication skills. Graduates of the program also complete a 12-week internship inside their specified agricultural discipline.

Virginia Tech is one of 20 land-grant colleges and universities nationwide offering associates of agriculture degrees.



# Seafood Safety Finds Home in the Blue Ridge

People looking for expertise on seafood safety aren't likely to look for it six hours from the coast. But for people in the know, Virginia Tech is often the first place to look for answers. Over the years, the university has been at the forefront of developments in the field of seafood safety and quality.

Among accomplishments in the field are the establishment of the industry standard procedure for crab meat pasteurization, the founding of the Sea Grant program in Virginia, and the development of data and techniques that help the industry combat food pathogens such as *Vibrio vulnificus* and *Listeria monocytogenes*.

In recent years, Virginia Tech has taken the lead with applying a new food safety system called Hazard Analysis and Critical Control Points, or HACCP, to the seafood industry. George Flick, university distinguished professor of food science, was one of the founding members of the National Seafood HACCP Alliance, organized by the National Sea Grant College Program

The alliance, which includes members from a handful of state and federal agencies as well as representatives from industry, was charged with creating or modifying guidelines for process monitoring, and creating a new training curriculum for regulators and industry. The Seafood HACCP Alliance's work culminated in the development of new industry-wide regulations adopted in December 1997.

Since the regulations took effect, every seafood processor in the U.S. has assumed responsibility for developing and adhering to a HACCP plan.



George Flick, Virginia Tech seafood safety expert.

HACCP regulations affect everyone who eats seafood, whether fresh, frozen, or canned. The plan's purpose is to identify the key steps within the processing protocol that are most susceptible to food safety problems, then rigorously managing those steps to ensure food safety.

Flick's role with the HACCP Alliance includes writing portions of the HAC-

CP manual and the model standard sanitary operating procedures for a number of commercially important species. In general, seafood HACCP has been well received by both regulators and industry, and has received a number of awards.

More importantly, it has made the U.S. seafood supply safer.

## Homecoming

*continued from page 1*

depends on the early season performance of both Virginia Tech and Syracuse.

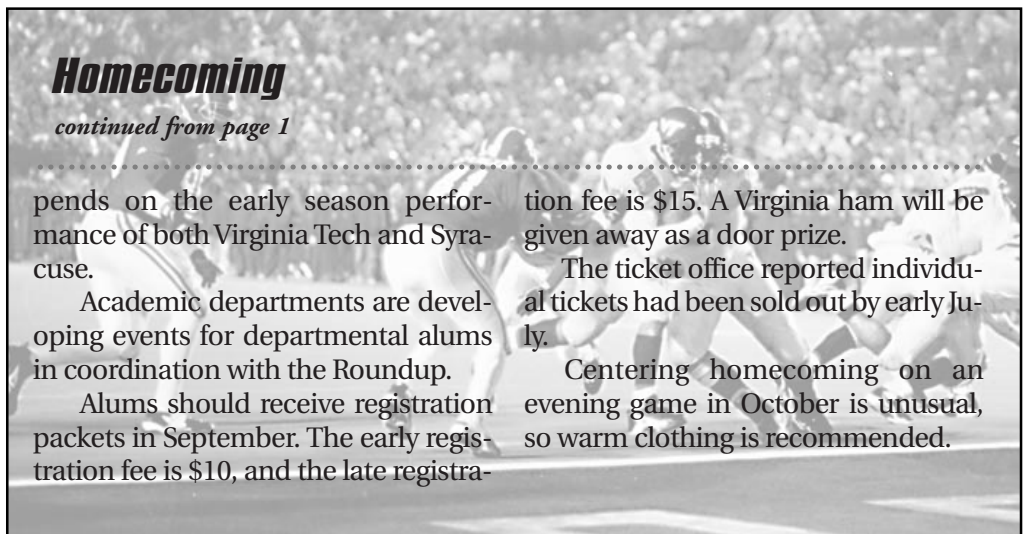
Academic departments are developing events for departmental alums in coordination with the Roundup.

Alums should receive registration packets in September. The early registration fee is \$10, and the late registra-

tion fee is \$15. A Virginia ham will be given away as a door prize.

The ticket office reported individual tickets had been sold out by early July.

Centering homecoming on an evening game in October is unusual, so warm clothing is recommended.



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# Last But Not Least



Carolyn Mack, center of front row, is flanked by her parents shortly before she received her bachelor's degree in environmental science, becoming the seventh Mack child to graduate from Virginia Tech. Standing (from left to right) are her siblings and now fellow Virginia Tech alumni: Margaret, Richard, Anita, Kathryn, and Jim. Not pictured is David. The parents, Bob and Mary Mack of Hampton, have one daughter, Elizabeth, who attended another university. Carolyn, the youngest child, is the only family member to attend the College of Agriculture and Life Sciences.



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