SC agribusiness is $41.7 B and growing
Vice President’s Message

This issue features good news about the state of agribusiness, South Carolina’s largest industry. A study released in January showed the economic impact of agriculture and forestry (agribusiness) has increased to $41.7 billion, up 23% over similar data published in 2008, in spite of the recession. And closing fast on the goal of $50 billion by 2020 set by the state Department of Agriculture.

No one group is responsible for this exciting news. It is the result of a dedicated collaboration among the state’s agriculture and forestry agencies – including the Department of Agriculture, Palmetto Agribusiness Council, Farm Bureau, and Clemson University – and the hard work of the people who grow crops, raise livestock and manage forestland across our state.

Recent investments by the state General Assembly have made it possible for Clemson to strengthen our agribusiness educational programs for university students and for working farmers.

We are putting more extension agents in county offices to help farmers increase both production and profitability. In addition to transferring research-based information on variety selection and production technologies, Clemson Extension agents are conducting financial management workshops for new farmers and those who are seeking to expand into new products or markets.

In addition, Extension agents are working with the Farm Service Agency to help farmers navigate the 2014 Farm Bill and determine which programs provide the most financial benefit for their operation.

Clemson also is collaborating with the state Forestry Commission to enhance the economic impact of that industry. Our board of trustees chairman, a former ambassador to Canada, hosted a conference that brought Canadian officials to campus for conversations to strengthen trade ties, particularly in forest products. Forestry contributes some $17 billion to the agribusiness total and has the potential to increase significantly as the housing market improves and more value-added products are produced in the state.

This issue offers a brief glimpse of Clemson’s teaching, research, extension and regulatory programs that focus on growing the economic impact of agribusiness...and improving the quality of life for South Carolina citizens.

Sincerely,

George Askew
Vice President for Public Service and Agriculture
The largest industry in South Carolina has cast aside the withering effects of the Great Recession and continued to flourish at an impressive rate, according to a 2015 report cited on Feb. 10 in the State House by South Carolina Gov. Nikki Haley.

Agribusiness, a diverse cluster of 89 sectors that includes agriculture and forestry, collectively accounted for $41.7 billion in economic impact based on 2013 data, further emphasizing that it is a significant driver of the state’s economy.

“The news that agriculture and forestry mean tens of billions of dollars for our economy and 212,000 jobs for our people is a real reason to celebrate,” said Haley. “We have invested in agribusiness and in our rural areas, our farmers know we continue to have their back, and working with (S.C. Agriculture) Commissioner (Hugh) Weathers, we’re going to keep South Carolina on the move.”

Clemson University Public Service and Agriculture, the Palmetto AgriBusiness Council, the S.C. Department of Agriculture and the S.C. Farm Bureau commissioned the report “The Impact of the Agribusiness Sector on the South Carolina Economy.”

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“In 2009, we introduced the ‘50 by 20’ goal of raising the economic impact of South Carolina agribusiness to $50 billion by the year 2020. With this recently updated study, we know that this goal of growing our industry to this level is well within reach, and we proudly celebrate the fact that agribusiness continues as the state’s No. 1 industry.”

— Hugh Weathers, commissioner, S.C. Department of Agriculture

“We are pleased that the ag sector is continuing to grow and make positive impacts on the South Carolina economy. As the largest grassroots general farm organization in the state, we encourage our state’s leaders to continue to support the ag sector by funding our critical needs for the future.”

— David Winkles, president, S.C. Farm Bureau

“This study clearly shows that forestry and agriculture are critical industries to South Carolina’s economy. We often refer to forestry as the ‘ideal industry’ in that it contributes around $17 billion to the state’s economy while having a positive effect on the environment, society and quality of life.”

— Gene Kodama, state forester, S.C. Forestry Commission


SC producers set to beef up cattle inventories

By Scott Miller

South Carolina’s $140 million cattle industry is poised to grow with market demand on the rise.

A new report shows U.S. cattle and calf inventories increasing for the first time since 2007.

“Producers are beginning to retain cows and heifers in order increase production numbers due to the market demand,” said Matthew Burns, Clemson Extension beef specialist.

To assist with the industry’s growth and profitability, Extension is helping producers with product evaluation, performance testing, farm and records management, forage management, marketing, and combatting parasites and disease.

The inventory of South Carolina cattle and calves was up 1.4% at the beginning of 2014, even as the nation reported an average decline of more than 1.7%, according to stats from the USDA National Agricultural Statistical Service.

Roughly 335,000 cattle and calves currently graze in South Carolina, where annual sales top $92 million, according to the USDA. Total economic output of the cattle industry in South Carolina is nearly $140 million, with the sector supporting more than 1,361 jobs.

Among its many livestock-related programs, Extension works with cattle producers to implement grazing systems that lower production costs and use nutrient-rich forages that aid weight gain. The Master Cattlemen Class helps producers maximize the value of their herd.

Extension’s annual bull tests supply farmers with both grain- and grass-fed bulls that show maximum weight gain and breeding potential.

Additionally, Clemson’s Livestock and Poultry Health division identifies foreign and emerging diseases that impact consumer health and eat into producer profits.

Extension connects dots to successful farm management

By Scott Miller

Theresa Milanesi’s Upstate cattle farm is entering its fourth year of operation, and the retired teacher has made just one sale and has few prospects for her next.

She needs a shooter to test her cows’ fertility and a trailer to transport them. She needs grass for cows to graze. She also needs a marketing plan after the sales deal that was the impetus of her business plan fell through.

“I don’t want to keep borrowing from my retirement,” said Milanesi, whose husband also is retired.

Her story is common in agriculture: a first-time farmer struggling to build a foundation while managing the unforeseen stresses of a new business.

Fortunately, Extension economist Wilder Ferreira makes house calls, or farm calls even. Milanesi met Ferreira at a “Financial Management for Producers” class Ferreira offers throughout the Upstate.

That meeting is leading to a consultation with Clemson Extension specialists to develop a grazing operation to more economically feed her cows year-round, and a marketing consultation to unlock new sales opportunities. Clemson Extension has a slate of programs to assist emerging farmers, with support from the South Carolina General Assembly.

“These connections are so important,” Ferreira said.

The one-day course covers agribusiness management, accounting terminology and standards, financial analysis, cash versus accrual accounting and other topics related to farm accounting, management and business planning. Ferreira shows examples of agribusinesses’ books to help analyze performance and spot trends.

“This training is two-fold,” Ferreira said. “It’s the class today, and it’s also the consulting I can do.”

Ferreira, who has launched and sold businesses in the past and has taught entrepreneurship at Clemson, will sit down with Milanesi and analyze her tax return line by line to help her build a viable business.

Ferreira said a common problem of struggling farmers is that owners draw too much salary.

“They don’t have the concept that they need to save money for growth. You have to keep growing your farm or you’re going to get smaller and smaller,” he said. “Usually they say, I started with 100 cattle but I had to sell.”
In the most closely watched test of the semester, all the students passed with flying colors. And then they were sold.

The 2015 Clemson University Bull Test saw 43 bulls and 19 heifers graduate Feb. 7 at the T. Ed Garrison Livestock Arena, drawing nearly 400 South Carolina cattle producers and record prices at auction.

The test – which measures the amount of weight the animals gain – is designed to identify strong genetic potential the animals can pass along to their offspring.

"The test compares bulls in the same breed and age group, so cattle producers can get a better idea of what kind of performance to expect," Burns said. "It all boils down to providing the best genetics possible for the South Carolina cattle industry. We want to give cattle producers every possible competitive advantage."

Cattle breeders from across the state and region enter their bulls in the annual test, which concludes with a sale at auction. The bulls began the test in September at the Clemson Beef Cattle Farm on the Simpson Experiment Station near Pendleton.

The bulls and heifers drew more than $230,000 at auction. In 34 Clemson sales since 1981, 1,582 bulls have been sold for more than $3 million.

Burns uses an electronic monitoring system that tracks each bull’s feed intake during the test. Those numbers are published in the sale catalog for buyers. The data is also used to create feed-conversion standards for different breeds.

More: clemson.edu/extension/livestock/beef/bulltests-efbt

Turfgrass professionals learn the latest management techniques at Clemson’s Turf School. Held annually in February, the school is taught in three locations across the state.

The one-day course is designed to help turfgrass managers overcome the technical challenges of managing grounds, lawns, recreational parks, athletic fields and sod production facilities.

The 2015 program – which offered Pesticide Recertification credits for South Carolina, North Carolina and Georgia – focused on identifying and implementing the best management protocols for water quality, insect pests, diseases, fertilization, and weeds.

Participants also got a first-hand look at Clemson’s research to minimize economic and environmental costs, and meet federal and state regulations.

More: clemson.edu/extension/livestock/beef/bulltests-efbt
4-H youth aim for a bright future

By Rebecca Dalhouse

4-H shooting club competitions strike fear in the heart of every pigeon in earshot; but the real pigeons don't have to worry. The clay ones, that's another story.

Bright orange clay pigeons burst into a thousand pieces a few seconds after a competitor calls out, “Pull!” and everyone cheers and fist bumps. In Orangeburg recently, the shooter was Michaela Hurst (photo).

Youth ages 9-18 participate in 4-H shooting clubs across the state. In 2014, the South Carolina state shotgun team earned a spot in a national competition. Rick Willey, state 4-H shooting sports coordinator, says more kids get involved every year and it is one of the most popular 4-H programs.

“These young people gain a lot of self-confidence and discipline,” Willey said. “Kids who are involved in our program also do well in academics. It teaches them focus and how to set goals, and a lot of them go on to get shooting scholarships in college.”

SC youth win national 4-H championship

By Scott Miller

Six youth from the S.C. 4-H Horse Program won awards at the national 4-H Horse Roundup in Louisville in November.

The team, led by Clemson horse program director Kristine Vernon, competed in hippology (equine science and management) and presentation using visuals, props and multimedia to demonstrate a horse-related topic.

The hippology team won first place overall, and included Kristy Waldrep of Charleston, Hailey Mundell of Chapin, Hannah Steele of Chester and Aubrey Miller of Troy. Waldrep was named reserve champion in the individual contest and Mundell placed 8th in the high individual category. The presentation team finished fifth overall, and included Ashley McCarter of York and Ashlyn Kinney of Greenwood.

State Rep. Gary Clary and the S.C. House of Representatives recognized the winning teams at the statehouse in January.


Science on the Move

By Scott Miller

South Carolina teens are building rockets to launch potential careers in science. They also build cars and design robots.

That’s a typical day at Science on the Move, a mobile education initiative of Clemson Extension’s 4-H program. Science on the Move lets students in kindergarten through high school experience the joys – and opportunities – of STEM: Science, Technology, Engineering and Mathematics.

Science on the Move travels the Palmetto State with two trailers filled with educational materials needed for hands-on training in energy, environmental science, plant and animal science, health, geospatial science, and robotics and engineering.

“This program coaches students to become the prepared workforce that South Carolina needs to interest new businesses and encourage economic growth,” said Katie Rishebarger, coordinator of Clemson’s Science on the Move program.


Pull!

4-H shooting clubs provide extensive education in the safe and responsible handling of firearms. Along with learning how to master the art of shooting a 4-inch clay pigeon out of the sky, kids learn teamwork, discipline and sportsmanship.

Willey emphasized the importance of family involvement. “Our program depends entirely on volunteer leaders and family participation. We could not do it without them,” he said.

Meanwhile, 4-H kids stay focused on the clay pigeons.


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Cover crops can add new life to SC soils

By Jim Melvin

“It’s alive!” In this case, we’re not talking about the Frankenstein monster. We’re talking about soil.

Soil is a living ecosystem swarming with tiny creatures. But in many areas of the world, including parts of South Carolina, the soil may need some TLC.

Enter cover crops, which are plants that keep the soil covered when no cash crop is growing.

In some circles, the cost effectiveness of cover crops is up for debate. But the need for healthier soils is not. Soil degradation and erosion are among soil’s worst enemies, reducing its effectiveness to produce any cash crop.

For the most part, farmers combat this by applying fertilizers containing synthetic nutrients. But when they plant cover crops such as rye, clover, vetch, peas, radish and sorghum, they are using plants to feed the soil microbes. A robust microbe population in turn increases the soil’s ability to grow crops and to store water. Multi-species cover crops add to the biological diversity of soils and reduce the incidences of plant diseases and pests.

Video: http://bit.ly/17k2i4A

Project uses compost to generate free heat for organic farm

By Jim Melvin

Clemson University researchers and educators are finding ways to turn up the heat without turning on a heater. And it’s free - via nature.

Shawn Jadrnicek, farm manager for the University’s Student Organic Farm, is combining food waste from Clemson’s cafeterias and wood mulch from local producers to heat water that is then used to warm the farm’s greenhouses and for a variety of other purposes. The heat is produced by the decomposition of long, thick compost piles, which reach internal temperatures that can be astoundingly hot. In fact, Jadrnicek has to be careful not to build the piles too high. Otherwise, they can literally catch on fire.

“There are bacteria and fungi in there, and as they feed on the compost material, they generate a massive amount of heat,” says Jadrnicek, who has been working jointly with Clemson University recycling organics and biofuels project coordinator C. David Thornton. “Our system usually peaks out at 160 degrees, but it stays over 150 for more than two months. You can extract heat for months and months. We had a pile last year that was still 120 degrees a year after it was built.”

Video: http://bit.ly/1MPFYAz

Student Organic Farm ranked among nation’s best

By Jonathan Veit

Clemson University’s Student Organic Farm ranks 9th out the nation’s top 50 university farms, above Yale University, Duke University, University of New Hampshire and others, according to the journal Best College Reviews.

“We strive for the farm to be a place where we can demonstrate farming systems and strategies that are economically, ecologically and socially sustainable, and where we can spark the imaginations of the next generation of farmers,” said Geoff Zehnder, Clemson Sustainable Agriculture Program director.

The journal noted the interdisciplinary nature of the farm’s teaching and research; widespread student involvement from farm labor to business and marketing; experiential learning opportunities; and focus on producing high value vegetables, small fruit, herbs and cut flowers sold through the Campus Supported Agriculture Market Program.


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Agritourism is growing in more ways than one

By Jim Melvin

The largest industry in South Carolina is agriculture, followed by tourism. So combining the two makes sense — and cents.

The next time you wind your way through a corn maze or enjoy a hayride, keep in mind that you are also supporting the farmers who feed you.

“Agritourism is growing faster than a lot of other segments in the agribusiness arena,” said Buddy Jennings of the Farm Bureau Federation at the SC AgriBiz & Farm Expo in January. “It is about a lot more than pumpkin patches.”

The concept of agritourism — defined as any agriculture-based activity that attracts visitors to farms and ranches — has been around for a long time. But in recent years, its definition has expanded. Corn mazes, hayrides and pumpkin patches have been joined by disc golf, mud runs, paintball, ziplines, pig racing and even human foosball.

With recent legislative funding fueling its momentum, agritourism is taking off throughout South Carolina. “The General Assembly realized agritourism was an opportunity for economic growth,” said Martin Eubanks, S.C. assistant commissioner of agriculture. “Everybody wants to get back on the farm, looking for the farm experience.”

One example of agritourism is Denver Downs Farm in Sandy Springs, which offers more than 30 “farntastic” activities, including a 10-acre corn maze.

“A few generations ago, most everyone in South Carolina had grandparents or relatives who lived on a farm,” said Catherine Garrison Davis, co-owner of Denver Downs Farm. “Times have changed, but agritourism ensures that families can visit a farm and learn about where their food comes from.”

More: http://bit.ly/1z5AB6f

SC farms among nation’s most profitable

By Scott Miller

South Carolina’s farms are outperforming the nation’s historically agriculture-rich communities in the Midwest, a recent study on farming profitability shows.

“South Carolina farming has taken big steps with the help of cutting-edge agricultural research and education,” said Tom Dobbins, director of the Clemson Cooperative Extension Service. “This study recognizes the great work done by our farming community in South Carolina.”

Farm Futures magazine released its list of the nation’s Best Places to Farm based on profitability. Kershaw County came in at No. 17 of the 3,000 U.S. counties evaluated. Saluda County was No. 28 on the list led by Southeastern counties.

“In both of those counties, we’ve been able to add two full-time Extension agents to assist farmers, thanks to support from the General Assembly, and it has paid dividends,” said Brian Callahan, assistant director of Extension Field Operations.

By Scott Miller

Clemson University plans to expand its support of startup and existing agribusinesses in South Carolina, President Jim Clements said at the S.C. Farm Bureau meeting in December.

“South Carolina's growing network of agribusiness companies and suppliers is increasing the demand for top talent. Clemson is responding to that need with new and strengthened degree offerings, continuing education, workshops, online information resources and certification programs,” Clements said.

Additionally, Clemson is expanding its research programs aimed at maximizing farm profits while reducing environmental impact and continues to align its programming with input from the state and business groups like the Farm Bureau.

Clemson created a comprehensive new agribusiness program that blends traditional crop development and production guidance with business, marketing and financial planning expertise. The university intends to extend the reach of that program statewide in the coming year.

“We are hiring more Extension agents and ag research specialists across the state to expand services to South Carolina farmers,” said George Askew, Clemson vice president of Public Service and Agriculture. The new hires will further support precision agriculture research, new plant technology and agribusiness economics programs, among others that are improving farming profitability.

“It’s a wonderful time to be in agriculture in Clemson to see as we travel the state that our programs are working and that our president and trustees are 100% supportive of what we’re doing,” Askew said.


By Scott Miller

More than 150 South Carolina teens learned about diverse career opportunities in agriculture at the S.C. Agribiz & Farm Expo in January.

App developers, coders, attorneys, engineers and other professionals have found fruitful homes in agriculture, which isn’t just for farmers.

“I really want students to leave with a broader perception of what the opportunities are,” said Katie Black, who organized the AgriBiz Youth Day event.

Sponsored by Clemson’s College of Agriculture, Forestry and Life Sciences, the event connected South Carolina high school students to agribusiness professionals, career opportunities and the schooling that can get them there.

Clemson general counsel Beth Crocker, McCall Farms’ Joe Smyth and Ben Skelley of AgSouth Farm Credit – all Clemson alumni – spoke to Youth Day attendees about the diversity of career opportunities available in agriculture.

“I’ve been at Clemson more than 10 years now, and in the last three years it has been amazing to see the students’ increased interest in agriculture,” said Black, student recruitment director.

Researchers woo wild bees to pollinate crops

By Peter Kent

Bees have been dying off, raising concern about the bounty of our food supply. Clemson entomologist Merle Shepard is working to attract native bees to fertilize crops.

“The target will be watermelon production,” Shepard said. “We’re going to add wildflowers to the landscape to help native bees and we will provide ecological system information to the farmers.”

At the end of growing season, the researchers will compare their flower-powered test sites to watermelon fields without added flowers.

“Native bees are the ones that farmers used years ago before the European honeybee came on the scene,” Shepard said. “Oftentimes native bees are foraging when domesticated ones are not.”

Wild pollinators are vital to about 75 percent of the flowering plants in the world. Shepard has identified 100 species in the Charleston area, where he and colleagues are conducting the study at the USDA vegetable lab and the Clemson Coastal Research and Education Center.

“Scientists know a lot more about bees in the West, and Midwest and Northeast than they know in the Southeast; so there’s a real need to find out which ones are here and what they’re doing,” Shepard said.

Clemson precision-ag testing primed for new heights

By Scott Miller

Sensor engineer Joe Mari Maja received Federal Aviation Administration approval to fly an Unmanned Aerial Vehicle (UAV) at Clemson’s Edisto Research & Education Center as part of his effort to “technologize” farming in South Carolina with the use of intelligent “agri-tronics” devices.

The eyes in the sky will monitor crop health and gather data to improve farming efficiency and productivity by letting growers know precisely when and where to water, fertilize or spray crops. The UAVs can analyze a 10-acre field in less than five minutes; work that takes a person days or weeks to complete, Maja said. They also can quickly spot diseased livestock that require attention.

“I believe the applications for this are just enormous. UAV is a game changer in precision agriculture,” he said.

Blue Ridge recovering from historical row cropping; Piedmont lags behind

By Jonathan Veit

A study by Clemson researchers indicates that the Blue Ridge region of South Carolina, North Carolina and Georgia has made great strides towards ecological recovery from late-19th and early-20th century row cropping methods, but not so much in the Piedmont region.

Scientists untangling the complex inner workings of plants

By Jim Melvin

Earth is straining under the needs of 7.3 billion people. How do we feed them all, and keep them cool in summer and warm in winter? How do we maintain livable environments, and avoid a frightening outcome straight out of a science fiction novel? In collaboration with scientists around the world, Clemson researchers are tackling these important issues. And one of the ways they’re doing it is by developing new understandings of the genetic inner workings of our most plentiful food — plants.

“We need raw materials to fuel our economy,” says Alex Feltus, a plant geneticist. “Billions of people need food, fiber, fuel, building materials, pharmaceuticals and other products produced by crops.

“There is nothing new here. What is new is our ability to reorganize plant genes to rapidly develop new crop varieties that yield more or novel products. If we want stable economies in the face of population pressure and climate change, we need to enhance the rapid rollout of new crops that make the things we need.”


Super-computer speeds up plant genetics research

By Jim Melvin

Clemson University’s The Palmetto Cluster super-computer is the 89th fastest computer in the world and among the top five fastest super-computers at public academic institutions in the United States without federally funded centers, which is good news for research scientists like Alex Feltus.

Feltus, associate professor of genetics and biochemistry, uses the computer to find valuable traits such as biomass production and disease resistance hidden deep within the immensely intricate genetic material of plants.

“Only a super-computer can handle the massive numbers of DNA sequences that are generated by new DNA sequencing technology,” says Feltus, a member of a research team that recently received a $1.4 million grant from the National Science Foundation to enhance the capacity of genomic databases to process mind-boggling bundles of data. “There are 55,000 genes in rice alone. We’re trying to understand the genes and their pathways, and how they are combining and interacting. You can’t examine this level of complexity without using a super-computer.”

More: http://bit.ly/1A4Qoeq
Video: https://vimeo.com/120190729
Clemson researchers begin tracking alligators

By Jonathan Veit

Clemson’s S.C. Cooperative Fish and Wildlife Research unit will begin satellite-tracking alligators in the state’s coastal plain to understand their population numbers, movement and ecology.

The satellite tracking is the next phase of a study to provide scientific support for the S.C. Department of Natural Resources as it designs a long-term, adaptive alligator harvesting strategy.

The researchers will use GPS to understand how landscape features affect habitat use and how alligator movement between habitats influences the accuracy of population estimates.

Grafting mixes, matches plant roots and tops

By Peter Kent

A vegetable specialist at the Clemson University Coastal Research and Education Center in Charleston is improving a technique for grafting, which binds disease-resistant roots with robust plant tops.

Richard L. Hassell leads a research team that developed a recently patented method to eliminate regrowth, a major challenge to growing many vegetables.

Watermelons and their kin — melons, squashes and cucumbers — are very susceptible to soil diseases that destroy their vines. Commercial growers around the world plant vast numbers of grafted vegetable plants, making Hassell’s work a major advance, reducing rejection and labor costs.

Regrowth is a result of grafting, the process of splicing soil-disease resistant roots of one plant to the fruit-producing top of another plant. The plants have to be genetically compatible — relatives — for the graft to work. The technique is vital to combat to plant diseases living in the soil.

The rootstock, however, has a powerful drive to grow its own shoots and leaves. If regrowth occurs, the rootstock will nourish its offshoot, leaving the grafted flower part to wither.

The state currently uses a nightlight survey design based on monitoring programs in Florida and Louisiana. But what works for Louisiana and Florida might not be best for counting alligators in South Carolina’s complex and varied alligator habitat, said Abby Lawson, a Clemson Ph.D. candidate who is studying alligator population ecology.

“South Carolina alligator habitat is both diverse and fragmented. It includes marshes, wooded swamps, rivers, lakes, farm ponds, and manmade freshwater impoundments managed for waterfowl. Many of these habitat types are difficult to access for nightlight surveys. Abrupt shifts in habitat type on the landscape also require the use of multiple monitoring methods, even within a small geographic area,” she said.

This is the first time male alligator movement has been tracked in South Carolina and is believed to be the northernmost movement study within the alligator’s home range.

The researchers chose the Santee Delta region because it contains multiple nightlight survey routes already monitored by DNR.
Forestry builds economic partnership with Canada

By Jonathan Veit

South Carolina and Canada engage in an estimated $6.2 billion in bilateral trade annually and approximately 163,000 South Carolina jobs depend on trade and investment with Canada; but the relationship could be stronger.

“One of our missions at Clemson is building the South Carolina economy,” said David Wilkins, Clemson board of trustees chairman and former U.S. ambassador to Canada. “Our two largest trading partners are Germany and Canada; and Clemson is primed to help expand the relationship with Canada.”

To that end, Clemson hosted a conference in January to strengthen forestry industry ties between the two. Featured speakers included Wilkins; Louise Blais, consul general of Canada; Bob Jones, Clemson provost; Gene Kodama, S.C. state forester; and Glenn Mason, Canada’s assistant deputy minister of natural resources.

Wood-based construction materials open new markets

By Jonathan Veit

A new institute aims to change how commercial buildings are constructed in the U.S.

The Wood Utilization + Design Institute (WU+D) will leverage Clemson’s assets in forestry, architecture, and construction science and engineering to design, test and market innovative, sustainable wood-based materials for a commercial construction market dominated by steel and concrete.

The institute also plans to forge new markets for South Carolina’s $17 billion forest-products industry, form partnerships with corporations that need product design consultation and testing, and prepare Clemson students to take leadership roles in designing and marketing innovations in wood-based construction technology.

“South Carolina has the timber, design and manufacturing muscle to produce sustainable wood-based solutions that challenge conventional approaches to commercial building. And Clemson has the resources to help make it happen,” said WU+D director Patricia Layton.

More: http://bit.ly/1qXRPhV

Gene Kodama, South Carolina state forester

“This conference is a major building block to develop a strategic partnership focused on economic development,” Blais said.
Workshop helps homeowners go ‘whole hog’

By Tom Hallman

Before you go whole hog, you’d better know that you are doing it safely.

That’s the idea behind “Backyard Pork Processing and Canning,” a day-long workshop created by Clemson Extension agents to train people who choose to grow and process their own pork at home.

Held on a farm, the program leads participants through the slaughter and butchering during the morning session; a separate afternoon session deals with preparation of meat for the freezer and pressure canning of pork for the pantry.

“We wanted it to be as realistic as possible to the producer’s situation to give the most practical, real-life experience,” said Rhonda Mathews, a Clemson Extension food safety and nutrition agent in Abbeville County who led the food processing portion of the workshop. “It’s tailored to a family with just a an animal or two that they raise for meat.”

Producers can sign up for either of the sessions individually or for both. Greenville County agent Danny Howard leads the morning program, covering ethical slaughter and carcass handling.

A segment on butchering skills is followed by hands-on instruction in pressure canning. At the end, participants take home the fruits of their labor: canned, diced pork and a cooler of meat for the freezer.

“We're seeing a lot of interest from people who want to grow and process their own meat,” Howard said. “More and more people are regaining the skills their parents and grandparents took for granted. We’re trying to see that they get science-based information related to handling live animals, the carcass and the butchered meat so that the food they produce is safe as well as economical.”

Small-scale farmers finding that help is on the way

By Jim Melvin

For small-scale farmers, hard work and long hours come with the territory — and that doesn’t even include their “day jobs,” without which many could not support themselves and their families.

Sacrificing weekends off, vacations and even sleep, small-scale farmers grind away like marathoners running a race without a finish line. And to make matters more difficult, most are in charge of all facets of their operations — production, delivery, sales, marketing. You name it; they do it.

But these farmers are finding that assistance is increasingly available from a support system that is continuing to develop. The “small farmer mini-conference” at the January Agribiz & Farm Expo is just one example of how valuable information is being shared and distributed — not just to farmers, but between them.

“Clemson Public Service and Agriculture has dedicated the Sandhill Research and Education Center as our center for agribusiness and the new and emerging farmers program,” Extension director Tom Dobbins said. “This is a clear indication of the value we are placing on agribusiness throughout South Carolina. It is our goal to develop a model program for our state and region.”

Dave Lamie, Extension specialist for economic development, hosted the event, which was held in a jam-packed conference room at the Florence Civic Center. The standing-room-only gathering sent a clear message that weary farmers want all the help they can get.

“The last cost that farmers keep track of is their time,” said Lamie, who has directed the new and beginning farmers program for the past several years and who will be devoting even more of his time in the leading the emerging and small farmer programs. “What could farmers do if they could get some of that time back? Produce more. Do a better job of marketing. Find better production alternatives. Get some sleep. Take a vacation. Spend more time with their spouse and children — a lot of those things that are precious to us as people.”

More: http://bit.ly/1LmNP6Y and www.clemson.edu/sandhill
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Clemson Extension and FSA help with Farm Bill enrollment

By Scott Miller

Farmers could see big financial gains by updating crop yield records and reallocating base acres as allowed under the 2014 Farm Bill.

“The financial return on your time is going to be very valuable,” S.C. Farm Service Agency executive director Harry Ott said at a Clemson Extension workshop at the S.C. Agribiz & Farm Expo.

The complex Farm Bill includes significant reforms to the federal government’s farm safety net programs; and the decisions farmers make this spring could impact payments received through 2018.

Clemson Extension agents have received training and are ready to help farmers navigate the complicated Farm Bill. Ott said the FSA has partnered with Clemson Extension, which can give farmers projections on which Farm Bill programs would provide the most financial benefit for them.

A farmer himself, Ott said he updated yields with the FSA, increasing his yield data on corn from 65 bushels to 95.

“You need to do yield reallocations. It is a no-brainer,” said Ott, a former S.C. House minority leader who was a featured speaker in Florence.

In addition to updating yields and base acres under the farm bill, farmers also can choose whether to enroll in the Agriculture Risk Coverage (ARC) or Price Loss Coverage (PLC) programs that mitigate losses on farm commodities.

The ARC program provides revenue protection, while PLC protects against drops in commodity market prices. Schwarz said the numbers her company crunched show that, generally, corn and soybeans would benefit more under the ARC program, while wheat, sorghum, rice and peanuts likely would receive greater protection under the PLC program.
Clemson grows agribusiness leaders

AGRIBUSINESS is South Carolina’s largest industry with an economic impact of $41.7 billion annually, accounting for 10.5% of the state’s workforce.

By teaching business and technical skills to current and future agriculture and forestry leaders, Clemson University is expanding the impact of agribusiness on a local, regional and global scale.

TEACHING
Developing tomorrow’s agribusiness leaders today through degree programs in the College of Agriculture, Forestry and Life Sciences, and youth programs through 4-H and FFA.

RESEARCH
Discovering effective production technologies and financial strategies to help farmers improve yields, increase profits, and develop new products and markets.

EXTENSION
Disseminating information and innovation through workshops, site visits, and community partnerships that encourage wise stewardship of natural resources to meet the rising demand for sustainable, locally-grown food products.

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