

## SRPLN FCS State Report 2013

Reporting Institution: XX 1862 \_\_\_ 1890 (check one)

Name of Institution: Clemson University, Clemson, South Carolina

### Budget Situation:

Clemson University is considered two separate state agencies from a state budgeting standpoint. It is a research university that receives an educational and general (E&G) state appropriation for teaching and student support and a land-grant Public Service Activities (PSA) division that receives a state appropriation to support Extension, research and regulatory programs in agriculture, forestry, and natural resources. The South Carolina state budget for FY2013-14 contains no budget cuts for Clemson University or Clemson PSA. The state has authorized a 3 percent general increase for all permanent faculty and staff. Clemson PSA has received the following in additional funding:

- \$1 million in recurring funding for Advanced Plant Technology at the Pee Dee Research and Education Center in Florence
- \$500,000 in recurring funding for Precision Agriculture
- \$300,000 in recurring funding for the Veterinary Diagnostic Center at Livestock-Poultry Health in Columbia
- \$3 million in nonrecurring funding for the Advanced Plant Technology Laboratory at the Pee Dee Research and Education Center in Florence
- Inclusion of Proviso 45.6 (Fertilizer Inspections) which produces \$450,000 in revenue to support the Agriculture Services Lab.

### Staffing Update (field and state office):

Clemson Extension Family Consumer Sciences is focused on Food Safety & Nutrition. The State Program Team Leader is an Emeritus Professor of Food Microbiology who continues to work in a part-time capacity. Current professional Extension Food Safety & Nutrition field staff members include 1 food safety Extension Associate, 6 permanent county Extension agents, 1 full-time grant-funded nutrition agent, 1 part-time state funded food safety rehire, 1 part-time grant-funded food safety rehire and 1 part-time food safety information staffer. Due to joint appointments, Food Safety & Nutrition agents and the Extension Associate represent ~7.5 FTE's; two agents have ~50% 4-H responsibilities. One food safety agent and the Extension Associate are recent hires; applicants for an additional food safety agent position are being interviewed this month. EFNEP staffing includes 1 FCS faculty FTE, 6 professional area agents (M.S. or higher) and approximately 16 paraprofessionals. A total of 2.5 food safety Extension FTE's are housed in the Department of Food, Nutrition and Packaging Sciences and represent 6 food science faculty and one FCS faculty. The Extension Associate and the food science faculty members focus on economic development through assistance to the food industry and food entrepreneurs.

### How Institution is Addressing the Situation:

Clemson Extension continues to focus its resources in 8 programmatic areas - Agronomic Crops, Horticulture, Livestock & Forages, Water Resources, Forestry & Natural Resources, 4-H Youth Development, Community & Economic Development, and Food Safety & Nutrition.

### Top 3 Program Highlights of Current Year:

Major county programming priorities for Clemson Extension Family & Consumer Sciences continue to be food safety and nutrition education. County nutrition programming now is funded through the Expanded Food & Nutrition Education Program (EFNEP) or through grants and generated revenues. Faculty/specialists, the Extension Associate, and Food Safety & Nutrition county Extension agents deliver food safety programs including Better Process Control Schools, HACCP training for processors and school food service, pre-Good Agricultural Practices trainings, hands-on Home Canning Workshops, food safety programs for day care workers and consumers, ServSafe® Food Safety Training for Employees and ServSafe® Certification programs for Retail Managers. They also provide assistance to South Carolina food entrepreneurs and food businesses through workshops and one-on-one counseling.

- **Carolina Canning®** –South Carolina Department of Agriculture funding made it possible to tailor home food preservation curricula to South Carolina fruits and vegetables and to offer hands-on home canning workshops across the state in 2011. The curriculum includes six food preservation lesson – pressure canning (vegetables), boiling water bath canning (fruits and acidified tomatoes), making jams and jellies, pickling, drying foods at home and freezing foods. From January 2011 to July 2012, county Food Safety & Nutrition Extension staff delivered 67 hands-on canning workshops to 713 members of the general public, youth and limited resource individuals in 25 South Carolina counties. These workshops were successful in reaching clientele who lacked canning knowledge. Over 90% of participants classified themselves as non-canners or novice canners. Most responding participants (97%) found workshops to be very useful and nearly all (99%) reported gaining new knowledge. The proportion of participants planning to use safe home canning methods increased markedly after workshops. Before enrolling in hands-on pressure canning workshops, only 28% of the 92 responding participants used pressure canning methods. After the workshops, 79% said they would use pressure canning – a 180% increase. Before participating in the hands-on boiling water bath canning workshops, 54% of 67 responding attendees used this method. After the workshops, 85% planned to use the boiling water bath canning method for acid and acidified foods– a 57% increase. As a result of the Carolina Canning® hands-on workshops, people used their learned knowledge to preserve more fruits and vegetables and to consume more preserved specialty crops. The project increased knowledge, consumption and utilization of locally grown specialty crops by participants enrolled in the curriculum. In response to public demand, 15 additional workshops thus far have been offered in 2013 and 13 more have been scheduled.
- **Canning Coaches** – To help meet consumer demand, county Food Safety & Nutrition Extension staff have recruited volunteers (Canning Coaches) who are willing to share science-based food preservation knowledge with South Carolinians. Additional funding from the South Carolina Department of Agriculture made it possible for us to recruit and train 43 Canning Coach volunteers in 2012 and 22 additional volunteers in 2013. Those volunteers are now assisting agents with workshops, answering food preservation questions and making presentations and are beginning to offer workshops. One-time funding from Clemson Extension has made it possible to provide canning kits to Extension offices in 29 of 46 South Carolina counties (Coaches' home counties). Canning kits include a portfolio notebook (contains posters for all food preservation lesson), a pressure cooker, a boiling water canner, a food dehydrator and other assorted canning, preserving and presentation materials. Agents are serving as mentors to Coaches in their assigned counties. This project continues to multiply the ability of agents to get reliable, science-based food preservation and canning

information into communities across the state and is helping South Carolinians safely home preserve their foods. Additional Canning Coaches will be recruited for 2014.

- **School HACCP in South Carolina:** The U.S. Department of Agriculture mandated Process Hazard Analysis Critical Control Point (HACCP) Plans for all schools receiving USDA funds. HACCP is a systematic method for controlling and preventing food safety problems. Process HACCP differs from classical HACCP in that all menu items are assigned to a process category rather than treating each menu item separately. Critical control points (points for possible contamination and/or microbial growth) are established for the process category rather than for the individual menu item. In 2009, Dr. Angela Fraser, Department of Food, Nutrition and Packaging Science adapted a HACCP Plan that she had previously developed for North Carolina schools. The plan was extensively reviewed by SC Child Nutrition Directors and recommended changes were incorporated. Each year the SC Plan is reviewed and revised to be certain it is feasible and practical within the SC school foodservice environment. Two training programs aligned with the content of the SC HACCP Plan were also developed. The first is a ten-hour program that includes PowerPoint slides, a manual, and a 50-item assessment test. The ten-hour program was submitted to the School Nutrition Association and was granted approval as an approved food safety course. The second training curriculum targets school foodservice operators, is designed to be delivered in two to four hours and covers basic food safety principles and the SC HACCP monitoring forms.

The SC HACCP Plan currently is used by 85 South Carolina school districts and provides food safety standards for 473,000 lunches prepared daily and 84.2 million lunches yearly. To date, 75 individuals have completed the ten-hour training. A database was developed in August 2012 to analyze responses to the test items on the 50-item assessment test administered as part of the ten-hour training program. Individual test items and groupings of test items will be analyzed on a semi-annual basis to determine the difficulty of each item and whether content is being adequately covered in the ten-hour training. All materials, excluding the 50-item assessment exam, are at [www.foodsafetysite.com/foodservice/conducting/SCSchools/SCSchoolsHome](http://www.foodsafetysite.com/foodservice/conducting/SCSchools/SCSchoolsHome).

**New or Unique Collaborations and/or Funding Sources:**

Food industry clientele and food entrepreneurs are benefitting from a collaboration entitled “Food, Nutrition and Packaging Science Emphasis on Health & Safety”. In addition to assisting current South Carolina food businesses, five faculty members (Drs. Dawson, Northcutt, McGregor, Thomas, and Whiteside) in Food, Nutrition and Packaging Science work with the S.C. Department of Agriculture, the S.C. Department of Commerce, and the S.C. Economic Development Association to provide technical expertise to recruit new food and packaging industry into the state. The new food safety Extension associate leads **Food2Market**, a program designed to help South Carolina entrepreneurs navigate regulatory hurdles encountered by new food businesses ([http://www.clemson.edu/extension/food\\_nutrition/food2market/index.html](http://www.clemson.edu/extension/food_nutrition/food2market/index.html)). Agents serve as county-based conduits to connect Extension clientele to both faculty and Extension Associate resources.

**Contact for Additional Information:**

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