Agromedicine isn’t a word you hear every day, but it is a practice used everyday by farmers, fishermen and forestry workers. Any time they are heeding advice to slap on the sunscreen, remembering to wear safety gear, or handling pesticides carefully, workers can thank agromedicine.

Traditionally, the discipline has focused upon occupational safety and health, but more recently has broadened its focus to encompass nutrition, food safety and even biosecurity — thus drawing everyone else under its umbrella. And agromedicine has evolved as a team approach between professionals in the medical and agricultural fields.

Given the potential to benefit so many people, it is small wonder that the SAES has embarked on a plan to strengthen its research focus in this area. Faculty recently developed an agromedicine, nutrition and food safety program initiative, which lays out guidelines for improving multidisciplinary research, building partnerships, and promoting outreach. The goal of improving the health, safety and quality of life of farmers and rural residents is reflected in many of the cutting-edge projects now under way at SAES. Just a few of these include: Coupling biosensors to Global Positioning Satelite (GPS) technology to detect bioterrorist attacks in food crops; investigating the potential of beneficial bacteria, herbs, medicinal mushrooms and plant extracts to fight disease, preserve food, or improve health; surveying ethnic minorities to discover their use and attitudes toward nutrition, and alternative medicines; outreaches dealing with food safety behavior in rural populations, and explorations into foodborne pathogens on poultry farms and their relationship to biosecurity strategies.

Much of the groundwork to further the mission is already in place, through the Agromedicine Institute in Greenville. Founding members were N.C. A&T’s SAES, School of Nursing and School of Technology, as well as East Carolina University’s School of Medicine, Nursing and Allied Health Sciences, N.C. State University’s College of Agriculture and Life Sciences, and the Eastern Area Health Education Center. An institute offshoot, the Southern Coast Agromedicine Center, extends the mission into Puerto Rico, the Virgin Islands, and participating states in the Southeast.

Now SAES is seeking to strengthen and broaden the agromedicine mission further by leading a consortium of all 1890 land-grant universities that will conduct collaborative research on agromedicine issues. A meeting is planned in June for the 18 universities to pen an agreement.

“More than 20 percent of North Carolina’s workforce is employed in agriculture, and the state has the second largest number of farmers in the United States,” said Dr. Alton Thompson, dean of A&T’s agriculture school, and a member of the editorial board of the Journal of Agromedicine. “That’s why it is important for N.C. A&T and other land-grant universities to take the lead in addressing these issues, particularly in light of the fact that minorities and underserved communities are hardest hit by the occupational injuries and diseases that afflict this industry.”
Orange County farmer Stanley Hughes is the 2004 Small Farmer of the Year, a notable honor for at least two reasons.

One, the award speaks to the skill it takes to achieve such superlative recognition. Two, getting the award means that Hughes had to slow down at least long enough to receive the honor, bestowed March 24 during Small Farms Day on A&T’s campus.

You don’t get to be Small Farmer of the Year by standing still, as exemplified by Hughes. Any given day may find Hughes in Minnesota learning how computers can help farmers run more successful farms; or in Louisiana learning more about niche markets. He might be fixing a tractor on his 75-acre farmstead, or at the Carrboro Farmer’s Market selling the collards and kale that he’s reaped from his Pine Knot Farm.

Flip the pages of the July 2003 Gourmet Magazine and there again — alongside stories about “fruits from paradise” and blueberry tarts — you’ll find Hughes; featured for having some of the best organically-certified produce in the country.

Recognized by the Cooperative Extension Program at N.C. A&T State University which awarded him Small Farmer of the Year in memory of the late farmers Gilmer L. and Clara Y. Dudley, Hughes was honored for his willingness to try alternative agriculture, for his success at making it work, for his community networking, and for using Cooperative Extension programs to stay abreast of developing farm technologies.

“Mr. Hughes has been very receptive to trying new and innovative ways to continue to keep his farming operation viable,” says Dr. Fletcher Barber, Director of the Orange County Extension Center. “He’s well respected in his community, because of his leadership and the initiative he takes in pursuing opportunities to try new things.”

Hughes, 55, is a third-generation farmer, the youngest and the only one of 12 children born to Bennie and Addie Hughes who pursued farming as a career. For more than 20 years, Hughes worked a full-time job while farming tobacco. In 1996, though, after being laid off from a manufacturing job, farming became his full-time job.

That year, Hughes became the first Orange County farmer to grow organic tobacco, in addition to his regular tobacco harvest; he also grew soybeans, wheat and a few head of cattle, and began the shift to more organic production of future crops. Despite all those diverse pursuits, certification requirements, juggling and maintenance, Hughes made a pleasant

of Small Farms Week.

at the Agricultural Biotechnology

Clayton listens to a presentation

Cooperative Extension agent Bill

D).  

bankruptcy.

farm back from the brink of

practices — they helped bring his

live with sustainable production

Trantham not only found a way to

Farms Day Luncheon on March 24.

keynote address at the Small

Carolina dairy farmer, delivers the

Program at A&T.

Hughes says “With the high

cost of living, the high cost of

farming, if you’re not a larger

farmer, you just about need to

do other things if you’re trying
to stay on the farm.”

Hughes is an average-size

man with the hands of a giant, a

quiet demeanor, and just enough

of a smile that makes you won-
der if he knows a secret the rest

of us haven’t figured out.

He has two daughters, but doesn’t anticipate either

of them — one is a Charlotte

businesswoman, the other still

in school - taking over the farm

that’s been in his family for

more than 100 years. He believes

they should have the right, just

as his parents gave him and

his siblings, to make their

own way.

“Being black, there wasn’t

much future in farming,” Hughes

says. “To get loans and get them

on time, you had to put up more

collateral than white farmers and

a lot of people weren’t willing to

do that. Most black people didn’t

have anybody who could co-sign

for them, then if they got any-
thing it was too risky for them
to seek any expansion and risk

losing it.”

Contemporary programs,

though, such as Operation Spring

Plant and Golden LEAF, which

provide grants and assistance to

limited-resource and minority

farmers, along with Extension

outreach, are making the gamble

more of a sure thing for Hughes.

It’s enough for him to con-
tinue the family legacy, to put his

sweat and ingenuity into the same

land that was tilled and sown and

plowed by his maternal and

paternal grandfathers before him.

“At one time, this farm sup-
ported three families and now it’s
down to where it’s supporting

one,” Hughes says, “but I feel
good to be the only one carrying

out our grandfathers’ dreams.

“To be able to be free, work

out in this air and to see the

things that you can grow, is what

it’s all about. It’s sort of like say-
ing, ‘I put this seed in the ground

and look what I made of it.’ Of

course, without the Good Master

helping you, you ain’t going to

accomplish nothing no way, but

to be able to say you guided this

is what farming is all about. It’s

taking a path of your own.”

Biotech gets reality check

Research institutions such as N.C. A&T

lie at the core of North Carolina’s young,
vibrant and growing biotechnology industry,
said Gwyn Riddick, director of the Piedmont
Triad Office of the North Carolina
Biotechnology Center.

“We have all the ingredients,” he said.

“We now have to work on the recipe.”

That recipe includes a healthy mix of col-
laborative research, partnerships, seed grants,
education, and entrepreneurship, as well as
the supportive environment created by the
state of North Carolina through continued
funding of such initiatives as the private non-
profit N.C. Biotechnology Center, he added.
As director of the new office, which opened
in March in Winston-Salem, Riddick works with
and assists the Triad’s growing biotechnology
community, including approximately three dozen
biotech and life sciences companies, educational
institutions and economic development groups.

Riddick’s remarks were made before 200
attendees of the Symposium on Agricultural
Biotechnology Awareness in North Carolina
at N.C. A&T, during Small Farms Week.

Riddick said agricultural biotechnology plays
a central role in biotech industries. He cited sever-
al examples, including such companies as Biolex of

Pittsboro, which employs 43
people in making recombi-
nant protein from duck
weed; Embrex of Durham,
which has created 140 jobs
in making a vaccination
preparation; Syngenta of Greensboro,
which, among other things,
is mapping the watermelon

genome with the aim of developing disease-resist-
ant watermelons, and BioResource International
of Raleigh, which uses enzymes to convert

chicken feathers into high protein animal feed.

“What we doing is moving these ideas from
mind to lab to the marketplace. That’s our special-
ty,” Riddick concluded. “We’re working today
with what we call a bio-based economy, and it is
getting to be more so every day. It’s an economy
that is based on biotechnology, which uses
renewable raw materials to produce products
and energy here for our daily use.”
The School of Agriculture and Environmental Sciences Banquet is set for Monday, April 26.

The SAES “Career Expo 2004” gave Deidra Felton (top right) a chance to talk about employment opportunities with Sharon Owens, veterinary medical officer with USDA’s Food Safety and Inspection Service. Felton is a senior from Morehead City. Brannon Jeffers (bottom center), a sophomore from Roxboro, also received some information from Owens. Almost 40 agribusiness firms and government agencies sent recruiters and representatives to the Career Expo.