Accountability Report Transmittal Form

Agency Name: **Public Service Activities – Clemson University**

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Clemson University
Public Service Activities
Budget and Control Board
Accountability Report for 2007-2008

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About the Cover pictures – The images depict three vital aspects of PSA in its service to South Carolinians. In the midst of the worst drought in SC's history, Clemson PSA faculty, staff, and students have been recognized by the EPA for their water resources initiatives. Next, PSA extension workers collaborate with peach farmers to improve the quality and quantity of a vital South Carolina crop. Finally, the Clemson bull testing program at Edisto Research and Education Center in Blackville evaluates the growth rate of bulls consigned primarily by purebred breeders. The program allows producers to compare their breeding and management programs to the rest of the state's purebred industry.

Section I – Executive Summary

I-1 Mission

Mission Statement

Clemson Public Service Activities support the University's emphasis areas by developing and delivering unbiased, science-based information to improve the quality of life for the people of South Carolina in:

- *Agrisystems Productivity and Profitability*
- *Economic and Community Development*
- *Environmental Conservation*
- *Food Safety and Nutrition*
- *Youth Development and Families*

Clemson University was founded in 1889 on Thomas Green Clemson's belief that education could create a better way of life for the people of South Carolina. Clemson University is part of a national system of land-grant universities established by the U.S. Congress to improve the quality of life for the citizens in each state. Clemson University Public Service Activities (PSA) is responsible for research, outreach and regulatory services.

As our state's education, research and information needs have changed, the scope of Clemson's public service has also changed in keeping with our mission. Guided by the strategic initiatives (see page 2), PSA's services are conducted by a statewide network of faculty and staff dedicated to addressing the challenges facing South Carolina's citizens, communities, businesses, and public agencies.

Working in conjunction with other state and federal agencies as well as municipal governments and private industries, our personnel provide needed research, training and information not provided by any other agency. Because of this unique arrangement of talent and expertise, PSA plays a significant leadership role in advancing the competitiveness of agriculture and forestry industries, enhancing the economic potential of rural communities, safeguarding the food supply, preserving natural resources and preparing young people to become productive citizens.

Core Values

Service – *Clemson PSA serves South Carolina's citizens through research, outreach and regulatory activities that enhance the quality of life in our state. We build partnerships with people, communities, other countries, industries and agencies to achieve our mission; we are responsive to their needs and we are proactive in our outreach.*

Discovery – *Clemson PSA conducts research to discover innovative technologies, products and processes that can enhance agribusiness industries, build rural economies and communities, protect the environment and natural resources, improve the nutritional quality and safety of the food supply, and prepare South Carolina's youth to be productive citizens.*

Knowledge Transfer – *Clemson PSA believes that sharing and applying knowledge generated by scientific research is the best way to help South Carolina's citizens make informed decisions about the major issues that affect their lives.*

Respect – *Clemson PSA pledges to provide a work environment that fosters collaboration and respect among our employees and for those we serve, regardless of race, faith, ethnic heritage, gender or sexual orientation. We value the state's cultural diversity and strive to respect and incorporate that diversity in our staffing and services.*

PSA units develop a strategic plan (see page 29) at the beginning of each fiscal year containing objectives and performance measures. Each unit is required to describe its programs and activities, as well as explain the significance and benefits of its existence. The following strategic initiatives drive PSA's planning process:

PSA Guiding Principles

Advance South Carolina's economic and social development while adhering to the principles of environmental conservation.

Enhance South Carolina's international ties through mutually beneficial research and Extension programs.

Focus our program resources on emerging areas of emphasis and potential for excellence while continuing to support traditional program areas of statewide importance.

Hire faculty and staff who sharpen our focus on areas of excellence.

Provide productive workplaces that are conducive to faculty recruitment and to successfully winning external grants.

Provide objective, science-based information that promotes sustainable economic development in South Carolina.

I-2 Major achievements from 2007-08

As we progress into the 2008-09 fiscal year, there is no debate about the tough times facing many South Carolinians and our state government. Indeed, it can be argued that there are few times in recent history that have seemed so daunting. Our state faces rising energy costs, the housing bubble, extreme drought, job losses, and environmental challenges – all in the midst of population growth and development. We strongly believe that there has also never been a more relevant time for the work of Clemson's Public Service Activities (PSA).

PSA research programs, educational programs, and community development efforts directly affect South Carolinians. We recognize that one of the facts about PSA is that it is so much a part of the state's history of service that one can never forget how integrated our services are with all 46 counties; services that are uniquely provided by PSA.

Achievements are presented by PSA unit to include 1) Cooperative Extension, 2) Experiment Stations, 3) Livestock-Poultry Health, 4) Regulatory Services, and 5) PSA Institutes.

COOPERATIVE EXTENSION – www.clemson.edu/extension

Since the national Extension Service was founded in 1914, Clemson Extension Service has served the diverse needs of citizens through technology transfer and training programs. South Carolina's citizens and PSA's stakeholders have direct input into decisions of the Extension system through statewide planning efforts and the needs identification process. Extension partners with other agencies and organizations to best meet the needs of South Carolina's citizens. The State Extension Advisory Committee provides feedback and interface with our diverse clients.

New knowledge was personally delivered through a phenomenal 431,542 contacts made by Extension personnel. Working across all 46 South Carolina counties, more than 242,300 participants attended 12,508 Extension programs.

Major initiatives for 2007-08 include the following:

- 78,000 acres were improved by Extension personnel and participants in a **Coastal Watershed Academy**, saving an estimated $56,000 in management costs. Volunteers and PSA personnel cleaned 30 miles and five access points along the Enoree River, where 28 bags of garbage were removed, along with approximately a ton of large items.

- 350,250 acres were affected by **Extension's Integrated Crop Management programs**.

- Over 76,500 acres were planted with **New Alternative Crops**, and 239 farmers reported increased profits through this planting initiative.

- The **Extension Peanut program** has an economic impact of more than $3 million through increased yield, improved disease management, and more effective nutrients.
    - Increased yield by an estimated 100 pounds per acre through variety selections
    - Increased profitability by educating growers about the most effective disease management practices
    - Increased profitability by demonstrating how certain nutrient additives are unnecessary or even counter-productive

- The **Extension Wheat Variety Challenge** has an economic impact of $2.4 million in 2008
    - Results are the major factor in how quickly new releases are accepted by growers
    - Extension's recommendations outperform the test average by up to eight percent
    - Results are disseminated showing multi-year trends

- **Small cattle herd producers** were able to increase their income by more than $100,000 total because of Extension's program to co-mingle truckloads, selling 1,455 calves in 2007-08.

- Extension continues to work with AmeriCorps to **conduct youth leadership and dropout prevention** in Colleton, Allendale, Dorchester, and Hampton counties. 75 percent of the participating students' grades have improved, according to year-end evaluations. Test scores in math and reading improved as well, with teachers also reporting improved classroom behavior among participants.

- Three hundred and ninety seven people completed training to become certified **Master Gardeners**. These gardeners and Extension personnel contributed 42,111 hours of public service through presentations, newsletters, radio programs, and television appearances.

- To increase efficiency and reach a wider audience, the **Master Wildlifer** course was broadcast over satellite to 18 sites across the state in four 2.5-hour evening sessions, with cost of enrollment kept at only $100. Two hundred and forty one landowners participated and are responsible for more than 124,000 acres. According to course evaluations, the information presented helped them save or earn more than $1 million.

- **Expanded Food and Nutrition Programs (EFNEP)**:
  - Conducted 2,293 programs for 9,083 adults; more than 1,600 volunteer hours contributed for this project. Ninety-eight percent of participants showed improvement in one more nutrition practices; 94 percent showed improvement in one or more food management practices; and 79 percent showed improvement in one or more food safety practices.
  - Conducted 3,437 PSA programs for 45,487 children and youth. More than 17,500 reported using the practices that were taught.
  - Conducted 441 PSA programs for the general public, reaching 7,224 adults on nutrition and food-related diseases.
  - Published more than 13,700 column inches of information on food safety and nutrition in newspapers and other external publications.
  - Provided 1,034 minutes of radio airtime and 801 television minutes on food safety and nutrition.

- **4-H** expanded their services in 2007-08 to include the following:
  - 987 adults were trained who, in turn, trained 17,472 youths in areas such as leadership skills (1,029), workforce preparation (808), and hunting safety (416).
  - 4,279 individuals participated in 1,073 service-learning projects in their communities.
  - 4-H youths gave 175 presentations about their program to other groups and 213 youths improved their communication skills through speaking opportunities.
  - Volunteers contributed 11,482 hours with an estimated value of $206,676.
  - 2,005 youths and 379 adults benefited from 4-H financial management programs, designed to help families cope with financial challenges and stresses.
  - 4-H$_2$O Pontoon Classroom reached 1,650 youths with a science-based water quality and natural resources program. Many of the participants worked in the Enoree River clean-up.
  - 4-H Teen CERT participants received 20-hours of training in immediate first aid, light search and rescue activities, and communicating with professional first responders.
  - 4-H teens developed an animal emergency preparedness plan using GPS/GIS geospatial technology and presented the systems at the national 4-H Agents Association Meeting.

- 1,054 volunteers in the **Family and Community Life** program reached more than 4,800 individuals and their time was worth more than $1.1 million.

EXPERIMENT STATION -- http://www.clemson.edu/agforestryresearch/

Experiment Station researchers are responsible for providing science-based information on major issues facing our state, region, nation, and the world. Clemson researchers have produced more than 100 new varieties of food and fiber crops, as well as 45 patents. Significant strides were made in 2007-08 on peanuts, cotton, tobacco, and switchgrass.

For 2007-08 the Experiment Stations had more than 120 active research projects. Researchers issued 11 disclosures, submitted nine patent applications, and received one patent. In addition, three license agreements were signed, two new cotton and three new soybean varieties were released. Faculty submitted 165 technical contributions for publication.

Major achievements for 2007-08 included:

- Researchers examined the **cultivation of switchgrass** in South Carolina as a potential biofuel crop. Harvests of research-planted switchgrass should reach maximum yield after three years. Preliminary data indicate that switchgrass could become one of the most economical and environmentally friendly crops produced on the Coastal Plain.

- **Fungicide research on peanuts** saves growers $400,000 annually in disease management expenses. Experiment station researchers evaluated new peanut varieties and alternative tools for managing diseases.

- Researchers determined that **cotton farmers could save $1 million** annually if a single specific nematicide is used instead of other seed treatments.

- **Cost savings of 40 percent could be realized for cotton farmers** in reduced rate fertilizer applications. Researchers used GPS/ remote sensing / precision farming techniques to compare traditional fertilizer applications and reduced rate applications. This is critical to growers as the price of fertilizer rises with the price of fuel/processing.

- Experiment station scientists have determined the optimum timing of **cotton insecticide applications** during certain portions of the cotton-blooming period. This will make it possible for cotton growers to increase the effectiveness and reduce costs of protecting crop yields from insect pests.

- Research contributed to farmers being able to decrease the number of **pesticide applications** from 14 to five per season on leafy greens, such as collards. Farmers indicated that they saved money, with larger commercial growers saving about $180 per acre.

- South Carolina was ranked 10th nationally (2005) in watermelon production, at 77 million pounds. Bamberg, Barnwell and Allendale counties are among the top watermelon-producing counties. Clemson scientists found that **Cahaba White vetch is effective in reducing season-long wilt in seedless watermelons**. This information will be useful to growers who are focusing on the seedless varieties. In related work, the Cahaba White vetch is also being investigated as a cover crop for biofuels.

- Researchers and applied economists developed recommendations to fit the specific needs of **shrimp-related tourism** in Myrtle Beach, Charleston, and Beaufort. These included

marketing locally caught shrimp on "shrimp-eating tours" in Myrtle Beach and building a shrimp visitor's center in Beaufort that focuses on the heritage of the local shrimp industry.

- Research findings on **e-commerce in South Carolina** have been incorporated into the SC Fast Trac entrepreneurial training program, and results are also being used as part of the Southern Rural Development Center E-Commerce training program.

- Conservationists across the country are working to **increase the bald eagle population**, and Clemson's research is being used to ensure continued recovery. Researchers have identified an alga, which is present in the bird's food chain, that can cause a fatal disease. They are now working on treatment options.

- Clemson research has been used to show **forest managers** that a mow-and-herbicide treatment offers a way to reduce forest fuel load without using a burning treatment that produces smoke. This has been particularly well received for managers close to urban areas.

- To determine the effects of increasingly common metals, PCB's, and pharmaceuticals in **aquatic ecosystems**, researchers have established site specific water quality criteria for metals. They have also identified behavioral changes in fish exposed to pharmaceuticals and have shared this information with state and federal agencies.

- **Honeybee populations** are increasingly at risk. The Hood Beetle Trap, invented by a Clemson scientist, can reduce the beetle population below the economic threshold and has lessened dependence on pesticides for small hive beetle control. It currently is distributed by Brushy Mountain Bee Farm, Moravian Falls, N. C, with more than 5,600 traps sold as of September 2007.

- The **turfgrass and lawn care industries** continue to grow. Economic sectors of the industry include sod farms, lawn care services, lawn and garden retail stores, and lawn equipment manufacturing. Clemson's research on the genetic engineering of drought- and salinity-resistant turfgrass has produced grass with enhanced drought tolerance. The availability of these new varieties is especially significant for the golf course industry on the coast.

- Clemson scientists have established **best practices utilizing an experimental tobacco topper** that prevents bacterial wilt, an extremely damaging disease to flue-cured tobacco. These practices have been distributed to growers to reduce crop loss.

LIVESTOCK-POULTRY HEALTH -- http://www.clemson.edu/lph/

The Livestock-Poultry Health (LPH) program of Clemson University is composed of three (3) areas of service; the Veterinary Diagnostic Center , Animal Health Programs, and the SC Meat and Poultry Inspection for USDA. This organization has a major role in protecting the quality of life for humans, as well as companion and food animals. Daily functions of LPH include conducting constant surveillance for diseases that affect both man and other animals, providing the diagnostic expertise that allows for treatment and eradication of disease of domestic animals, and inspecting/testing the processing of foods of animal origin. Veterinary diagnostic support for wildlife also is provided by the diagnostic laboratory.

- LPH increased their **federal funding** by 3.7 percent, based on 2007-08 expenditures.

- Dr. Dan Lafontaine was presented the prestigious **American Veterinary Medicine Association (AVMA) Public Service Award**. Dr. Lafontaine serves as Assistant State Veterinarian and Chief of the SC Meat and Poultry Inspection Department.

- The Animal Population Institute at Colorado State University recognized LPH for **realistic disease modeling**. The process, in collaboration with the National Animal Identification System (NAIS), seeks to share data while protecting confidentiality.

- **The FDA awarded LPH the Commissioner's Special Citation** for exceptional leadership and dedication to protecting public health in response to our management of the melamine feed contamination incident that affected the pet food supply.

- To increase the state's effective **response to animal-related disasters**, LPH:

    o Presented 20 sessions in Foreign Animal Disease & Biosecurity Awareness;
    o Collaborated with DHEC to present five courses on Avian Flu Rapid Response;
    o Hosted the Southern Agriculture Animal Disaster Alliance;
    o Assisted SLED with threat and vulnerability assessments pertaining to SC Food & Agriculture Sector infrastructure and the Homeland Security Report; and,
    o Collaborated with the SC Emergency Management Division to update several state plans for emergency preparedness related to animal, agriculture, and the meat supply.

REGULATORY SERVICES -- http://www.clemson.edu/public/regulatory/

Regulatory Services safeguards South Carolina from potential acts of agroterrorism, protects our agricultural community from invasive plant and insect species and plant diseases, and ensures that pesticides are used safely in our homes, schools, and businesses.

- Established **online license renewal** for pest control businesses, pesticide dealers and commercial applicators, increasing efficiency for customers and making the process more cost effective.

- Established an agreement to provide **online pesticide license examinations** beginning in fall 2008. Individuals will be able to take exams at one of eight sites on technical college campuses across the state.

- **Received coveted accreditation by USDA National Organic Program**, which means the Department of Plant Industry's Organic Certification Program is certified for another five years.

- C**onducted 3,179 inspections** monitoring proper pesticide use.

PSA INSTITUTES – http://www.clemson.edu/public/about_us/overview.html#centers

There are six institutes under the PSA umbrella and selected achievements for 2007-08 are presented below in reverse alphabetical order.

- Youth Learning Institute
- Strom Thurmond Institute of Government and Public Affairs
- Institute for Nutraceutical Research
- Institute on Family and Neighborhood Life
- Clemson Institute for Economic and Community Development
- Baruch Institute for Coastal Ecology and Forest Science

YOUTH LEARNING INSTITUTE
http://www.clemson.edu/yli/

The Youth Learning Institute (YLI) is a vital component of Clemson University's youth outreach effort, using the research and knowledge of University faculty and staff to develop programs that target SC youth. More than 21,000 young people participate annually in more than 70 programs held at our leadership centers, ranging from two-week residential programs to one-day in-school training.

Clemson University has been offering experiential education to the youth of South Carolina since 1934. Since that time, Clemson camping has touched the lives of more than 250,000 participants. Initially founded as summer 4-H camps, our mission has expanded to include other young people and adults in year-round programs.

- Received gift of more than $10 million and 350 acres from Cliffs Communities founder Jim Anthony for development of **Teacher Renewal Center**. The goal of the Center is to help the state retain its best teachers.

- US Department of Health and Human Services awarded a grant to YLI and its partners to build capacity to **serve at-risk youth** in Aiken and Edgefield counties.

- YLI and Aiken County Schools established **Camp Long Middle School**, a new alternative education program for boys. The SC Arts Commission awarded Camp Long $3,000 to incorporate arts into the curriculum.

- In partnership with The Cliffs Communities, Inc. YLI established a new summer program for 12-15 year olds. "**Adventure Summer Camp at Pinnacle Falls**" teaches wilderness safety, survival skills, and teamwork to help campers gain self-confidence.

STROM THURMOND INSTITUTE OF GOVERNMENT AND PUBLIC AFFAIRS
http://www.strom.clemson.edu/

The Thurmond Institute conducts applied research and service in public policy areas at the local, regional, state, and national levels. With an established record of collaborative partnerships with academic, governmental, and private sector scholars throughout the world, the Institute also enhances awareness of current public policy issues on the Clemson campus and throughout the state and region through informal and formal educational programs.

- Jeff Allen, Director of the Water Resources Institute, was selected to serve on the state **Shoreline Change Advisory Committee**. The committee brings together leaders and researchers to study the effects of development and erosion on the state's valuable shores.

- Awarded the contract to evaluate the state's 9th grade **laptop initiative** across six pilot test school sites.

- Awarded $70,000 to determine the state of knowledge on **shoreline retreat policies** for coastal South Carolina.

- Secured funding from the General Assembly to create an **economic development partnership** along the I-95 corridor. The majority of funding will go directly to the local community businesses and organizations through their grass root business plans to improve the opportunities in their areas.

- Published a **SC Self-Portrait** through the Self Center for the Future that is a bi-annual survey and trends assessment to better understand South Carolinians' attitudes toward the state's current situation and future outlook.

- Published innovative "**Planning for College: A Comprehensive Guide for SC Families**," a resource available at no cost to citizens across South Carolina (www.strom.clemson.edu/familyguide). The Guide received favorable press across the state both in print and on television.

- Conducted **regional economic impact** analyses for several groups, including:
  o The Citadel
  o SC Association of Non-Profit Organizations (SCANPO)
  o Greenville County Housing Authority
  o Beaufort County

INSTITUTE FOR NUTRACEUTICAL RESEARCH
http://www.clemson.edu/INR/

Nutraceuticals are foods or parts of foods, including dietary supplements, which help prevent or treat diseases such as cancer and heart disease. With the establishment of manufacturing facilities and corporate offices of companies such as GNC/Nutra Manufacturing, Pfizer Capsugel, and Perrigo, South Carolina has become a recognized center for the nutraceutical industry. The INR has been in existence since January 2002 and during this time has established funding through DOD, NIH, USDA, private foundations and industry. A Science Advisory Board is comprised of representatives from twenty-one companies, universities and government agencies.

For 2007-08, INR achievements included:

- Continuation of external funding to **further development of curcumin, muscadine, quercetin and caffeine as natural food additives**, 2007-08 awards of $177,000. This is a portion of the overall award of $1,009,690.

- Drs. Roberts, Smith, and Gangemi submitted a patent application for a **composite polymeric material from renewable resources**.

- Drs. Roberts and Gangemi signed license for injection **blowmolding: biodegradable closures for bottles.**

- The South Carolina Center for Botanical Medicine was formed to promote and nourish collaborations in chronic disease prevention and development of new SC agribusiness. The Center is the formal link between researchers at Clemson and MUSC. A MOU has been submitted for approval. The SC Department of Ag and USDA will be active participants in this Botanical Center.

INSTITUTE ON FAMILY AND NEIGHBORHOOD LIFE
http://www.clemson.edu/ifnl/

The Institute on Family and Neighborhood Life (IFNL) at Clemson University helps to generate, apply and share the research foundation for youth, family, and community development. Work at IFNL starts from the premise that strong communities support strong families and vice versa, and that both are necessary for healthy development of children and youth.

- Garnered external funding to continue development of the **Center for Community Service** in southern Greenville County. More than 10,000 clients have been served since 2006.

- **PSA Marketing recognized with Silver and Bronze "Telly"** awards for documentary on faith-based community development in South Carolina, produced in collaboration with Sisters of Charity Foundation.

- **Increased direct market sales of farmers by 20 percent** through continuing partnership with the Lowcountry Food Bank and 18 non-profit organizations. The Growing Foods Locally Initiative has certified 10 non-profits with ServSafe®, using 755 volunteers and 10 small-scale produce farmers.

- Research Assistant Professor **Doris Cole was named SC's Rural Educator of the Year** by the SC Department of Commerce.

- **The Building Dreams project** was awarded more than $500,000 to continue its service to children of prisoners. More than 400 children have been served, and a site visit team concluded that Building Dreams is one of the most outstanding programs within the federal initiative.

- Through a federal Health and Human Services (HHS) grant, **IFNL has distributed $240,000 to 14 rural faith and community-based organizations** to build their capacity to provide services to children and families. An additional 200 organizations received non-monetary support, such as technical assistance or fund-raising guidance.

CLEMSON INSTITUTE FOR ECONOMIC AND COMMUNITY DEVELOPMENT
http://www.clemson.edu/sandhill/

The mission of the Clemson Institute for Community and Economic Development (CIECD) is to bring the resources of the University and our partners to bear on problems and issues at the local level, and through collaboration with community stakeholders, help them achieve a more livable, prosperous and sustainable future. CIECD has received approximately $928,756.44 in external funding to support key programs.

- **Leadership training** is one of the major initiatives of CIECD that incorporated programs across the state to more than 940 participants in the following programs:
    - Leadership South Carolina (statewide)
    - Palmetto Leadership programs in Chester (adult and youth programs), Beaufort, Marion, Lexington counties County
    - Builders of Tomorrow Workforce development/enhancement in Colleton, Allendale, Dorchester, and Hampton counties
    - SC LEADS program for agriculture, forestry and natural resources
    - Mayor's Institute, (co-sponsored by SC Arts Council and the CU School or Architecture, Arts and the Humanities) through the Design Arts Partnership) State-wide impact.
    - SC Women's Connection (Statewide)
- **Community Development** programs such as Enhancing Broadband Connectivity (Statewide), Deliberative Dialogue (multiple programs presented to more than 600 individuals), Community Planning Charettes and Strategic Planning Sessions in over 30 communities including county-wide strategic planning sessions for Richland County, Lower Richland District, and Horry County.
- **Economic Development** programs

    - Workforce Development Strategies (Allendale, Bamberg, Barnwell, Calhoun, Orangeburg Counties)
    - Report on the economic impact of farming, food processing, and forestry on the South Carolina economy
    - Workforce skills gap analysis in the Upper Savannah region
    - The Innovation Center (IC) funded through a $150,000 USDA Rural Development grant providing assistance to 115 organizations
    - MarketMakerSC-A web-based marketing tool and development of Internet geo-referenced database for South Carolina food supply chain for agricultural and natural-resource (including marine) producers
    - Business Incubator Guide-development of best management practices for business incubators

BARUCH INSTITUTE FOR COASTAL ECOLOGY AND FOREST SCIENCE
http://www.clemson.edu/baruch/

The mission of Clemson University's Belle W. Baruch Institute for Coastal Ecology and Forest Science is to conduct research and education programs focused on the ecology and management of the natural resources of the coastal region of South Carolina for the betterment of the state's citizens.

- To support faculty research efforts, **funding agencies** include US Geological Survey, US Department of Interior, SC Sea Grant, Andrew W. Mellon Foundation, US Fish and Wildlife

Service, USDA - Natural Resources Conservation Service, USDC – NOAA – National Sea Grant, US Fish and Wildlife Foundation, Town of Pawleys Island, SC Department of Natural Resources, The Nature Conservancy, The Donnelley Foundation, The Historic Ricefields Association, and BASF.

- The Institute **received laboratory instrument enhancement funds to purchase a discrete auto-analyzer** (for nutrients) that will enable analysis of all forms of solids (TS, TSS, VS) and some bacteria (*E. coli*, total coliforms, and enterococci) in water samples and some forms of nutrients (inorganic and organic N and P) in plant, soil, and water samples. These analyses are important to our ecological and management research of the natural resources of the coast.

- The Beach Vitex task force won the **2007 Pulling Together Initiative Community Spirit Award** from the National Fish and Wildlife Foundation for its efforts to eradicate beach vitex, which could be virtually eliminated in SC by the end of 2010. The Aquatic Invasive Species Program has research, Extension and cooperative cost-share control/eradication programs for beach vitex, phragmites, Chinese tallow, water hyacinth, alligatorweed, and island apple snails.

- **A new textbook**, *Ecology of Tidal Freshwater Forested Wetlands of the Southeastern United States,* was edited by William H. Conner from the Institute and Thomas W. Doyle and Ken W. Krauss of the USGS National Wetlands Research Center in Lafayette, LA. The new book is the result of several research projects conducted under the auspices of the USGS Global Change Research Program.

I-3 Key strategic goals for present and future years

PSA goal areas complement the University's 10-year goals in the Southern Association of Colleges and Schools (SACS) assessment procedures and in the USDA five-year plan of work. All of the units within PSA have aligned their programming, funding, evaluation, and accountability functions around these five goal areas which are then aligned with Clemson University's academic plan:

Academics, research and service	**Campus life**
Student performance	**Educational resources**
Clemson's national reputation	

The academic plan focuses on eight broad emphasis areas that foster collaboration and promote the integration of teaching, research, and service. It also encourages programs that provide interdisciplinary research and service venues, unique platforms for enhanced scholarship, and increased opportunities for graduate and undergraduate students. These emphasis areas are:

- **Leadership and Entrepreneurship**
- **Information and Communication Technology**
- **Family and Community Living**
- **Advanced Materials**
- **Automotive and Transportation Technology**
- **General Education**
- **Biotechnology and Biomedical Sciences**
- **Sustainable Environment**

PSA units developed an update at year three to the five-year PSA plan. Units identified several "Big Ideas" that will serve as goals for the coming years. This exciting approach will guide all PSA units in their planning endeavors and will ensure future assessments are in line with the strategic goal. Through this process, and normal planning inherent in the assessment system all units will create their goals,

ensure that they align with Clemson University's goals, and put methods in place to assess the goals.

As an example, the Experiment Station **"will serve as a dynamic link between classic bench sciences and traditional agricultural and other plant products through focused hires, facilities improvements, competitive funding, and public-private partnerships."** Researchers, staff, and agents then target their internal objectives for the year with this goal. As a regional example under this large goal, the Pee Dee Research and Education Center (REC) "will foster economic stability and development by conducting applied research and outreach focused on traditional and new plant-based systems appropriate to the Pee Dee region of South Carolina."

Based on the above goals, assessment of the Pee Dee REC, for example, can occur in a thoughtful and comprehensive manner. Objectives for the current year can be evaluated for how well they address stated goals; outcomes are assessed based on quantifiable results, and then reviewed for any adjustment in the goal statements.

I-4 Opportunities and barriers to strategic goals

Opportunities

The following opportunities are future initiatives that align with state goals and PSA focus areas.

- Continued efforts to focus work in five areas of core competency offers opportunities to improve both the quality and cost-efficiency of PSA services.

- Continued emphasis on collaborating with partners in other universities, governmental agencies, nonprofit organizations, and the private sector offers opportunities to leverage investments from state funds and extend the impact of these investments.

- Expanded use of communications technology – such as video conferencing, public radio and TV, and the Internet – offers opportunities to deliver information on PSA research, extension and regulatory programs to more citizens in a cost-effective manner.

Challenges

Every organization that regularly evaluates its performance through internal and external assessments finds areas for potential improvement. Often these challenges may have the potential to become opportunities for the future. PSA is no different, and through its evaluation processes suggests the following challenges to be addressed:

- Current economic concerns need to be addressed to prevent PSA from cutting vital services.

- The fast-changing needs of South Carolina citizens require flexibility to develop and/or adapt programs quickly within resource constraints.

- Rapidly changing technologies offer more options to deliver services, and PSA must be selective in determining the methods that best meet citizens' needs in a cost-effective manner.

I-5 How the accountability report is used to improve organizational performance

The purpose of assessment and accountability is to evaluate performance to make improvements, as all organizations strive to evolve. Assessment helps ensure that annual developments should affect the efficiency, the effectiveness, and/or the reach of an organization, and new initiatives should address a need by a PSA constituency.

PSA believes this report serves the public well in explaining our service to the State and its citizens. Consideration of the goals and initiatives described herein occurs throughout the year in formal and informal settings.

Results from this report are used to further the following:

- **Activity planning** – encouraging units across PSA to review this report initiates collaboration, new research projects, and new service concepts.

- **Personnel planning** – as positions become available through retirements or resignations, new hires can be targeted to areas of greatest impact across the state based on annual performance of a unit.

- **Financial planning** – use of annual assessment correlates funding with results so that funds are distributed to areas of greatest potential statewide impact.

Section II – Organizational Profile

II-1 Your Organization's main products and services and the primary methods by which these are delivered

PSA is a service organization that, at its very core, strives to improve the quality of life for South Carolinians by providing them with objective, practical and timely knowledge developed from basic and applied research conducted at Clemson University. Our primary clients are the citizens of South Carolina who rely on this knowledge to manage and improve their farms, businesses, and organizations.

PSA utilizes the following primary units to connect with the public:

- **Clemson Experiment Station**
- **Cooperative Extension Service**
- **Regulatory Services**
- **Livestock-Poultry Health Programs**
- **The Institutes of PSA:**
  - Baruch Institute for Coastal Ecology and Forest Science
  - Clemson Institute for Economic and Community Development (CIECD)
  - Institute for Nutraceutical Research
  - Institute on Family and Neighborhood Life
  - Strom Thurmond Institute of Government & Public Affairs
  - Youth Learning Institute

PSA units actively strive to solicit ideas and issues from SC citizens. Through websites, public forums, advisory committees, and thousands of programs, PSA personnel are active across South Carolina *for* South Carolina. Faculty and specialists in these units are active on state boards, commissions, task forces and other committees that can benefit from researchers' expertise.

PSA is fully committed to strengthening its services through technology and greater utilization of its staff in all of the above units. Each unit develops programs, training and educational materials for citizens and constituent groups.

II-2 Key customers segments and their key requirements/expectations

PSA's customers segments include, but are not limited to the following:
- **Citizens of South Carolina**
- **Agricultural producers and growers**
- **State, local, and county agencies**
- **Communities**
- **Local and county governments**
- **Pesticide and fertilizer sellers and users**
- **Practicing veterinarians**

PSA programs are accessible to all citizens. The mission and goals of the organization lend themselves to people who are associated with agriculture, agricultural and forest products, business and industry,

landowners and natural resources managers, families and youth, limited resource families and community leaders.

In order to continually assess our own performance and ensure we meet the expectations of our customers, surveys and follow-up calls to participants are part of our regular processes. Customer comments are considered vital to PSA success, and surveys note the following as important expectations:
- **Accurate and practical information**
- **Timely programs based on important public issues**
- **Ethical approaches with clients**
- **Thoughtful and efficient use of financial resources**
- **Educational opportunities for all ages**
- **Excellent customer service**
- **Accountability**

II-3 Key stakeholders (other than customers)

PSA's key stakeholders include, but are not limited to the following:
- **Citizens of South Carolina**
- **Federal, state, and local governments**
- **Federal, state, local, and private granting agencies**
- **PSA employees**
- **PSA suppliers**
- **Private donors**
- **Commodity boards and associations**
- **Agricultural community, to include industry and related associations**
- **Advisory boards**

II-4 Key suppliers and partners

PSA's key suppliers and partners include, but are not limited to the following:
- **Federal, state, local, and private granting agencies**
- **Federal, state, and local governments (direct funding allocations/support for infrastructure)**
- **Private donors**
- **Strategic partners with federal, state, and local agencies and the agricultural industry**
- **Vendors maintained in the Clemson University accounting information system**

II-5 Operation Locations

Although Public Service Activities continues to reorganize and consolidate its services to better serve our citizens, we are still able to serve every county in the state, through Extension offices, which are provided by the respective county government through a cooperative agreement. Research activities are primarily carried out at the Clemson University campus but much is done at locations throughout the state. These Research and Education Centers (RECs) are located in areas where the soil conditions and climates can best be used to solve those specific problems faced by our stakeholders in the surrounding area. Below is a list of the sites where much of this activity takes place:

Aiken County	Long Leadership Center
Barnwell County	Edisto Research and Education Center
Charleston County	Coastal Research and Education Center
	Restoration Institute
Clarendon County	R.M. Cooper Leadership Center

|	
Florence County	Pee Dee Research and Education Center
Georgetown County	Baruch Institute of Coastal Ecology and Forest Science
Pickens County	Clemson Experimental Forest & Botanical Garden
	T. Ed Garrison Livestock Arena
	Youth Learning Institute
Richland County	Sandhill Research and Education Center
	Clemson Institute for Community and Economic Development
	Livestock-Poultry Health
York County	Matthews Environmental Center
Dominica, West Indies	Archbold Tropical Research and Education Center
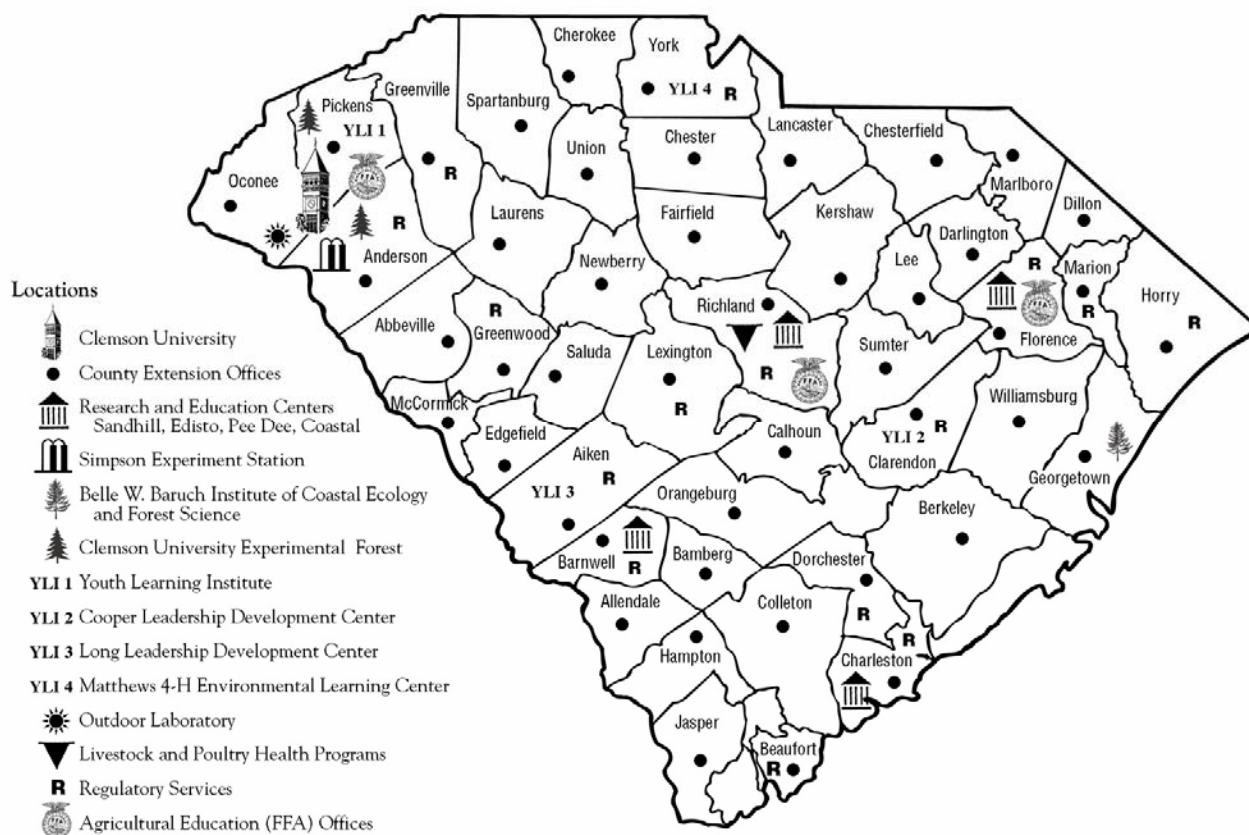
Figure II-1

II-6 Number of Employees

As of July 1, 2008, PSA had 884 employees in 711.21 FTE's. There are 73 positions funded solely from external funds.

Type	Headcount	FTE
Classified	476	395
Unclassified	408	316
Total	**884**	**711**

II-7 Regulatory environment under which your organization operates

PSA operates under federal and state mandates. Most mandates are listed below, with links to websites that better explain the full extent of what is expected of PSA. The federal mandates require extensive reporting to comply with federal funding and compliance regulations. Although not listed below, PSA is also subject to the University's academic reporting requirements. For instance, PSA is required to meet Southern Association of Colleges and Schools (SACS) accreditation requirements as well as specific requirements for research.

Mandates

USDA Cooperative State Research, Education and Extension Service http://www.csrees.usda.gov/

Morrill Act 1862 http://www.csrees.usda.gov/about/offices/legis/morrill.html
> *Provided,* That the moneys so invested or loaned shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section 5 of this Act), and the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this Act, to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes on the several pursuits and professions in life.

Hatch Act of 1887 http://www.csrees.usda.gov/about/offices/legis/pdfs/hatch.pdf
> The Hatch Act of 1887 authorized federal-grant funds for direct payment to each state that would establish an agricultural experiment station in connection with the land-grant college established under the provisions of the Morrill Act of 1862, an of all supplementary acts.

Smith-Lever Act 1914 http://www.csrees.usda.gov/about/offices/legis/pdfs/smithlev.pdf
> SEC. 1.[1] In order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture,[2] home economics, and rural energ**y**,[3] and to encourage the application of the same, there may be continued or inaugurated programs in connection with the college or colleges in each state.

Legislative Authorization for Clemson Public Service Activities

Livestock-Poultry Health Programs: Animal Health and Diagnostic Laboratory:
> Provides statewide surveillance for diseases that affect both man and animals. Enforces state and federal animal health laws and regulations. Protects animal and public health through eradication and control of endemic, foreign, and emerging diseases. Provides veterinary diagnostic laboratory facilities and diagnostic expertise to assists veterinarians, animal industries, and animal owners in diagnosing livestock and poultry diseases of economic impact. The laboratory provides diagnostic assistance for diseases of companion animals and wildlife. Coordinates the statewide animal emergency response planning to protect animal health, public health, and food safety in the event of major disasters, whether natural or manmade. Sections 47-4-10 et seq. of the SC Code of Laws authorizes Clemson-PSA to perform these duties as assigned by law.

Regulatory and Public Service Programs: Plant Industry (DPI):
> DPI delivers statewide programs to ensure the quality of fertilizer and lime through registration, inspection, and analysis; to provide certification programs for the nursery, organic, and seed industries; to prevent and control plant and honeybee pests; to deliver quality assurance and identity preserved programs for value added planting stock; to approve the release of genetically modified organisms in the state; to enforce the imported red fire ant quarantine; to carry out the boll weevil eradication program; and to deliver homeland security programs related to plant agriculture with the mission of

prevention, mitigation, and emergency response. The following sections/chapters of the SC Code of Laws authorize DPI to carry out the above listed regulatory functions: 46-7, 46-9, 46-10, 46-21, 46-23, 46-25, 46-26, 46-33, 46-35, 46-37.

Regulatory and Public Service Programs: Pesticide Regulation (DPR)

DPR carries out state and federal mandated programs of pesticide regulation to ensure safe and legal use of pesticides in the state through product registration, licensing of dealers and applicators, and conducting misuse investigations. Related programs include pesticide container recycling, groundwater sampling and analysis, Integrated Pest Management in Schools, Federal Worker Protection Standard and Endangered Species programs. Legal authority for these programs is derived from the SC Code of Laws Section 46, Chapters 1, 7, 9 and 13 as well as the Federal Insecticide, Fungicide, & Rodenticide Act, the Worker Protection Standard Regulations and the Endangered Species Act.

Regulatory and Public Service Programs: Agricultural Service Laboratory (ASL) and Plant Problem Clinic (PPC):

ASL provides unbiased, scientifically sound information and analytical testing of soil, plant tissue, forage, animal waste, irrigation water and compost samples to guide proper nutrient and resource management. PPC analyses and reports plant pest identification to growers, homeowners and other interested persons to determine appropriate control measures. Authority to provide these services is derived from Section 46-7 of the South Carolina Code of Laws.

Regulatory and Public Service Programs: Agricultural Biosecurity:

Regulatory and Public Service Programs employees coordinate statewide surveillance for naturally occurring and introduced pests and diseases of plants under Homeland Security Presidential Directives 8, 9, and 10. In addition, educational programs are developed and implemented for agricultural chemical security and all-hazards disaster preparedness, prevention, mitigation and response. Section 46-9 of the South Carolina Code of Laws authorizes RPSP to carry out these activities.

Agricultural Biosecurity

Coordinates statewide surveillance for naturally occurring and introduced diseases and pests of agricultural plants and animals under Homeland Security Presidential Directives 8, 9, and 10. In addition, educational programs are developed and implemented for disaster preparedness, prevention, and mitigation for livestock and other animals, whether those disasters are natural or manmade. Sections 46-7-30 et seq. of the SC Code of Laws authorizes Clemson-PSA to conduct agricultural research and to carry out extension work as assigned by law.

II-8 Key strategic challenges

Please see Section I.4 on page 13 for current challenges.

II-9 Performance improvement systems(s)

Public Service Activities operates under an umbrella of processes designed to improve performance.

Employee Performance: Primary among these processes is the University's Employee Performance Management System (EPMS), which reviews the personal performance of classified employees. Similar to this process is the Faculty Activity System which allows the faculty to report their plans for the coming academic period and post any accomplishments or measures of their activities. This information is used for promotion and tenure.

Unit Performance: A new evaluation system was pilot tested in 2006-07 called the PSA Unit Assessment and Quarterly Performance Report. This new report requires each unit to complete three sections: Unit Relevance, Planning and Results, and Accomplishments. As part of this process, each unit must explain their contributions to PSA and to the state of South Carolina. They also must list their unit's activities/programs and justify why those activities/programs exist, why they should be funded, and what benefit those activities/programs have to PSA's mission and to the state of South Carolina. It also requires each unit to state specific objectives
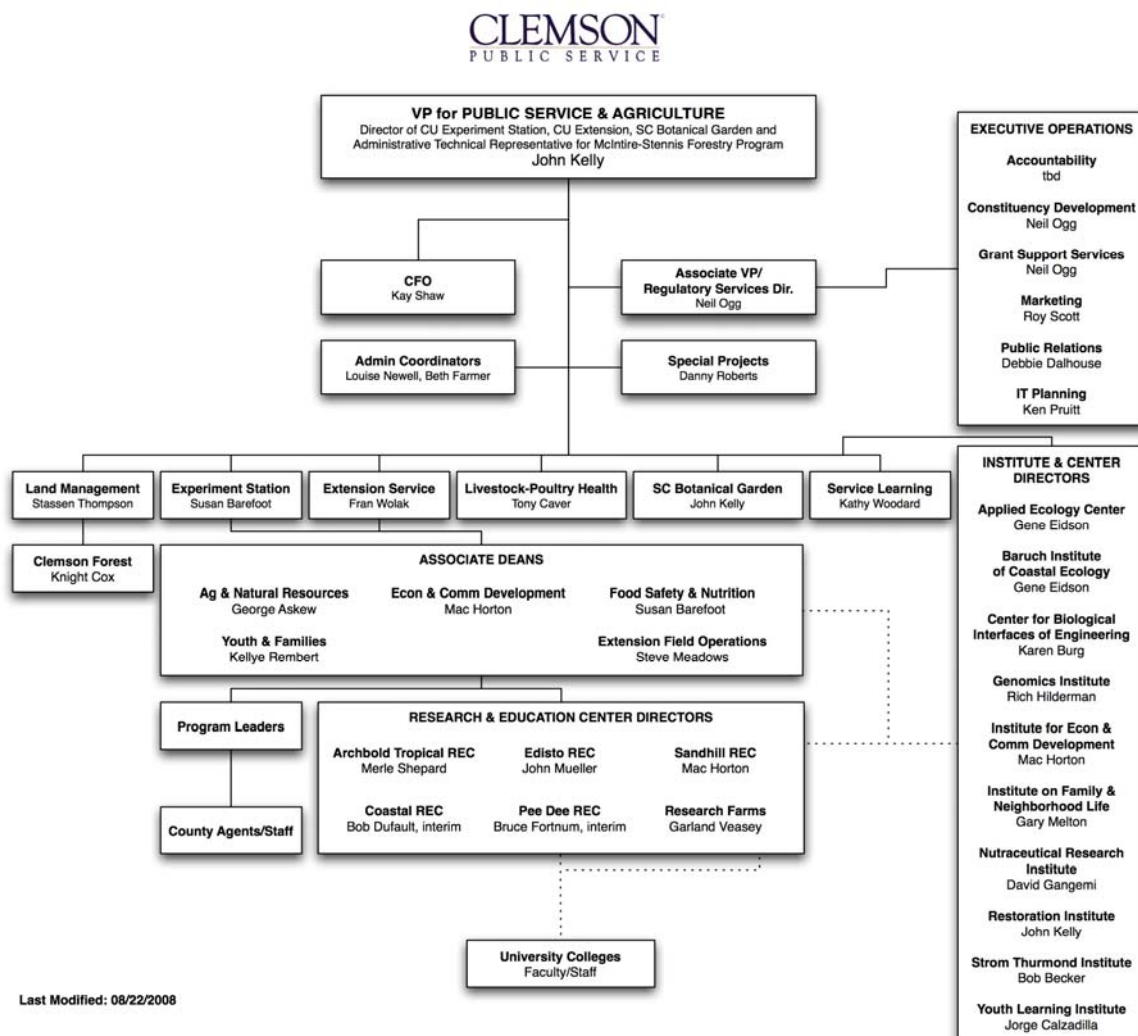
for the coming year and give a progress report when they meet those objectives. Each quarter the units are required to submit progress on key performance measures related to their program and the significant accomplishments their unit has had during the quarter.

Agency Performance: This year the new WEAVEonline® university-wide assessment database was used by individual units. Weave is: **W**rite expected outcomes/objectives, **E**stablish criteria for success, **A**ssess performance against criteria, **V**iew assessment results, and **E**ffect improvement through action. Information becomes a part of the strategic planning stage for PSA through assessment completion and review by unit heads and other administrators.

PSA also uses the Clemson University Management Information System (CUMIS). CUMIS, historically, was developed for assessment reporting to the U.S. Department of Agriculture. CUMIS is a computer-based, on-line system developed for the collection and reporting of data for the Clemson University Cooperative Extension Service. CUMIS is in place to track and evaluate detailed progress made in Extension programs by providing information relative to time spent toward programs, programs conducted, number completing programs, knowledge gain and adoption of practice as a result of participation.

University Performance: Clemson University is assessed by multiple constituencies. The University is subject to accreditation reviews for both individual disciplines and the University as a whole. In addition, students, alumni and other external partners demonstrate their response to institutional performance through alumni surveys, student focus groups, and donations.

II-10 Organizational Structure

CLEMSON
PUBLIC SERVICE

VP for PUBLIC SERVICE & AGRICULTURE
Director of CU Experiment Station, CU Extension, SC Botanical Garden and
Administrative Technical Representative for McIntire-Stennis Forestry Program
John Kelly

EXECUTIVE OPERATIONS

Accountability
tbd

Constituency Development
Neil Ogg

Grant Support Services
Neil Ogg

Marketing
Roy Scott

Public Relations
Debbie Dalhouse

IT Planning
Ken Pruitt

CFO
Kay Shaw

**Associate VP/
Regulatory Services Dir.**
Neil Ogg

Admin Coordinators
Louise Newell, Beth Farmer

Special Projects
Danny Roberts

| **Land Management** Stassen Thompson | **Experiment Station** Susan Barefoot | **Extension Service** Fran Wolak | **Livestock-Poultry Health** Tony Caver | **SC Botanical Garden** John Kelly | **Service Learning** Kathy Woodard |

Clemson Forest
Knight Cox

ASSOCIATE DEANS

Ag & Natural Resources
George Askew

Econ & Comm Development
Mac Horton

Food Safety & Nutrition
Susan Barefoot

Youth & Families
Kellye Rembert

Extension Field Operations
Steve Meadows

Program Leaders

RESEARCH & EDUCATION CENTER DIRECTORS

Archbold Tropical REC
Merle Shepard

Edisto REC
John Mueller

Sandhill REC
Mac Horton

Coastal REC
Bob Dufault, interim

Pee Dee REC
Bruce Fortnum, interim

Research Farms
Garland Veasey

County Agents/Staff

University Colleges
Faculty/Staff

**INSTITUTE & CENTER
DIRECTORS**

Applied Ecology Center
Gene Eidson

**Baruch Institute
of Coastal Ecology**
Gene Eidson

**Center for Biological
Interfaces of Engineering**
Karen Burg

Genomics Institute
Rich Hilderman

**Institute for Econ &
Comm Development**
Mac Horton

**Institute on Family &
Neighborhood Life**
Gary Melton

**Nutraceutical Research
Institute**
David Gangemi

Restoration Institute
John Kelly

Strom Thurmond Institute
Bob Becker

Youth Learning Institute
Jorge Calzadilla

Last Modified: 08/22/2008

II-11 Expenditure/Appropriations Chart

Base Budget Expenditures and Appropriations

Major Budget Categories	FY 06-07 Actual Expenditures		FY 07-08 Actual Expenditures		FY 08-09 Appropriations Act	
	Total Funds	General Funds	Total Funds	General Funds	Total Funds	General Funds
Personal Service	$ 39,912,833	$ 26,982,243	$ 44,272,492	$ 28,194,359	$ 5,779,874	$ 35,944,945
Other Operating	$ 24,586,480	$ 9,592,669	$ 33,703,606	$ 14,839,297	$ 6,424,786	$ 4,387,673
Special Items	$ 134,974	$ 134,974	$ 134,974	$ 134,974	$ 134,974	$ 134,974
Permanent Improvements						
Case Services						
Distributions to Subdivisions	$ (235,722)	$ (235,722)	$ (243,123)	$ (243,123)	$ (237,383)	$ (237,383)
Fringe Benefits	$ 11,376,849	$ 8,200,980	$ 13,049,045	$ 8,958,403	$ 14,162,025	$ 10,428,852
Non-recurring						
Total	**$ 75,775,414**	**$ 44,675,144**	**$ 90,916,994**	**$ 51,883,910**	**$ 76,264,276**	**$ 50,659,061**

Other Expenditures

Sources of Funds	FY 06-07 Actual Expenditures	FY 07-08 Actual Expenditures
Supplemental Bills		$ 3,900,000
Capital Reserve Funds		
Bonds		

$3.8 million transferred to be spent in capital projects fund

II-12 Major Program Areas Chart

Major Program Areas

Program Number and Title	Major Program Area Purpose (Brief)	FY 06-07 Budget Expenditures		FY 07-08 Budget Expenditures		Key Cross References for Financial Results*
I	Agricultural Research (Experiment Station)	**State:** 16,450,254 **Federal:** 3,751,166 **Other:** 5,045,298 **Total:** 25,246,718		**State:** 23,489,849 **Federal:** 5,038,739 **Other:** 6,151,363 **Total:** 34,679,951		7.2
		% of Total Budget:	33%	**% of Total Budget:**	38%	
II	Cooperative Extension	**State:** 22,932,485 **Federal:** 6,294,449 **Other:** 9,372,539 **Total:** 38,599,473		**State:** 22,780,559 **Federal:** 7,116,697 **Other:** 13,735,591 **Total:** 43,632,847		7.3
		% of Total Budget:	51%	**% of Total Budget:**	48%	
III	Livestock-Poultry Health	**State:** 3,247,428 **Federal:** 2,378,089 **Other:** 566,840 **Total:** 6,192,357		**State:** 3,535,669 **Federal:** 2,466,017 **Other:** 556,434 **Total:** 6,558,120		7.4
		% of Total Budget:	8%	**% of Total Budget:**	7%	
IV	Regulatory Services	**State:** 1,849,515 **Federal:** 961,533 **Other:** 2,730,354 **Total:** 5,541,402		**State:** 1,868,313 **Federal:** 940,994 **Other:** 3,027,250 **Total:** 5,836,557		7.5
		% of Total Budget:	8%	**% of Total Budget:**	6%	
V	State Energy	**State:** 87,530 **Federal:** **Other:** **Total:** 87,530		**State:** 92,159 **Federal:** **Other:** **Total:** 92,159		n/a
		% of Total Budget:	0%	**% of Total Budget:**	0%	
VI	BioEngineering	**State:** 107,934 **Federal:** **Other:** **Total:** 107,934		**State:** 117,360 **Federal:** **Other:** **Total:** 117,360		n/a
		% of Total Budget:	0%	**% of Total Budget:**	0%	

Below: List any programs not included above and show the remainder of expenditures by source of funds.

Section III – Elements of Malcolm Baldrige Award Criteria

III-1 Leadership

Clemson University is committed to achieving the goals first set forth by its founder, Thomas Green Clemson, who asked for an institution dedicated to the children of South Carolina; a place dedicated to the laying the foundation for the future of the state, driving change, and leading the way for generations.

The underlying philosophy of Public Service Activities has and will always be assisting the people of South Carolina, primarily with agricultural issues, and but also with any issue under our purview. As Clemson requested, our leadership is built on our relationship with our state's citizenry. Under the experienced leadership of Vice President John Kelly, our organization is focused to provide research and outreach in PSA's five goal areas.

♦ *1. How do senior leaders set, deploy and ensure two-way communication?*

> Vice President John Kelly has established a reputation for encouraging open communication within and across PSA units. The PSA Cabinet is only one formal communication mechanism, meeting at least once a month to share initiatives and results of projects. The Cabinet is responsible for implementing programs, initiatives and activities aligned with the PSA goal areas. The Cabinet consists of the following key leaders:

> - **VP for PSA**
> - **Associate VP for PSA**
> - **Directors of Experiment Stations**
> - **Directors of Institutes**
> - **Chief Operating Officer, Experiment Station**
> - **Chief Operating Officer, Extension Service**
> - **Director of Livestock-Poultry Health**
> - **Director of Public Relations, PSA**
> - **Senior Extension Agent, CUCES**
> - **Associate Deans**
> - **Director of Information Technology**
> - **Regional Directors**
> - **Assistants to VP for PSA**
> - **PSA Chief Financial Officer**

> PSA faculty and staff are encouraged to share their opinions and interests with the senior leadership through formal meetings held across the state at Experiment Stations, or through informal mechanisms. Senior leaders regularly travel around the state, participating in meetings with PSA stakeholders (see page 15), faculty and staff to elicit ideas for improving performance.

♦ *2. How do senior leaders establish and promote a focus on customers and other stakeholders?*

> PSA leaders serve on multiple state and regional committees and organizations that are addressing the needs of the state's citizens. In addition, faculty and staff also participate across multiple arenas to gather information on current issue and concerns. For example, the severe drought across the upstate counties has been a concern that PSA, through the SC Water Resources Center, has addressed through public forums, presentations, newspaper articles, and newsletters, offering suggestions to citizens and local governments on managing a very limited water supply.

♦ *3. How does the organization address the current and potential impact on the public of its products, programs, services, facilities and operations, including associated risks?*

Through annual operational planning, PSA follows a simple strategic project management philosophy.

1. **Consensus building** and broad-based public relations activities precede the introduction of new programs in the state. Internally, initiatives must align with the stated goals of the unit and must have measurable outcomes.
2. **Peer review** of research is conducted internally, externally, and at the federal level. Research must meet stringent requirements when involving human and animal subjects or recombinant DNA.
3. **Feedback loops** are vital to PSA. Its advisory system, a close working relationship with appropriate leaders at the local, state and federal level, provides feedback on the impact of programs.
4. **Satisfaction surveys** are conducted regularly and are detailed in Category 3-Customer Focus. These surveys along with more informal information-gathering techniques provide a continual source of feedback. This feedback is used to address the current and potential impact of PSA activities on the public.

♦ *4. How do senior leaders maintain fiscal, legal, and regulatory accountability?*

As a part of Clemson University, PSA leadership relies on the various offices within the University and within PSA to make sure all aspects of the organization are in compliance. The organization is well equipped to monitor itself to maintain fiscal, legal, and regulatory requirements. Periodically, the University's Internal Auditing Office undertakes spot audits of areas within our organization. Finally, initiatives across the state are undertaken with appropriate approvals at the local level, such as city governments or school districts. The findings are submitted to the Vice President of PSA for review and action.

♦ *5. What key performance measures do senior leaders regularly review to inform them on needed action?*

PSA may be unique in the breadth and depth of services offered in multiple locations across the state. An organization this large has many levels, with each level having very specific responsibilities, but also a level of independence in setting expectations. However, there measures that are considered key to the overall "health" of the organization. By unit, they include the following:

- Clemson Extension Service
    - Number of client interactions
    - Programs offered, participation and completion levels
    - Acres of SC land affected by programs
    - Volunteer hours and types of contributions in programs
    - Customer service as measured through satisfaction surveys and feedback
- Clemson Experiment Stations
    - Number of proposals processed
    - Amount of grants funded
    - Number of disclosures (official announcement of potential invention)
    - Number of patent applications and licenses awarded
    - Number of technical papers and contributions published

- Livestock-Poultry Health
  - Disease-free status
  - Presentations and publications related to animal disaster prevention
  - Premises registered with The National Animal Identification Service (NAIS)
- Regulatory Services
  - Invasive species survey and mitigation
  - Number of plant nursery inspections and compliance
  - Pesticide container recycling and safety management
  - Emergency preparation and response training readiness
  - Number of samples analyzed by type
  - Pesticide inspections for safe use
  - Structural pest inspections and compliance
- Institutes
  - Number of proposals processed
  - Number of public presentations
  - Number of publications, both research and policy oriented
  - Number of regional, state, and national committees served

♦ *6. How do senior leaders use organizational performance review findings and employee feedback to improve their own leadership effectiveness and the effectiveness of management throughout the organization, including the head of the organization and the governance board? How do their personal actions reflect a commitment to the organizational values?*

An ongoing review of key performance criteria and employee feedback is used to improve leadership and management effectiveness. In several areas, reverse reviews are conducted by employees at the unit level to rate and provide feedback to leadership. The following is a list an example of the rating questions:

1. What am I now doing that helps or supports your job performance?
2. What would you like me to consider doing that I am not doing now?
3. What would you like me to consider <u>not</u> doing that I am doing now?
4. Is there anything we can implement that would make your life easier and/or improve your performance?
5. Is there anything in our policy or procedures that you would like to have considered for change that might help or improve your performance?

Faculty and staff have always exercised their privilege to have an open dialogue with the administration. The most powerful use of the policy has been their collective strength through the Faculty and Staff Senate organizations. These organizations represent their respective area in all concerns ranging from working conditions to compensation. Through their elected representatives, these organizations report their concerns and comments to the President on a regular basis.

♦ *7. How do senior leaders promote and personally participate in succession planning and the development of future organizational leaders?*

- **Professional development** opportunities are promoted and advocated through announcements in newsletters, emails, and directors' meetings. Senior leadership strongly

recommends including professional development goals in the annual employee evaluation process.
- **Mentoring** is also important and occurs through research partnerships between senior and junior faculty.
- A **succession plan** was developed in 2005 and updated in 2007.

♦ *8. How do senior leaders create an environment for performance improvement, accomplishment of strategic objectives and innovation?*

Senior leaders encourage employees to pursue lifelong learning and to achieve their potential through individual performance goals and evaluations, providing each employee with an opportunity to discuss their own goals and concerns.

Innovation is essential to the growth and success of PSA, and many employees come to work with us because the environment facilitates innovative thought. New initiatives work their way up from individuals to their departments, to the PSA unit, and opportunities for researchers to earn internal innovation funds often precede full proposals to external agencies.

Several publications highlighting achievements from the various faculty and staff from all areas within PSA are published on a regular basis. These publications go to great lengths to highlight the innovative, ground-breaking and unique contributions of our employees. Our web sites, hosted by the department, unit or organization, identify accomplishments by our employees. A number of awards for various achievements are made each year. These examples and others too numerous to mention set the environment for improved performance and the recognition for that performance.

♦ *9. How do senior leaders create an environment for organizational and workforce learning?*

Within PSA, there are multiple opportunities for professional and personal development that allow employees to learn about and participate in PSA initiatives. PSA personnel regularly volunteer with other units; for example, the Botanical Garden relies on volunteers to clear areas within the forest as well as to coordinate and work at the semi-annual plant sales. Internal and external opportunities for professional development are encouraged, pending available funding. Senior leaders encourage this activity through actively marketing these opportunities and enabling staff to take advantage of them with time flexibility.

♦ *10. How do senior leaders communicate with, engage, empower, and motivate the entire workforce throughout the organization? How do senior leaders take an active role in reward and recognition processes that reinforce high performance throughout the organization?*

The office of the Vice President for PSA and his leadership staff (see page 18) use the following as only a few of the mechanisms for establishing a collaborative, empowered, and motivated workforce:

- **Web page** – the PSA web page staff regularly updates the PSA home page (http://www.clemson.edu/public/) with stories that highlight the activities of personnel from across the state.
- *Impacts* – the PSA magazine is published quarterly and contains communication from the senior leaders as well as informative articles that highlight accomplishments in each of PSA's units.

For example, the Summer 2008 edition can be found at
http://www.clemson.edu/public/impacts/08summer/

- **Radio** – The "Your Day" program has aired on public radio for eight years and broadcasts interviews with local, state, and national experts on a variety of issues affecting South Carolinians.
- **PSA Conference** – The Vice President's office hosts an annual conference that informs PSA faculty and staff about issues that have been noted as important, as well as concerns that employees have voiced.

Due to budgetary constraints PSA Directors and supervisors currently have limited flexibility in rewarding employees with merit salary increases. When funds are available, employees may be awarded a salary increase based on merit without consideration of any cost-of-living increase mandatory for classified employees. Such requests for merit increases must include written justification and be approved by the Vice President.

♦ *11. How do senior leaders actively support and strengthen the communities in which your organization operates? Include how senior leaders and employees contribute to improving these communities, determine areas of emphasis for organizational involvement and support, and how senior leaders, the workforce, faculty and staff and the organization contributes to improving these communities.*

PSA's mission is to assist South Carolinians in making informed decisions that will improve their lives, their communities, and their state. PSA accomplishes this by developing new knowledge through research and then applying that knowledge in communities where it has a positive impact. In addition, community support is also demonstrated through participation on or interaction with local, regional, and state boards. A limited set of examples includes:

- State Enterprise Architecture Oversight Committee
- State Extension Advisory Committee
- Education and Economic Development Act
- SC Association of Counties
- SC Farm Bureau Federation
- Shoreline Policies Advisory Committee
- Ocean Planning Task Force
- SC Department of Education Task Force on Revenue and Funding
- United Way of the Midlands Early Childhood Council
- Southern Association of Agricultural Scientists
- SC Forestry Association
- SC Biotechnology Alliance
- SC Commodity Boards (as designated for various crops and livestock)
- Palmetto Partners

As mentioned earlier, senior leaders value the service contributions made by their faculty and staff because it is considered essential to understanding our primary customer – the South Carolina citizen.

III-2 Strategic Planning

Strategic planning within PSA is an ongoing process that includes all levels of the organization. It starts at the top with PSA leadership and is communicated throughout the organization via a number of processes.

♦ *1. What is your Strategic Planning process, including KEY participants…?*

PSA is committed to taking a leadership role in addressing challenges and realizing opportunities in South Carolina. Points in the process include:
- **Establishment** of Clemson University's goals and priorities for the year are created through senior leadership retreats and administrative council meetings
- **Review** of University goals and priorities with PSA leadership to determine where the strengths of PSA, in alignment with its mission, can best set public service goals
- **Development** of unit and institute objectives into measurable statements
- **Input** from all PSA employees and consideration of previous stakeholder input when composing the plan. The administration then charts the proposed course.
- **Feedback** is provided by employees to their directors, and to the PSA Cabinet. If appropriate, the plan is refined.

♦ *2. How do your strategic objectives address the strategic challenges you identified in your Executive Summary (1.4)?*

Strategic objectives designed to address PSA's challenges include, but are not limited to:
- **Communication** – increase methods by which SC citizens can communicate directly with PSA faculty and staff.
- **Technology** – actively seek new technologies that make PSA programs more affordable, more accessible, and more immediate across all 46 SC counties.
- **Strategic Financial Management** – carefully evaluate unit initiatives and outcomes in an effort to allocate resources to where they will have the most beneficial impact.
- **Diversify Funding** – increase efforts to garner external funds from a variety of sources, including increased federal dollars and partnerships with private foundations.

♦ *3. How do you develop and track action plans that address your key strategic objectives (part 1)? How do you allocate resources to ensure accomplishment of your action plans (part 2)?*

WEAVEonline® is a Web-based assessment management system that PSA participates in and supports the SACS Standards for Accreditation. WEAVEonline® captures standard program-level assessment areas: mission, outcome/objectives, measures/findings, action plan, and analysis. It has expanded capabilities in linking to larger institutional perspectives within each program's outcomes/objectives.

WEAVEonline® allows every department and unit at Clemson the opportunity to link to:
- General education competencies
- Professional accreditation standards
- Institutional priorities (goals)
- Institutional and college strategic plans

WEAVEonline® stands for:
Write expected outcomes/objectives
Establish criteria for success
Assess performance against criteria
View assessment results
Effect improvements through actions

This information is submitted to CU Office of Assessment. Each unit must complete an initial plan and a self-assessment of their efforts each year. At the end of a reporting period, each unit must report why they did or did not meet those objectives and explain what improvements they will make based on the results of that knowledge.

PSA also uses the Clemson University Management Information System (CUMIS). CUMIS, historically, was developed for assessment reporting to the U.S. Department of Agriculture. CUMIS is a computer-based, on-line system developed for the collection and reporting of data for the Clemson University Cooperative Extension Service. CUMIS is in place to track and evaluate detailed progress made in Extension programs by providing information relative to time spent toward programs, programs conducted, number completing programs, knowledge gain and adoption of practice as a result of participation.

Allocation of resources for the subsequent fiscal years can be based on whether or not the goals were accomplished, or if satisfactory progress has been made to justify continuation. The evaluation process seeks to ensure that new initiatives receive appropriate funding. All appropriate sources of revenue, state, federal, and sponsored activities are used to accomplish the plan.

♦ *4. How do you communicate and deploy your strategic objectives, action plans and performance measures?*

As noted in III-2.1 above, the strategic planning process is an inclusive process, with experienced senior leadership, in conjunction with input from employees and stakeholders, determining PSA's goals. Communication to PSA faculty and staff occurs through multiple opportunities, both formal and informal.
- **Public Service Cabinet** – Section III-1.1 (page 22) details the members of the Cabinet who are assigned portions of the annual plan appropriate to their units.
- **Presentations** – To increase efficiency, presentations are made across the PSA locations via video conference; additional presentations are made in person as schedules permit.
- **Printed media** – *Impacts* magazine regularly reports on PSA efforts to meet annual objectives.
- **Websites** – Efforts have increased to make more information available across PSA websites, with a current initiative underway to standardize the content management of the sites.

♦ *5. How do you measure progress on your action plans?*

This process occurs beginning with individuals accounting for their progress on their own employment goals that have been related to unit and agency goals. If not fully complete, an evaluation of progress towards completion is made on each objective.

PSA Cabinet members then report to the senior leadership on the achievement of unit-specific assignments and, as with individuals, evaluation of progress is made on each objective.

Finally, the Vice President's office reports on PSA's achievements to the Administrative Council of the University.

♦ **6.** *How do you evaluate and improve your strategic planning process?*

The Vice President's office and the PSA Accountability Office solicit feedback on the process throughout the fiscal year. Comments affect results, such as the decision to not continue the Quarterly Reporting Form that had been tested for two years. It was determined that it would be more appropriate to align assessment of PSA with the new WEAVEonline® process used by the University.

♦ **7.** *If the agency's strategic plan is available to the public through the agency's internet homepage; please provide an address for that plan on the website?*

PSA recognizes the importance that the internet plays in today's society. PSA does not currently place the strategic plan on its website, but efforts to inform the public can be found in PSA's website www.clemson.edu/public/ and in Vice President John Kelly's letters in *Impacts* magazine.

♦*Strategic Planning Chart*

Program Number and Title	Supported Agency Strategic Planning Goal/Objective	Related FY 07-08 Key Agency Action Plan/Initiative	Key Cross References for Performance Measures*
I. Cooperative Extension	o Agrisystems Productivity and Profitability o Economic and Community Development o Environmental Conservation o Food Safety and Nutrition o Youth Development and Families	1) **Sustainable Management of Forest Resources and Forest Systems -** Conduct educational programs that promote sustainable forest management and understanding of natural forest systems through: 1) proactive leadership, 2) continuing education, and 3) educational training on public issues affecting forestry. 2) **Agricultural Biosecurity –** 1) Improve state, regional, and local capabilities to prevent agro-terrorism and threats to food safety through training exercises and dissemination of educational information; 2) Respond to agro-terrorism, foreign plant and animal diseases, and other disasters that threaten agriculture or food safety. 3) **Sustainable Agricultural Production Systems** – Support development of niche markets for beef, dairy, and poultry producers to allow farmers to diversify and make local products available to SC citizens; develop and implement animal production systems that are economically sustainable and environmentally sound; and provide training that will increase herd management and business skills. 4) **Environmental Horticulture Education Program** – Increase public's knowledge of horticulture education programs offered; Increase number of activities and programs offered by Master Gardener program; Increase the number of SC citizens receiving information via Horticulture Resources. 5) **4-H, Youth Development and Families –** 1) Develop communities of young people (ages 5-19) in SC who learn leadership, citizenship, and life skills by creating healthy experientially educational environments in the local	Indicators 7.1,3

		community. 2) Train 4-H volunteers and staff who provide land-grant based curriculum and educational experiences so that youth might develop specific life skills.	
		6) **Natural Resources and the Environment** – 1) Develop models that provide a scientific basis for decisions on long-term water quality issues in SC and teach Best Management Practices (BMP's) of natural resources at all levels of land ownership to minimize environmental impacts on water. 2) Provide landowners and natural resource managers with information and economic incentives to maintain and enhance lands for wildlife; and provide services to mediate and resolve human-wildlife conflicts as they occur.	
		7) **Food Safety and Nutrition –** 1) Increase percentage of people certified in food safety and nutrition. 2) Improve the quality and safety of food for South Carolinians. 3) Increase knowledge of and adoption of food safety practices and good nutrition practices by program participants.	
		8) **Community, Leadership and Economic Development –** 1) Conduct educational programs, training, and activities that enhance leadership, communication, team building, and strategic planning efforts. 2) Provide communities with tools to develop a vision for transformation to a future state of increased livability, prosperity, and sustainability. 3) Strengthen the economic competitiveness of rural areas.	
II. Experiment Station	o Agrisystems Productivity and Profitability o Economic and Community Development o Environmental Conservation o Food Safety and Nutrition o Youth Development and Families	1) **Agricultural Productivity and Profitability -** Improve agricultural productivity and profitability in all the major crops, grains, fruits, vegetables, livestock, poultry, fish, cotton, and timber. Increase technical papers and presentations. New focus on transferring technology in emerging areas such as forage-fed beef and pest management for genetically modified crops.	Indicators 7.1-2
		2) **Enhanced Economic Opportunity and Quality of Life for Americans –** Conduct research to enhance economic opportunities and improve the quality of life for South Carolinians. Assess local labor markets and quantify spatial dynamics. Evaluate opportunities and threats to rural markets.	
		3) **Forestry and Natural Resources –** Develop models to understand hydrology of SC's coastal plain to improve development. Evaluate forest management practices to decrease fuel burns. Evaluate new methods to manage timber for improved wildlife management. Research soil properties and their relationship to urban land use properties on lawns and golf courses.	
		4) **A Safe and Secure Food System and a Healthy Well Nourished Population** -- Develop nanotechnology applications for food safety and quality; Seek new methods to control harmful microbes in foods; Emphasize effects of plant based foods on health and nutrition. Increase collaboration with MUSC to evaluate health benefits of plants.	
		5) **Family and Community Living -** To strengthen the support for families and young people in South Carolina, through ongoing family and	

		youth development research programs.	
III. Regulatory Services	o Agrisystems Productivity and Profitability o Economic and Community Development o Environmental Conservation	1) **Pesticide Regulation** – To ensure safe and legal use of pesticides; to regulate the pest control industry. 2) **Plant, Fertilizer, and Seed Regulation** – To ensure the quality of fertilizer and lime; the prevention and control of introduced plant pest/invasive species, and pests of honey bees; the certification of seed purity/germination; the certification of freedom from plant pests in nursery, greenhouse and transplants. 3) **Soil and Other Analyses** – To examine soil samples and provide recommendations for soil composition and nutrient levels to clients, as well as to analyze feed and forage, animal waste, plant tissue, irrigation water, and compost samples and provide results to clients. 4) **Plant Problem Clinic** – To analyze plant samples for plant pests and diseases and provide results to clients. 5) **Polymer Chain Reaction Lab** – To analyze DNA and RNA of potential plant diseases to identify specific pathogens. 6) **Other Analyses-Homeland Security/Agroterrorism** – To administer programs preventing Agroterrorism.	Indicators 7.1,5
IV. Livestock-Poultry Health	o Agrisystems Productivity and Profitability o Economic and Community Development o Environmental Conservation o Food Safety and Nutrition	1) **Disease Eradication –** Maintain the livestock-poultry disease-free status for the purpose of protecting the health and marketability of South Carolina livestock-poultry. 2) **Disease Control** - Increase awareness among producers of disease control programs, e.g., South Carolina Voluntary Bovine Johne's Disease Control Program (SC VBJDCP), SC Egg Quality Assurance Program (SCEQAP) and encourage participation in them. 3) **National Animal Identification System (NAIS)-** 1) Develop a system to consolidate premises information on SC livestock-poultry operations and coordinate that information with national premises allocator and repository. 2) Compete for Cooperative Grants from USDA to help fund activities related to populating the premises identification system. 4) **Cooperative Agreements and Grants** - Pursue available cooperative agreements and grants to supplement state appropriations. 5) **Animal Emergency Response/Agro-Terrorism**-Further define the role of Livestock-Poultry Health, Animal Health Programs in animal emergency response and training in SC seek funding for these activities. Continue collaborative arrangements with Department of Homeland Security to present such information to SC audiences. 6) **Food Safety** – Ensure safe and properly labeled meat and poultry products to protect the public health; Maintain requirements that meet or exceed those of the USDA Inspection Services.	Indicators 7.1,5
V. Institute for Energy Studies	o Economic and Community Development o Environmental Conservation	1) Promote energy research and development in and for the state. 2) Transfer energy technology developed by others to SC applications.	N/A

		3) Contribute to national energy issues in areas of excellence. 4) Promote state-wide energy education activities.	
VI. BioEngineering Alliance	o Economic and Community Development o Environmental Conservation	1) Initiate major funding for research programs in bioengineering at the CU-MUSC Bioengineering Program. 2) Consolidate bioengineering education and research in South Carolina. 3) Disseminate bioengineering education and research conducted in SC, nationally and internationally.	N/A

III-3 Customer Focus

♦1. *How do you determine who your customers are and what their key requirements are?*

More than 600,000 contacts were made by PSA units in 2007-08, which reinforces our core belief that our customers are the citizens – young and old, rich and poor, rural and urban – of South Carolina. According to program participation, assessment efforts, internet traffic, and personal contacts the key requirements are identified across our units.

- **Timeliness** – PSA customers expect assistance quickly, whether that response is a phone call, email, website, radio, training workshop or demonstration site.
- **Accuracy** – PSA must strive to provide only the most current and accurate information, keeping citizens in touch with the latest research, products, or safety requirements.
- **Practicality** – Customers expect information and services from PSA to be relevant to their needs and interests as South Carolinians.

♦2. *How do you keep your listening and learning methods current with changing customer/ business needs?*

PSA was one of the first agencies to utilize the strength of the internet for communicating with their constituent groups. In addition, current efforts have utilized distance technologies such as video conferencing to make programs more accessible across the state.

Agents, faculty members, and staff are constantly working to ensure communication remains open in all the traditional methods and new technologies.

♦3. *What are your key customer access mechanisms, and how do these access mechanisms enable customers to seek information, conduct business, and make complaints?*

- **Research and Education Centers, and Extension Service County Offices** – PSA's physical presence across South Carolina provides important access points for many of our customers. All locations are staffed with professionals who are trained to utilize PSA resources to make sure accurate information is provided.
- **Public Boards and Meetings** – As stated earlier, PSA professionals serve the state through appropriate boards, commissions, task forces, and research groups. This interaction provides a valuable access mechanism through which people can voice praise or concern about PSA operations.
- **Websites** – PSA maintains numerous websites to provide information 24 hours per day. Each website has contact information for additional details.

♦*4. How do you measure customer/stakeholder satisfaction and dissatisfaction…*

PSA has implemented assessment and accountability processes to evaluate the quality of services provided in all counties of the state. A customer satisfaction survey (CSS) collects data from clients to determine ways to improve program quality, information delivery, and more importantly customer service. These evaluations serve as an important piece of our accountability efforts.

Four indicators (benchmarks) were identified to assess the quality and satisfaction of services provided: 1) up-to-date, useful, relevant, and easy to understand information, 2) the extent to which recipients had the opportunity to use the information, 3) the extent to which they have shared the information with others, and 4) the extent to which they are satisfied with the services provided.

♦*5. How do you use information and feedback from customers/ stakeholders to keep services or programs relevant and provide for improvement?*

- Meetings with advisory boards, local leaders, and other stakeholders serve as small group opportunities to open discussions about new initiatives. Having these discussions ahead of a new program improves planning.
- Focus groups provide feedback on how well programs and initiatives are meeting their needs. This information is provided directly to the appropriate PSA personnel in order for them to make improvements.
- Survey instrument summary results are conveyed to the PSA Cabinet members for review and recommendations and can be part of an employee's annual evaluation.

♦*6. How do you build positive relationships with customers and stakeholders? Indicate any key distinctions between different customer groups.*

Daily interaction, made possible by the location of PSA resources and personnel in every county, coupled with the delivery of information that is accurate, timely, and usable are the keys to positive relationships with customers and stakeholders. Industries, large business operations, and local governments require different levels of assistance than citizens who may have very specific individual needs.

For PSA, the top priority for positive relationships occurs through communication and collaboration across the 46 South Carolina counties.

III-4 Measurement, Analysis, and Knowledge Management

♦*1. How do you decide which operations, processes and systems to measure for tracking financial and operational performance, including progress relative to strategic objectives and action plans?*

- **Financial performance** is ensured by rigorous University and state accounting procedures.
- **Operational performance** is ensured through internal accountability measures, feedback from constituent groups, and state reporting requirements.
- **Unit performance** is ensured through assessment of initiatives that fit within PSA goal areas as well the University goals/emphasis areas. These units have their own established processes to determine their success in addressing the needs of their customers/stakeholders.

- **Personnel performance** is ensured through the state's EPMS process as well as internal opportunities for professional development, occupational health and safety, and adherence to state hiring practices.

♦*2. How do you select, collect, align and integrate data/information for analysis to provide effective support for decision-making and innovation throughout your organization?*

The PSA Office of Accountability works in coordination with the Vice President's office as well as with the unit directors to outline data requirements:

- Data is collected through PSA's network of information systems (survey instruments, advisory board sessions, focus groups, etc.).
- PSA's Accountability Office synthesizes the information, aligns results with strategic goals, and submits reports that are distributed to the Directors and the PSA Cabinet.
- Financial reports are merged with the assessment data upon request by the Chief Financial Officer for the directors and the PSA Cabinet.

♦*3. What are your key measures, how do you review them, and how do you keep them current with organizational service needs and direction?*

Key measures have been identified in Section III-1 and on the Strategic Planning Chart on page 29. The PSA Cabinet regularly reviews objectives and initiatives throughout the year as projects are discussed and, adaptations are made mid-year if evaluations deem them appropriate.

♦*4. How do you select and use key comparative data and information to support operational and strategic decision making and innovation?*

PSA maintains numerous information systems related to the operational aspects noted in III-4.1 above. Through these systems, data may be obtained to compare performance across multiple years, departments, and individuals. As much as appropriate, external comparisons from other public service agencies at land-grant institutions are also used.

♦*5. How do you ensure data integrity, timeliness, accuracy, security and availability for decision making?*

To the extent possible, the authenticated data source is used for all PSA information; for example, financial reports are pulled from audited financial data not from self-reported information. In addition, efforts to gather data from multiple sources provide valuable checks on achievement of objectives.

Those responsible for collecting and reporting data communicate with personnel to remind them to enter data in a timely manner. In order to ensure data is secure, both the University and PSA systems are protected by requiring passwords and using firewalls.

♦*6. How do you translate organizational performance review findings into priorities for continuous improvement?*

PSA units submit annual plans containing objectives for the reporting period. At the end of the reporting period, the plans are compared to the results. The units submit a Use of Results report that

explains how the results will be applied to the objective for improvement in the upcoming reporting period.

♦**7. *How do you collect, transfer, and maintain organizational and employee knowledge (your knowledge assets)? How do you identify and share best practices?***

Policy and procedure manuals containing best practices exist to ensure employees are aware of federal and state laws and regulations pertaining to a given process, as well as of Clemson University's specific policies and procedures.

In addition, PSA faculty and staff participate in conferences, meetings, and technical presentations where they to learn new practices and determine how appropriate changes can be integrated in PSA to improve efficiency and effectiveness.

III-5 Workforce Focus

PSA maintains an Office of Staff Development to ensure that PSA staff members are trained to meet the needs of their profession and achieve their potential. PSA's Business Services works with Clemson University's Office of Human Resources (OHR) for all employee policies and procedures. Commitment to our employees is best exemplified in the Human Resources Philosophy:

Clemson University Human Resources Philosophy

Clemson University's mission, as an agency of the State of South Carolina, is to serve the State and its people through teaching, research, and public service. Clemson is committed to the following fundamental beliefs:

1. To continually seek the highest degree of excellence possible. Employees, individually and collectively, must be committed to the goal of excellence in the performance of their duties.

2. To treat every employee fairly, ensuring that respect for the individual dignity and worth of each is maintained regardless of position and that no employee or applicant for employment is discriminated against because of race, sex, national origin, handicap or veteran status.

3. To provide the kind of open and honest leadership that fosters faith and confidence in management, expecting all those who supervise the work of others to treat those under their direction as they would want to be treated.

4. To provide free and open channels of communication for employees at all levels and to handle complaints of employees promptly and fairly.

5. To provide each employee with worthwhile and honest work with competitive wages and benefits and safe working conditions which are as convenient and pleasant as possible.

6. To provide every possible opportunity for self-improvement and advancement at the University.

These six statements of basic personnel philosophy are indivisible. Together they express the basic human resource management philosophy of Clemson University.

♦**1. *How does management organize and measure work to enable your workforce to 1) develop to their full potential, aligned with the organizations' objectives, strategies, and action plans; and 2) promote cooperation, empowerment, teamwork, innovation, and your organizational culture?***

PSA senior leadership recognizes the strength that comes with experienced and well-prepared workforce. Professional development is a priority, whether in a small on-campus class to learn a new software package or through internal and external professional development opportunities.

Support is offered individually, one-on-one, with the development of teamwork and innovation occurring within and across units.

♦*2. How do you evaluate and improve your organization and human resource related processes?*

The evaluation of human resource related processes is a part of the Employee Performance Management System process (EPMS) that takes place each year. Our employees are required to establish a planning stage in concert with the supervisor. An interview takes place to discuss the actual performance and open dialogue is encouraged as part of that interview. Objectives for the new assessment period are discussed.

♦*3. How does management recruit, hire, place, and retain new employees? Describe any barriers that you may encounter.*

PSA faces the same opportunities and challenges as all state agencies in tough economic times – balancing potential budget cuts with the need to perform required services. Recruitment and hiring follow the specified state guidelines for advertising and classification. Placement within PSA is completed as part of the classification process to ensure qualified specialists are located in their local service areas, understanding that the mission of PSA may require many professionals to travel across South Carolina.

Retention of exceptional employees is of paramount importance to the PSA leadership, who recognize the time, effort, and funds required to bring in new personnel. Efforts are made with staff to offer non-monetary benefits that interest employees, such as flex-time, professional development opportunities, mentoring, and continuing education.

♦*4. How do you assess your workforce capability and capacity needs, including skills, competencies, and staffing levels?*

The Office of Human Resources conducts a needs assessment survey for each University unit to ascertain training needs. From the information gathered, sessions are scheduled specific to unit needs. OSHA training is done in accordance with regulations. New employee orientation is offered to each new staff member online, as well as meeting with OHR personnel.

Capacity needs are determined in alignment with PSA goals and with unit goals and objectives on an annual basis. New positions must have established funding streams that do not distract from achievement of established objectives and the PSA mission.

♦*5. How does your workforce performance management system, including feedback to and from employees, support high performance and contribute to the achievement of your action plans?*

Communication during the **planning phase** of the process sets expectations, and employees provide input into formulating annual objectives.

The **evaluation phase** includes not only the category for meeting the expectations, but also one for exceeding and one for substantially exceeding. The possibility of achieving a higher rating for work that is accomplished encourages performing at a higher level.

Performance pay is also tied to the evaluation process and surveys have shown it to be a strong incentive for higher level performance, through this incentive has not been recently funded in state appropriations.

♦**6. *How does your development and learning system for leaders address the following: a) personal leadership attributes; b) organizational knowledge; c) ethical practices; d) core competencies, etc.?***

PSA provides in-service training programs for all employees, divided into three categories:
- **Subject Matter** -- Extension specialists and initiative teams develop subject matter trainings each year for agents to keep them up-to-date in the various program areas. Required sessions include Ethics and Regulatory Compliance.
- **Professional Development** (which includes Orientation) -- A variety of professional development trainings are offered each year covering such topics as grant writing, diversity, developing partnerships, developing survey instruments, etc. An orientation program is in place which includes an introduction to the Cooperative Extension Service and additional trainings in civil rights and program development.
- **Technology** – Training is offered to cover the use of many computer programs. In addition, the professional associations related to PSA also offer trainings and updates both at the state and national levels.

♦**7. *How do you identify and address key developmental training needs for your workforce, including job skills training, performance excellence training, diversity training, etc.?***

The University Office of Assessment, in coordination with the Office of Human Resources, regularly surveys PSA and University employees to elicit ideas for training. There is a regular set of training programs (http://www.clemson.edu/faculty-staff/training.html) that are offered both in class settings and online. Classes that are most popular are offered more often to meet employee demand.

♦**8. *How do you encourage on the job use of new knowledge and skills?***

Unit directors are strongly encouraged to use the planning stage of the EPMS process to tie new skills to new objectives, following through to evaluate achievement of objectives. In addition, many directors require that new skill application be a requirement for travel; employees may be asked what they will learn before being allowed to travel.

♦**9. *How does employee training contribute to the achievement of your action plans?***

The training offered through the University focuses on areas that can assist employees in improving their technology skills, important aspects of most goals areas. In addition, because employees are involved in their own evaluation process and in setting objectives, their training and knowledge are inextricably tied to PSA's plans and outcomes.

♦**10. *How do you evaluate the effectiveness of your workforce and leader training and development systems?***

The University Office of Assessment, in coordination with the Office of Human Resources, regularly surveys PSA and University employees to elicit ideas for training. In addition, each training session

includes an assessment of the training including the ability of the instructor, the ability to use the knowledge learned, and interest in additional training.

♦**11. *How do you motivate your employees to develop and utilize their full potential?***

PSA has a number of incentive and awards programs to support employees within the system. An innovative Distinguished Agent position was created which is reserved for those agents who perform at the highest level. Each professional organization that is tied to Extension, such as: the County Agricultural Agents, Family and Consumer Sciences Agents, 4-H Agents, Extension Secretaries, and Epsilon Sigma Phi, have awards programs to promote excellence in programming efforts. Three Superior Performance Awards are sponsored for agents and faculty as is an Outstanding Service Award for classified staff. In addition, the Clemson University Alumni Association sponsors the Distinguished Service Award each year for excellence in Public Service.

The prestigious Godley-Snell Award for Excellence in Agricultural Research is given each year to an individual scientist or a team of scientists whose research accomplishments benefit the citizens of South Carolina, the region, or the nation. This work exemplifies efforts to enhance the public trust in science and to increase the public's knowledge of the benefits of agricultural research.

♦**12. *What formal and/or informal assessment methods and measures do you use to obtain information on workforce well-being, satisfaction, and motivation? How do you use other measures such as employee retention and grievances?***

The Office of Human Resources conducts a needs assessment survey for each University unit to ascertain areas of concern for employees. Satisfaction is assessed within departments, and employees are able to move within PSA if appropriate positions come available.

Grievances are evaluated by the Faculty and Staff Ombudsman on an individual basis and solutions are sought in conjunction with the appropriate employees and supervisors, Human Resources, General Counsel, and unit directors.

♦**13. *How do you manage effective career progression and effective succession planning for your entire workforce throughout the organization?***

- **Professional development** opportunities are promoted and advocated through announcements in newsletters, emails, and directors' meetings. Senior leadership strongly recommends including professional development goals in the annual employee evaluation process.
- **Mentoring** is also important and occurs through research partnerships between senior and junior faculty.

♦**14. *How do you maintain a safe and healthy work environment?***

PSA complies with all state and federal work environment regulations as overseen by the Clemson University Office of Environmental Health and Safety.

The Office of Human Resources (OHR) ensures compliance with the Drug Free Work Force Act by annual distribution and enforcement of the Employee Drug and Alcohol policy. OHR also ensures compliance with the DOT regulations governing training and drug testing of employees who are

required to have a commercial driver's license (CDL). An Employee Assistance Program provides confidential assistance/referral for employees experiencing personal difficulties.

The University and PSA focus on encouraging safe work environment/habits. Ergonomics specialists on staff will provide recommendations for improving workstations, etc; and the University Wellness Center provides health programs and services at little or no cost to employees. These programs include, in part, recommendations for weight loss, improving diet, and lifestyle changes. Individual PSA units have a variety of complementary approaches in the safety area to include training in pest management for employees, safety compliance officers who stress safety in laboratory areas, and regular inspections of facilities and equipment.

III-6 Process Management

♦**1. How do you determine, and what are your organization's core competencies, and how do they relate to your mission, competitive environment, and action plans?**

The design of program initiatives is built around a four-step process:
- **Needs assessment** – based on customer comments, emerging research, University goals, and comparable agencies
- **Relevance** – to PSA mission, relationship to past successful initiatives
- **Capacity** -- personnel to fulfill required objectives, and availability of necessary facilities
- **Impact** -- targeted towards the customer base and systematically updated

The design of the delivery systems is constantly impacted by increased demand for services, new types of services, and new means of service delivery. PSA responds to changing customer needs through remote delivery of service using internet technology, satellite broadcasts, video conferencing, public television, and radio.

♦**2. How do you determine and what are your key work processes that produce, create or add value for your customers and your organization and how do they relate to you core competencies? How do you ensure these processes are used?**

Feedback from program participants, annual evaluations of objectives and goals, and communication with constituent groups all are coordinated to determine the most "valued" services. PSA's core competencies are the foundation on which goals and objectives are created and, end of the year assessment ensures improvements are made in subsequent years.

♦**3. How do you incorporate organizational knowledge, new technology, changing customer and mission-related requirements, cost controls, and other efficiency and effectiveness factors into process design and delivery?**

As noted in III-6.1 the processes that build PSA initiatives take into consideration multiple factors. It is the goal of PSA faculty and staff to seek new knowledge, to improve that which already exists, and to use this knowledge to improve the lives of South Carolinians. Often, we find that it is new technology that increases efficiency and effectiveness, and our evaluations will seek to determine the outcomes.

♦4. *How does your day-to-day operation of these processes ensure meeting key performance requirements?*

Communication is a key support process in the design, production, and delivery of products to customers. In addition, teamwork is an integral aspect of many PSA projects so that, evaluation of progress on performance requirements is integrated from the bottom up to the Vice President's office. Occurring informally through intra-unit meetings and presentations, colleagues collaborate and contribute to each other's success, thereby strengthening PSA programs and the overall performance of the agency.

♦5. *How do you systematically evaluate and improve your key product and service related processes?*

Surveys have been the most reliable process to evaluate how well we are meeting the needs of our customers. Our Extension Service uses exit surveys for each of their workshops to determine if the workshop met the anticipated need of the participates. Periodic mail surveys are sent to the list of Extension Service contacts to evaluate our overall service and to solicit suggestions for new and improved services.

Our contacts with industry and other government agencies allow us to use their feedback to monitor our usefulness to these identities. Our research is best judged by the number of grants awarded and the quality can best be measured by the number of publications our faculty produce, as well as the number of patents and licenses awarded. The outreach of this knowledge to our clients is accomplished by the Cooperative Extension Service, present in every county. The rapid identification, mitigation, prevention, and control of key agriculture pests; the quality of agrichemicals; the compliance with pesticide and plant industry laws and regulations, and animal disease-free status of LPH indicate the effectiveness of our regulatory programs.

♦6. *What are your key support processes and how do you improve and update these processes to achieve better performance?*

As has been stated previously, communication and feedback from our staff, clients, and partners has been the key to achieve better performance. State, regional, and national meetings are frequently initiated or attended by key individuals in our organization to ensure the efforts are coordinated to minimize duplication of effort while encouraging collaboration.

♦7. *How does your organization determine the resources needed to meet current and projected budget and financial obligations?*

During the annual planning process, unit directors collaborate with their staff members to create and determine which initiatives will be prioritized for the coming year. Most units require that initiatives be proposed in conjunction with funding amounts and sources. As much as possible, external sources of funds are sought for research and development projects. Finally, PSA is fortunate to have a strong base of volunteers who offer their time for multiple projects across the state, thus saving SC thousands of dollars each year.

III-7 Business Results

Results are presented in earlier sections, notably I-2 major achievements. The following is a graphic representation of several key results. These are presented by unit for 1) PSA Overall, 2) Experiment Station,

3) Cooperative Extension, 4) Livestock-Poultry Health, and 5) Regulatory Services. The classifications are provided beside each chart to correspond to the following Key Performance Indicators:

1. Mission Accomplishment and Organizational Effectiveness
2. Customer Satisfaction
3. Financial Performance
4. Workforce Performance
5. Organizational Efficiently and Work System Performance
6. Regulatory Compliance and Community Support
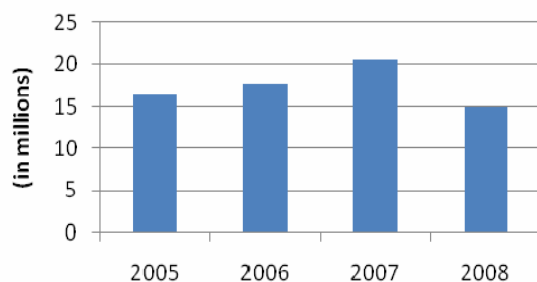
♦PSA Overarching Graphics   *Cross Reference Number 7.1*
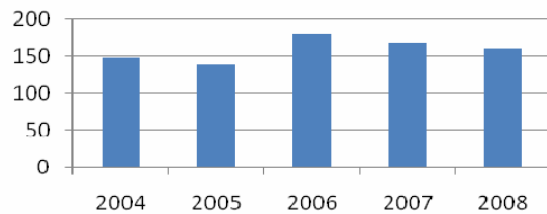
Indicates the number of research grant proposals submitted by PSA faculty. This data is used in evaluating the productivity of faculty.

Indicators: 1, 4, 5

Demonstrates PSA's annual trend with competitive grant funding. The data is cyclical in nature due to long-term funding periods, usually two to five years in length, limited levels of principal investigators, and time constraints. The data is also used at the University level to determine PSA's contribution to the President's sponsored research funding goals.

Indicators: 1, 3, 4, 5
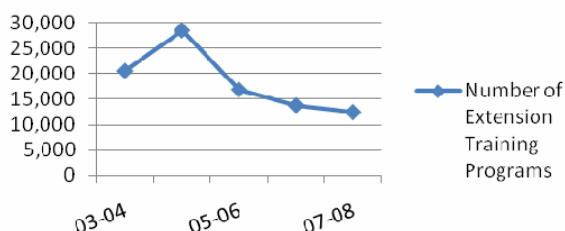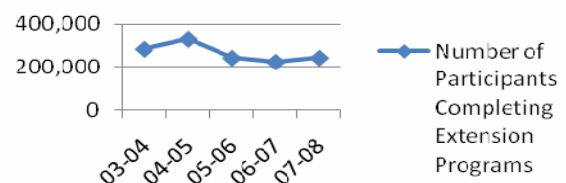
Number of Participants Reporting Gain in Knowledge (2003-2008)
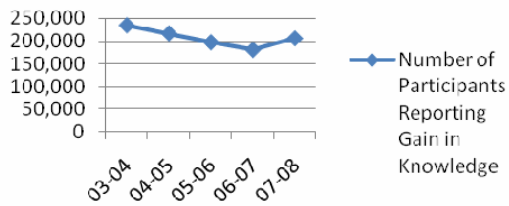
Trends of participants, number of programs, and number reporting gain in knowledge increase.

Indicators: 1, 2, 3, 4, 5, 6

♦Experiment Station

Experiment Station Technical Contributions
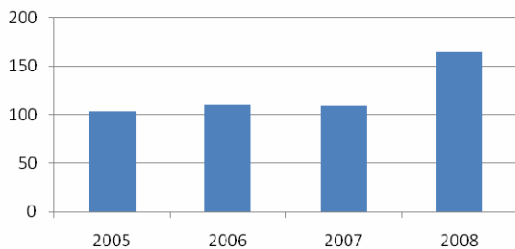
PSA faculty continue to increase their contributions to the body of knowledge in their areas of expertise. Technical contributions also serve as a factor in faculty performance evaluations.

Indicators: 1, 4, 5, 6

Experiment Station Patents
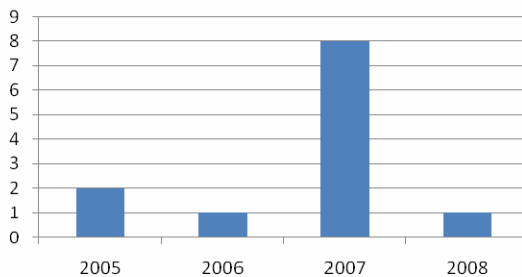
Patents indicate the merit and originality of discoveries submitted. Patents have the potential to generate new economic activity through licensing and marketing.

Indicators: 1, 3, 4, 5, 6

Experiment Station Disclosures
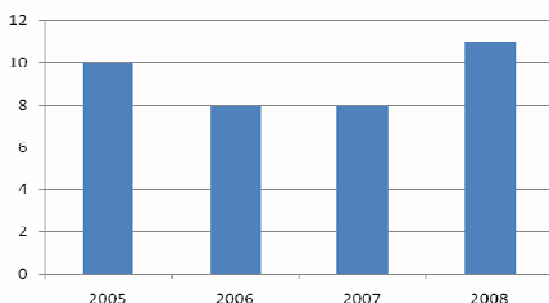
Disclosures are the first step in the discovery process leading to a patent. Data over time indicate that faculty are successful in inventing products.

Indicators: 1, 3, 4, 5, 6

Agronomic Crops: Integrated Crop Mgmt. Participants

5,000		
4,000		
3,000		
2,000		
1,000		
-		
2006	2007	2008
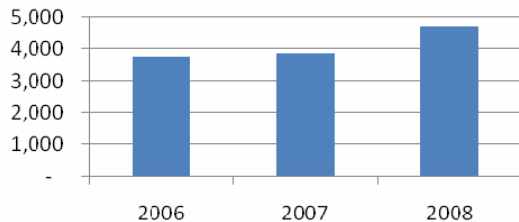
Indicates number of participants for Integrated Crop Management (ICM) programs and activities.

Indicators: 1, 2, 5, 6

Agronomic Crops: Acres Affected per Year by ICM

400,000		
300,000		
200,000		
100,000		
-		
2006	2007	2008
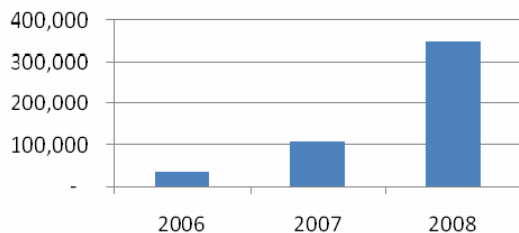
Indicates number of acres across all programs in SC planted with agronomic crops using ICM practices. ICM practices improve profitability for growers and reduces negative impacts on the environment.

Indicators: 1, 2, 5, 6

Horticulture Crops: Integrated Crop Mgmt. Participants

3,000		
2,500		
2,000		
1,500		
1,000		
500		
-		
2006	2007	2008
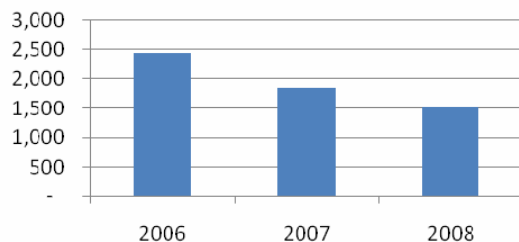
Indicates participation for ICM horticulture crops programs and activities. ICM practices improve profitability for growers and reduces negative impacts on the environment.

Indicators: 1, 2, 5, 6

Horticulture Crops: Acres Affected per Year by ICM

200,000		
150,000		
100,000		
50,000		
-		
2006	2007	2008
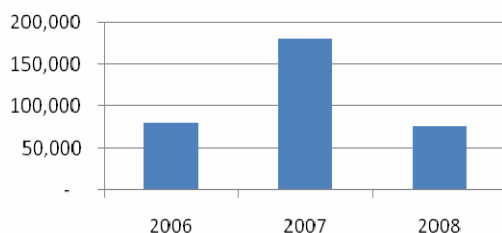
Indicates number of acres in SC planted with horticulture crops using ICM practices. ICM practices improve profitability for growers and reduces negative impacts on the environment.

Indicators: 1, 2, 5, 6

Sustainable Forest Mgmt & Environmental Enhancement: Participants
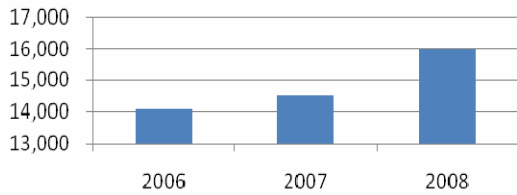
Indicates number of forestland managers trained in sustainable forestry practices. ICM practices improve profitability for growers and reduces negative impacts on the environment.
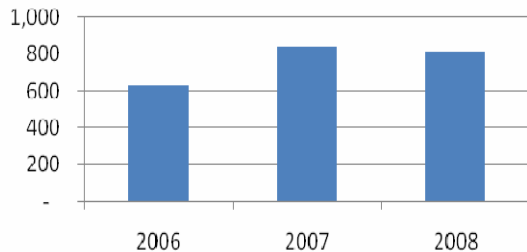
Indicators: 1, 2, 5, 6

Master Gardener Service Hours
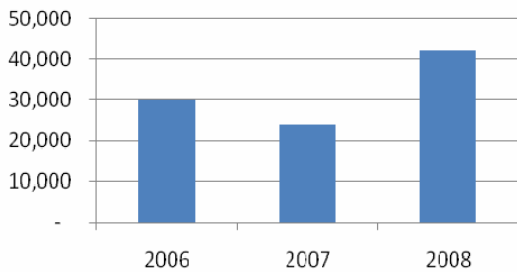
Indicates hours of volunteer service provided by Master Gardener's through environment horticulture programs and community landscaping projects.
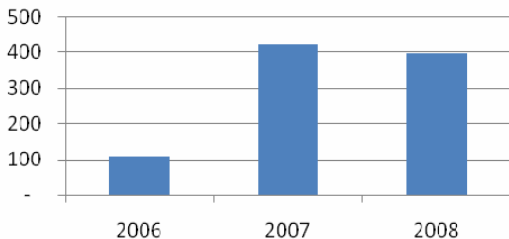
Indicators: 1, 5, 6

Food Safety Training: Managers Certified to Train

Indicates the number of food protection managers certified to train employees at various locations across the state.

Indicators: 1, 2, 5, 6

Food Safety Training: Service Establishments Represented

Indicates number of establishments where food safety certification training has been conducted.

Indicators: 1, 2, 5, 6

Family & Community Leaders: Volunteers
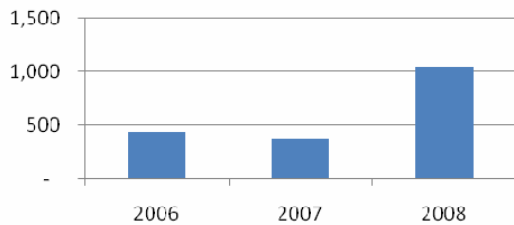
Indicates number of trained volunteers participating and leading family and community programs in SC.
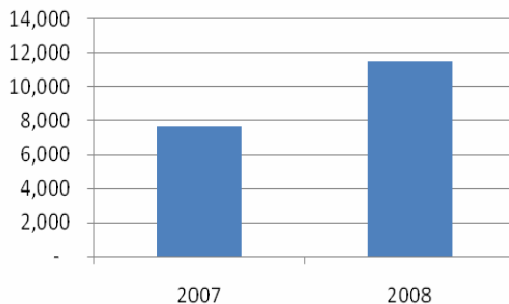
Indicators: 1, 5, 6

4-H: Volunteers Trained and Delivering Programs
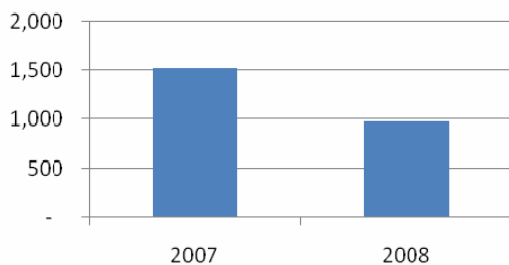
Indicates number of volunteers trained to conduct 4-H programs in SC communities.
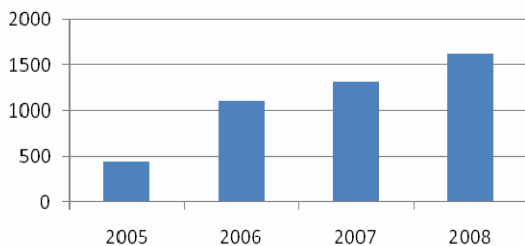
Indicators: 1, 5, 6

4-H: Volunteer Hours

Indicates number of volunteer service hours in 4-H programs.

Indicators: 1, 2, 5, 6

♦Livestock-Poultry Health

Cross Reference Number 7.4

National Animal Identification System Registration

Indicates progress towards full registration in the NAIS, which is designed to enhance animal disease control and eradication programs.

Indicators: 1, 3, 5, 6

♦ *Livestock-Poultry Health*

Retention of Disease-Free Status

100% free status since (date):
- Bovine Brucellosis 1984
- Classical Swine Fever 1972
- Pseudorabies 1995
- Pullorun-typhoid 1980
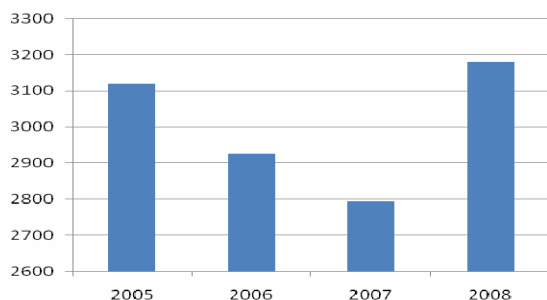- Swine Brucellosis 1998
- Tuberculosis 1981

Disease-free status improves the ability of SC producers to transport animals out-of-state and internationally.

Indicators: 1, 3, 5, 6

♦ *Regulatory and Public Service*

Cross Reference Number 7.5

Pesticide Regulation Inspections

Indicates that personnel are meeting their objectives to monitor the use of pesticides in SC to ensure their safe and effective use and prevent harm to the communities and the environment.
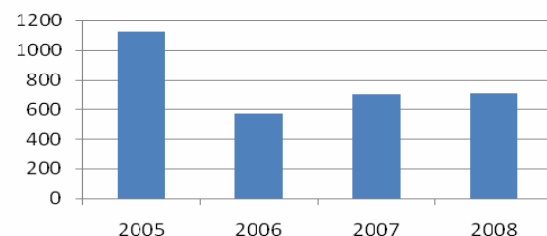
Indicators: 1, 3, 5, 6

Phytosanitary Certificates Awarded

These certifications regulate movement of products from SC to other states and countries. No rejections have been reported, reflecting the accuracy of DPI's work.
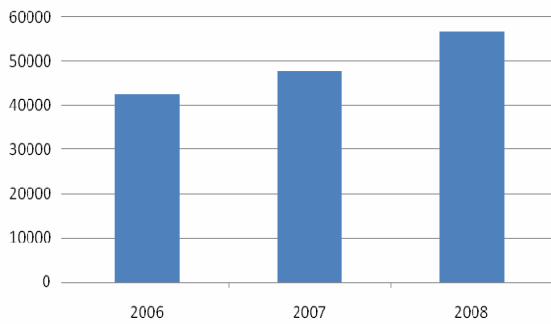
Indicators: 1, 3, 5, 6

Plant Nursery Inspections for Compliance

Indicates DPI's effectiveness with nursery inspections. Nurseries are required to undergo inspection and certification in order to ship plants across state lines.
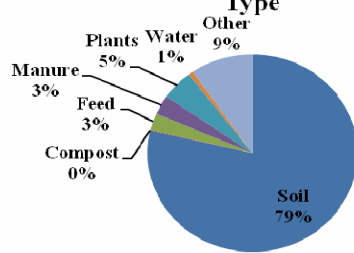
Indicators: 1, 3, 5, 6

Number of Samples Analyzed

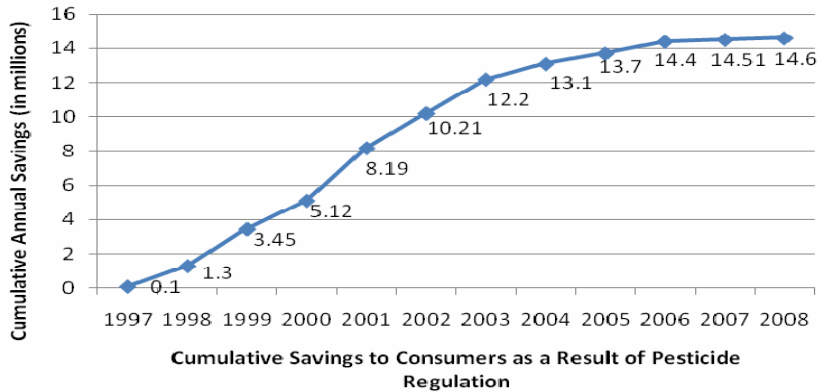Indicates the number of samples analyzed.

Indicators: 1, 3, 5, 6

Agriculture Service Lab Analyses by Type

Indicates the number of analyses performed for various sample types.

Indicators: 1, 3, 5, 6

Cumulative Savings to Consumers as a Result of Pesticide Regulation

Indicators: 3, 5

Clemson University Public Service Activities
Office of PSA Accountability
Room 126 Lehotsky Hall
Clemson, SC 29634

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