Food Processing Industry

Resource Directory

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A task such as this cannot be achieved without the efforts of support staff working with each design team member. To that support staff a sincere thank you is given. I would personally like to thank Anna Marie Rasberry, Connie Teel and Carolyn Boatwright for their secretarial support and Janice Guice for her word processing and database development assistance.

Joe H. McGilberry
Design Team Coordinator
Introduction

The overall objective of the “Southern Region Consortium To Address Food Processing Industry Competitiveness” is to link the land-grant system of the 13-state Southern Region into an alliance to address food processing technology issues, technical assistance resources, and collaborative opportunities. The initial step of this effort was to produce a directory of resources for the land-grant system in the 13-state Southern Region by identifying extension and research expertise, the facilities and equipment that are available and other resources that are in place to support the food processing industry in the region. The information compiled in this directory provides a concise listing of this expertise and resource base to support the commercial food processing industry. A goal of this effort is that this directory will be a tool to enhance collaboration between state land-grant institutions and be used as a guide for the identification of resources available and accessible to the food processing industry in the region. The directory is structured using the following format:

| **Expertise:** | Name  |
|               | Address |
|               | Phone/Fax |
|               | E-mail address |
|               | % Appointment (extension, research, teaching) |
|               | Area of Expertise |
|               | Current Research or Demonstration Projects |
|               | Commodity Interest |
|               | Discipline |

| **Support Facilities:** | Type of facility (e.g., pilot plant, analytical lab, etc.) |
|                       | Name of facility |
|                       | Location |
|                       | Contact person with address/phone |
|                       | Focus area |
|                       | Services offered/capabilities |
|                       | Fee, if any, to access facility use |
|                       | List of equipment housed in facility (with applicable access fees) |

| **Other Resources:** | Type (e.g., publications, newsletters, fact sheets, videos, notebooks, software, workshop handbooks, etc.) |
|                     | Title of publication, video, etc. |
|                     | Fees to obtain |
|                     | How to obtain (address/phone) |
There has been a great deal of discussion over the past several years relating to industrial Extension Service activities supporting the development of small to medium-sized manufacturing/processing industries throughout the United States. A critical mass of food processing expertise and resources exists within the land-grant system at Extension Services and Experiment Stations in the Southern Region that can form the basis for regional collaboration and a consortium to address food processing industry development and competitiveness issues.

The Directory will be accessible in three forms to meet the needs of our Southern Region consortium and our food processing industry clientele. A printed copy of the Directory will be available and distributed through the Southern Rural Development Center (SRDC). A computer disc version of the directory will be provided to the design team member in each state to produce copies and make revisions as needed to their individual state’s data bases.

The third form of Directory access will be via the Internet. The Directory home page will be a component of the SRDC home page with linkage to related home pages at the consortium land-grant institutions in the Southern Region. Upon completion of the Directory home page, articles will be submitted to food industry magazines relating to food technology, food engineering, and process engineering. These publications are a common resource to the food industry and will provide a forum to share focused information on the value of the Directory and available expertise and capabilities which exist at the land-grant institutions of the Southern Region.
Faculty Expertise
FACULTY EXPERTISE

ALABAMA

Name: Dr. Leonard Bell
Address: 328 Spidle Hall
Auburn University, AL 36849-5605
Phone: 334-844-3261 FAX: 334-844-3268
E-mail: 
%Appointment: 0 Extension; 40 Research; 60 Teaching

Areas of Expertise: Food physical chemistry; Chemical reactions occurring in reduced-moisture foods; High-intensity sweeteners; Water activity.
Current Research or Demonstration Projects: 
Commodity: 
Discipline: 

*********

Name: Dr. Margaret Craig-Schmidt
Address: 363 Spidle Hall
Auburn University, AL 36849-5605
Phone: 334-844-3263 FAX: 334-844-3268
E-mail: mcraigsc@humsci.auburn.edu
%Appointment: 0 Extension; 40 Research; 60 Teaching

Areas of Expertise: Nutritional biochemistry; Dietary fats in foods; infant nutrition; lactation maternal nutrition; hydrogenated fat; ratites.
Current Research or Demonstration Projects: Role of long chain polyunsaturated fatty acids in infant nutrition.
Commodity: EMU, Ratite/Infant Formula/Fats & Oils
Discipline: 

*********

Name: Dr. Robin Fellers
Address: 328 Spidle Hall
Auburn University, AL 36849-5605
Phone: 334-844-3261 FAX: 334-844-3268
E-mail: 
%Appointment: 0 Extension; 0 Research; 100 Teaching

Areas of Expertise: Food safety education; Learning styles in training food processor workers.
Current Research or Demonstration Projects: 
Commodity: 
Discipline: 

Name: Yun-Hwa Peggy Hsieh  
Address: Dept. of Nutrition and Food Science  
328 Spidle Hall  
Auburn University, AL 36849  
Phone: 334-844-2211  
FAX: 334-844-3268  
E-mail: phsieh@humsci.auburn.edu  
%Appointment: 0 Extension; 50 Research; 50 Teaching

Areas of Expertise: Protein biochemistry and immunochemistry applied to muscle food protein characterization, antibody production, enzyme immunoassay and food product development.

Current Research or Demonstration Projects: 1) Development of monoclonal antibodies for the detection of species adulteration in cooked meats; 2) Species identification of cooked fish; 3) Utilization of Cannonball jellyfish as food in U.S.

Commodity: Meat, Poultry, and Seafood

Discipline:

*********

Name: Brian E. Perkins, Sr.
Address: Auburn University Marine Research & Extension Center  
4170 Commanders Drive  
Mobile, AL 36615-1413  
Phone: 334-438-5690  
FAX: 334-438-5670  
E-mail: bperkins@seagrant.acenet.auburn.edu  
%Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Fish and seafood product: 1) By-product recovery and utilization; 2) Crisis mediation; 3) Employee training; 4) Environmental impacts of processing wastes; 5) Equipment requirements & installation; 6) Facility design; 7) Good manufacturing practices; 8) Hygiene; 9) Inspection; 10) Interpretation of laws and regulations; 11) Problem troubleshooting; 12) Processing technology; 13) Product development; 14) Quality control; and, 15) Safety.

Current Research or Demonstration Projects:
Commodity: Fish and Seafood

Discipline:
Name: Dr. Paulette Popovich  
Address: 328 Spidle Hall  
Auburn University, AL 36849-5605  
Phone: 334-844-6452  
FAX: 334-844-3268  
E-mail:  
%Appointment: 0 Extension; 30 Research; 70 Teaching  

Areas of Expertise: Total Quality Management; Marketing and Communications; Consumer Product Testing and Evaluation  
Current Research or Demonstration Projects:  
Commodity:  
 Discipline:  

**********

Name: Amarat H. Simonne  
Address: Department of Nutrition and Food Science  
328 Spidle Hall  
Auburn University, AL 36849  
Phone: 334-844-3290  
FAX: 334-844-3268  
E-mail: asimonne@humsci.auburn.edu  
%Appointment: 0 Extension; 100 Research; 0 Teaching  

Areas of Expertise: Food composition and analysis (micro and macro nutrients); Vitamin chemistry and application of HPLC to vitamin analysis; Application of selected technology for improving postharvest quality of products.  
Current Research or Demonstration Projects: 1) Effects of edible lipid based coating on ascorbic acid content of colored bell peppers; 2) Effects of preharvest treatment on postharvest quality and nutritional quality of bell pepper cultivars (Capsicum annum); 3) Consumer preference, yields and chemical composition of selected sugar enhanced and supper sweet sweet corn varieties.  
Commodity:  
 Discipline:  

**********

Name: Jean Olds Weese  
Address: 328 Spidle Hall  
Auburn University, AL 36849-5605  
Phone: 334-844-3261  
FAX: 334-844-3268  
E-mail:  
%Appointment: 85 Extension; 10 Research; 5 Teaching  

Areas of Expertise: Vitamin analysis using HPLC; Shelf life studies; General food safety issues related to food.  
Current Research or Demonstration Projects:  
Commodity:  
 Discipline:  


ARKANSAS

Name: Ron W. Buescher
Address: Department of Food Science
         University of Arkansas
         272 Young Avenue
         Fayetteville, AR 72704
Phone: 501-575-4775  FAX: 501-575-6936
E-mail: rbuesche@mars.uark.edu
%Appointment: 10 Extension; 80 Research; 10 Teaching

Areas of Expertise: Postharvest Physiology and Biochemistry
Current Research or Demonstration Projects: 1) Minimal process requirements of acidified foods; 2) Modified atmosphere preservation of perishables; 3) Reulation of lactic acid bacteria fermentations; 4) Mechanisms that cause and control pigment, texture and flavor changes in food products.
Commodity: Pickles/Acidified Foods/Vegetables and Fruits
Discipline: Post Harvest Physiology

* * * * * * * *

Name: Philip G. Crandall
Address: Department of Food Science
         University of Arkansas
         272 Young Avenue
         Fayetteville, AR 72704
Phone: 501-575-7686  FAX: 501-575-6936
E-mail: pcrandal@mars.uark.edu
%Appointment: 10 Extension; 80 Research; 10 Teaching

Areas of Expertise: Fruit processing, beverages, antimutagenic compounds, viscosity and pectin.
Current Research or Demonstration Projects: 1) Fruit and vegetable processing; 2) Beverage production; 3) Reducing the viscosity of fruit concentrates; 4) Recovery of bioproducts rich in antimutagenic compounds; 5) Development of food processing systems for developing countries.
Commodity: Fruits and Vegetables/Beverages
Discipline: Food Processing
Name: Alfredo R. Gonzalez
Address: Department of Food Science
         University of Arkansas
         272 Young Avenue
         Fayetteville, AR 72704
Phone: 501-575-4678       FAX: 501-575-6936
E-mail: 
% Appointment: 10 Extension; 85 Research; 5 Teaching
Areas of Expertise: Raw product physiology, quality of raw and processed horticultural products and pesticide residues.
Current Research or Demonstration Projects:
Commodity: Green Beans, Peaches, Spinach
Discipline: Post Harvest Physiology

* * * * * * *

Name: Navam Hettiarachchy
Address: Department of Food Science
         University of Arkansas
         272 Young Avenue
         Fayetteville, AR 72704
Phone: 501-575-4779       FAX: 501-575-6936
E-mail: 
% Appointment: 10 Extension; 70 Research; 20 Teaching
Areas of Expertise: Proteins and enzymes, antioxidants, lipid oxidation, food fortification and alternate crop utilization.
Current Research or Demonstration Projects: 1) Isolation, characterization and modification of proteins; 2) Protein structural-functional relationships; 3) physicochemical properties of proteins during processing and storage; 4) nutritional, allergic, and antigenic properties of proteins; 5) Rice processing and food fortification.
Commodity: Rice, Soybeans
Discipline: Protein Chemistry
Name: Dr. Luke R. Howard
Address: Department of Food Science
         University of Arkansas
         272 Young Avenue
         Fayetteville, AR 72704
Phone: 501-575-2978       FAX: 501-575-2165
E-mail: lukeh@comp.uark.edu
% Appointment: 75 Extension; 25 Research; 0 Teaching
Areas of Expertise: Postharvest physiology of fruits and vegetables, modified atmosphere packaging of foods, biochemistry of fruit and vegetable texture, stress metabolism in minimally processed fruits and vegetables, nutritional and sensory changes in fresh and processed fruits and vegetables, food processing.
Current Research or Demonstration Projects: Firmness and cell wall characteristics of pasteurized jalapeno pepper rings as affected by preheating and storage. Chemical composition and color of strained carrots as affected by processing. Antioxidant retention in hot yellow wax peppers as affected by pasteurization and storage. Relationship between physicochemical factors in raw potato tubers and potato chip quality.
Commodity: Fruits & Vegetables
Discipline: Food Processing

********

Name: Michael G. Johnson
Address: Department of Food Science
         University of Arkansas
         272 Young Avenue
         Fayetteville, AR 72704
Phone: 501-575-4778       FAX: 501-575-6936
E-mail: mjohnson@mars.uark.edu
% Appointment: 10 Extension; 70 Research; 20 Teaching
Areas of Expertise: Food safety and Microbiology
Current Research or Demonstration Projects: 1) Rapid methods to detect pathogens in food using monoclonal antibody and nucleic acid probes; 2) Listeria monocytogenes; 3) Destruction and control of pathogens with heat and chemicals; 4) Food fermentation; 5) Control of pathogens with bacteriocins.
Commodity: Poultry, Fruits and Vegetables
Discipline: Food Microbiology
Name: Yanbin Li
Address: Department of Poultry Science
         University of Arkansas
         Poultry Science Dept. 0-114
         Fayetteville, AR 72701
Phone: 501-575-4952       FAX: 501-575-3026
E-mail: 102@engr.uark.edu
%Appointment: 0 Extension; 100 Research; 0 Teaching

Areas of Expertise:
Current Research or Demonstration Projects: Food safety and sanitation biological material properties, simulation, and modeling in food processing, electrical tenderization, electrical pasteurization, processing water, poultry spray to reduce bacterial contamination, mechanical meat stripping, modeling bacterial destruction.
Commodity: Poultry
Discipline: Food Engineering

*********

Name: John Marcy
Address: Department of Poultry Science
         University of Arkansas
         Poultry Science Dept. 0-114
         Fayetteville, AR 72701
Phone: 501-575-2211       FAX: 501-575-3026
E-mail: jmarcy@comp.uark.edu
%Appointment: 40 Extension; 60 Research; 0 Teaching

Areas of Expertise: Poultry processing, meat microbiology and food safety
Current Research or Demonstration Projects: Educational programming with Hazard Analysis Critical Control Point (HACCP), sanitation and microbiology, providing sanitation education to the food service industry and prepared the HACCP training book for the Educational Foundation of the National Restaurant Association.
Commodity:
Discipline: Food Processing
Name: Bradley P. Marks  
Address: Biological & Agricultural Engineering  
          University of Arkansas  
          Engineering Hall 203  
          Fayetteville, AR 72701  
Phone: 501-575-2840  
E-mail: bpm1@engr.uark.edu  
%Appointment: 0 Extension; 70 Research; 30 Teaching  

Areas of Expertise: Thermal processing and storage of food materials  
Current Research or Demonstration Projects: 1) Investigating effects of processing parameters on the end-use quality and functional characteristics of rice, further-processed poultry products and canned vegetables. 2) Developing rapid methods for predicting functional properties of food materials. 3) Quantifying effects of storage history on physicochemical properties and microbial population in stored rice. 4) Developing mathematical models for cooking of poultry products.  
Commodity: Rice, Fruits and Vegetables, and Poultry  
Discipline: Food Engineering

**********

Name: Jean-Francois Meullenet  
Address: Department of Food Science  
          University of Arkansas  
          272 Young Avenue  
          Fayetteville, AR 72704  
Phone: 501-575-6822  
E-mail:  
%Appointment: 10 Extension; 70 Research; 20 Teaching  

Areas of Expertise:  
Current Research or Demonstration Projects:  
Commodity: Fruits, Vegetables, Rice, Poultry  
Discipline: Sensory Science
Name: Justin R. Morris  
Address: Department of Food Science  
          University of Arkansas  
          272 Young Avenue  
          Fayetteville, AR 72704  
Phone: 501-575-4679  
FAX: 501-575-6936  
E-mail: jmorris@mars.uark.edu  
% Appointment: 25 Extension; 50 Research; 25 Teaching  

Areas of Expertise: Enology, product development in juice and wine, raw product quality and effects of mechanization on juice wine.  
Current Research or Demonstration Projects: 1) Influence of preharvest complexes on final juice or wine quality; 2) Viticulture and enology; 3) New processing variables effect on wine quality and style; 4) New juice products from grape fruit blends.  
Commodity: Grapes, Fruits, Vegetables  
Discipline: Enologist

*******

Name: Andy Proctor  
Address: Department of Food Science  
          University of Arkansas  
          272 Young Avenue  
          Fayetteville, AR 72704  
Phone: 501-575-2980  
FAX: 501-575-6936  
E-mail:  
% Appointment: 10 Extension; 75 Research; 15 Teaching  

Areas of Expertise: Lipid chemistry, vegetable oil processing and adsorption.  
Current Research or Demonstration Projects: 1) Vegetable oil processing by adsorption; 2) Removal of non-triglyceride oil components in low energy adsorption systems; 3) Use of biosilicates as novel adsorptents in conventional oil processing.  
Commodity: Soybeans, Rice  
Discipline: Lipid Chemistry
Name: Carolyn Q. Sharp
Address: Department of Food Science
         University of Arkansas
         272 Young Avenue
         Fayetteville, AR 72704
Phone: 501-575-4677  FAX: 501-575-6936
E-mail: csharp@mars.uark.edu
% Appointment: 10 Extension; 90 Research; 0 Teaching

Areas of Expertise: Sensory evaluations and product development
Current Research or Demonstration Projects: 1) Sensory panel training for product evaluation; 2) Experimental and commercial product evaluation; 3) Utilization of rice fractions esp. flour and bran; 4) Vegetable product development.
Commodity: Rice, Vegetables, Fruits, Poultry, Fish
Discipline: Product Development

* * * * * * *

Name: Terry Siebenmorgen
Address: Biological & Agricultural Engineering
         University of Arkansas
         Engineering Hall 203
         Fayetteville, AR 72701
Phone: 501-575-2841  FAX: 501-575-2846
E-mail: % Appointment: 10 Extension; 20 Research; 70 Teaching

Areas of Expertise: Rice Drying and Processing
Current Research or Demonstration Projects: Looking at rice from harvest through milling, maintaining quality and head yield.
Commodity: 
Discipline: Food Engineering
Name: Yang Tao
Address: Biological & Agricultural Engineering
       University of Arkansas
       Engineering Hall 203
       Fayetteville, AR 72701
Phone: 501-575-2351       FAX: 501-575-2846
E-mail: ytO@engr.uark.edu
%Appointment: 80 Research; 20 Teaching

Areas of Expertise: Machine vision, image analysis and instrumentation applied in biological and agricultural engineering areas.

Current Research or Demonstration Projects: 1) Automated quality inspection of fruit and vegetables (plant area). 2) Poultry further processing/cooking line machine vision quality assessment and automatic feedback control (meat area). 3) Rice milling process DOM assessment using image analysis (grain area).

Commodity: Fruits and Vegetables, Poultry, Rice
Discipline: Food Engineering

*********

Name: Amy Waldroup
Address: Department of Poultry Science and Poultry Science Center of Excellence
       University of Arkansas
       Poultry Science Dept. 0-114
       Fayetteville, AR 72701
Phone: 501-575-4409       FAX: 501-575-3026
E-mail:  
%Appointment: 75 Research; 25 Teaching

Areas of Expertise: Poultry Products

Current Research or Demonstration Projects: Production and processing methods to reduce the incidence and levels of pathogens. Water recycling, pathogen detection methods, and new product development. Works with consumer groups to improve the overall knowledge of proper food handling techniques.

Commodity: Poultry
Discipline: Food Processing
FLORIDA

Name: Murat O. Balabb
Address: Food Science and Human Nutrition Dept.
University of Florida
P.O. Box 110370
Gainesville, FL 32611-0370
Phone: 352-392-4273 FAX: 352-392-9467
E-mail: 
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Application of engineering principles towards the preservation, quality retention, and nutritional quality of foods. Mathematical modelling and simulation of food processing. Application of high pressures and super-critical fluid processing to foods, including extraction, microbial and enzymatic effects. Objective quality evaluation by computer machine vision. Ohmic thawing of foods.
Current Research or Demonstration Projects: 1) Enzyme inactivation kinetics with pressurized carbon dioxide; 2) Thawing of frozen shrimp blocks with ohmic heating; 3) Extraction of pigments from shellfish shells with supercritical CO2; 4) Quality evaluation of shrimp with computer machine vision.
Commodity: Seafood and other (non-specific)
Discipline: Food Engineering

**********

Name: Robert P. Bates
Address: Food Science and Human Nutrition Dept.
University of Florida
P.O. Box 110370
Gainesville, FL 32611-0370
Phone: 352-392-1991 FAX: 352-392-9467
E-mail: 
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Activities in tropical and Florida fruits and vegetables, and legume processing and utilization. New processing systems, meat analogues, new food resources, appropriate technology, and low energy food processing and utilization.
Current Research or Demonstration Projects: 1) Adding value by improving the processing potential of Florida horticultural crops; 2) Processing and utilization of tropical fruit; 3) Akee toxicity, analysis and control.
Commodity: Tropical Fruits, Juices, Wine, Malt Beverages
Discipline: Food Science
Name: Robert J. Braddock
Address: Citrus Research and Education Center
         700 Experiment Station Road
         Lake Alfred, FL 33850-2299
Phone: 941-956-1151         FAX: 941-956-4631
E-mail: %Appointment:    0 Extension;   90 Research;   10 Teaching

Areas of Expertise: Citrus processing technology with emphasis on by-products recovery and chemistry, essential oils, aromas, peels drying, water removal, and utilization.
Current Research or Demonstration Projects: 1) Concentration processes including freeze concentration and membrane technology; 2) Aroma and essence concentration and recovery of citrul oils; 3) Dewatering and dehydration of citrus peel residues; 4) Bioconversion of limonene to flavor chemicals.
Commodity: Citrus By-Products
Discipline: Food Science

* * * * * * *

Name: Chin Shu Chen
Address: Citrus Research and Education Center
         700 Experiment Station Road
         Lake Alfred, FL 33850-2299
Phone: 941-956-1151         FAX: 941-956-4631
E-mail: %Appointment:    0 Extension;   100 Research;   0 Teaching

Areas of Expertise: Heat and mass transfer in food systems: food process modelling and application of computer-aided technology. Thermodynamic, physical and transport properties of food materials. Applications to citrus processing technology.
Current Research or Demonstration Projects: 1) Improving citrus juice processing technology; 2) Fruit juice concentration processes and essence recovery; 3) Physiocochemical characterization of fruit juice systems.
Commodity: Citrus Juice Concentrate
Discipline: Food Engineering
Name: Dalton Dwain Johnson
Address: University of Florida
Animal Science Dept.
P.O. Box 110910
Gainesville, FL 32611-0910
Phone: 352-392-1922    FAX: 352-392-7652
E-mail: johnson@animal.ufl.edu
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: 1) Animal Science/Meat Science; 2) Factors influencing quality and composition of beef, pork and goat; 3) Sensory evaluation of meat animals.

Current Research or Demonstration Projects: 1) Identification and manipulation of meat quality of beef from crossbred cattle; 2) Effects of feeding alternative feedstuffs on sensory and composition of pork; 2) Diet and management effects on quality and composition of meat goats.

Commodity: Meats

Discipline: Animal Science

****************

Name: William M. Miller
Address: Citrus Research and Education Center
700 Experiment Station Road
Lake Alfred, FL 33850-2299
Phone: 813-956-1151    FAX: 813-956-4631
E-mail:  
%Appointment: 0 Extension; 100 Research; 0 Teaching

Areas of Expertise: Post Harvest Technology and engineering applied to fruit and vegetable packing house operations, with specific application to Florida citrus fruit.

Current Research or Demonstration Projects: 1) Automation in sorting, grading and handling of fresh produce; 2) Developing base line data for quality evaluation and automatic grading of Florida citrus fruit.

Commodity: Table Fruits and Vegetables

Discipline: Food Engineering
Name: W. Steven Otwell
Address: Food Science and Human Nutrition Dept.
University of Florida
P.O. Box 110370
Gainesville, FL 32611-0370
Phone: 352-392-1991    FAX: 352-392-8594
E-mail: 
%Appointment: 90 Extension; 10 Research; 0 Teaching

Areas of Expertise: Seafood technology as a science of seafood production and utilization, including all applied and basic aspects of harvest, handling, processing, packaging, distribution storage and preparation.
Current Research or Demonstration Projects: 1) Assessing proper use of processing aids for water retention in fresh and frozen seafood; 2) Developing sulfite alternatives to control crustacean melanosis; 3) Developing recommended regulatory and industry practices to assure quality and safety in imported seafood products.
Commodity: Seafood
Discipline: Food Science

********

Name: Gary E. Rodrick
Address: Food Science and Human Nutrition Dept.
University of Florida
P.O. Box 110370
Gainesville, FL 32611-0370
Phone: 352-392-1991    FAX: 352-392-9084
E-mail: 
%Appointment: 0 Extension; 80 Research; 10 Teaching

Areas of Expertise: Seafood microbiology with emphasis on shellfish and associated pathogenic bacteria and parasites of public health importance. Food safety associated with seafood consumption and handling.
Current Research or Demonstration Projects: 1) Uptake elimination, retention, and depuration of virulent, avirulent, and viable but non-culturable forms of Vibrio vulnificus in oysters; 2) Ozone-assisted depuration of red tide; 3) Effect of lactic acid bacteria on the microbiological quality of shrimp, blue crab and oysters.
Commodity: Seafood
Discipline: Microbiology
Name: Charles A. Sims
Address: Food Science and Human Nutrition Dept.
         University of Florida
         P.O. Box 110370
         Gainesville, FL 32611-0370
Phone: 352-392-1991       FAX: 352-392-9467
E-mail:
% Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Juice and wine processing technology and the effects on quality. Use of membrane filtration in the processing of wines and juices, and color deterioration of juices and wines.

Current Research or Demonstration Projects: 1) Use of ultrafiltration to limit oxidation and precipitation of phenolics in juices and wines; 2) Use of sulfites in wines and the examination of alternatives; 3) Evaluation of grape cultivars and breeding lines for processing potential; 4) Pre-harvest factors affecting the quality of wines and juices; 5) Problems associated with tropical fruits; 6) Carrot juice processing and B-carotene stability.

Commodity: Fruits, Vegetable, Wines

Discipline: Food Science

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Name: Arthur A. Teixeira
Address: Agricultural and Biological Engineering Dept.
         University of Florida
         P.O. Box 110570
         Gainesville, FL 32611-0570
Phone: 352-392-7667       FAX: 352-392-4092
E-mail: atex@agen.ufl.edu
% Appointment: 0 Extension; 60 Research; 40 Teaching

Areas of Expertise: Food preservation and sterilization processing systems, computer simulation, optimization and control of food process operations. Economic feasibility studies, infant formula technology, overseas consulting experience.


Commodity: Non-specific

Discipline: Food Engineering
Name: Roger L. West  
Address: University of Florida  
        Animal Science Department  
        P.O. Box 110910  
        Gainesville, FL 32611-0910  
Phone: 352-392-7566  
        FAX: 352-392-7652  
E-mail: west@animal.ufl.edu  
% Appointment: 0 Extension; 60 Research; 40 Teaching  

Areas of Expertise: Meat Science and Muscle Biology  
Current Research or Demonstration Projects: Genetics Influences on Beef Tenderness; Postmortem Control of Beef Tenderness.  
Commodity: Meats  
Discipline: Animal/Meat Science

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Name: Sally K. Williams  
Address: University of Florida  
        Animal Science Department  
        P.O. Box 110910  
        Gainesville, FL 32611-0910  
Phone: 352-392-2993  
        FAX: 352-392-7652  
E-mail: williams@animal.ufl.edu  
% Appointment: 0 Extension; 70 Research; 30 Teaching  

Areas of Expertise: Meat and poultry processing with emphasis on the sole and synergistic effects of functional ingredients (i.e. food additives and GRAS substances) in muscle food systems in relation to functionality, food safety, consumer acceptance and shelf life.  
Current Research or Demonstration Projects: The production of reduced-fat meat (breaded beef nuggets) and poultry (chicken sausage) products; the evaluation of approved phosphate ingredients in restructured meat products and; the evaluation of sodium lactate as an antimicrobial agent in fresh poultry products.  
Commodity: Meats  
Discipline: Animal/Meat Science
GEORGIA

Name: Casimir C. Akoh
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         University of Georgia
         Athens, GA 30602-7610
Phone: 706-542-1067        FAX: 706-542-1050
E-mail: cmseakoh@uga.cc.uga.edu
%Appointment: 0 Extension; 60 Research; 40 Teaching

Areas of Expertise: Food chemistry and biochemistry. Lipid biotechnology/chemistry/biochemistry. Chemical and enzymatic syntheses of fat substitutes, their properties, application and metabolism. Food emulsifiers; enzymatic modification of lipids and phospholipids; metabolism of n-3 polyunsaturated fatty acids and n-9 fatty acids; synthesis of flavor and fragrance compounds; food additives; physical and chemical properties of lipids, and oxidative stability of lipids. Food enzymology.

Current Research or Demonstration Projects:
Commodity: Fats and Oils
Discipline: Food chemistry and biochemistry

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Name: John A. Carpenter
Address: University of Georgia
         Department of Food Science and Technology
         Athens, GA 30602
Phone: 706-542-2286        FAX: 706-542-1050
E-mail: cmseacarp@uga.cc.uga.edu
%Appointment: 0 Extension; 55 Research; 45 Teaching

Areas of Expertise: Microbiology of meat and poultry and meat and poultry products; methods of detection and inhibition of pathogens on carcasses and processed meats. Studies on transportation and storage of fresh meats; technological improvements in meat and poultry processing.

Current Research or Demonstration Projects:
Commodity: Meat and Poultry
Discipline: Meat and Poultry Microbiology
Name: Michael P. Doyle  
Address: Department of Food Science & Technology  
         University of Georgia  
         Athens, GA 30602-7610  
Phone: 706-542-2286  
E-mail: mdoyle@uga.cc.uga.edu  
%Appointment: 10 Extension; 57 Research; 33 Teaching

Areas of Expertise: Foodborne bacterial pathogens. Research focused on study of mechanisms of pathogenicity, the development of methods for pathogen detection and the identification of means to control or eliminate pathogens from foods.

Current Research or Demonstration Projects:  
Commodity: Non-specific  
Discipline: Microbiology

**********

Name: Ronald R. Eitenmiller  
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         University of Georgia  
         Athens, GA 30602-7610  
Phone: 706-542-2286  
E-mail: cmseiten@uga.cc.uga.edu  
%Appointment: 0 Extension; 52 Research; 48 Teaching

Areas of Expertise: Basic and applied studies with food and microbial enzymes; biologically active amine formation in food and relation to safety and quality; food composition; vitamin analysis methods, processing effects on nutrient quality.

Current Research or Demonstration Projects:  
Commodity: Non-specific  
Discipline: Food composition and nutritional quality

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Name: Daniel L. Fletcher  
Address: Department of Poultry Science  
         University of Georgia  
         Athens, GA 30602  
Phone: 706-542-2476  
E-mail: fletcher@uga.cc.uga.edu  
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Poultry science; food science; poultry processing; poultry further processing; meat quality; food microbiology.

Current Research or Demonstration Projects: 1) Effects of slaughter on meat quality; 2) Factors affecting poultry meat quality  
Commodity: Poultry  
Discipline: Poultry Processing
Name: Joseph F. Frank
Address: Department of Food Science & Technology
         University of Georgia
         Athens, GA 30602-7610
Phone:    706-542-0994       FAX: 706-542-7472 or 542-1050
E-mail:   frank@flavor.fst.uga.edu
%Appointment: 0 Extension; 65 Research; 35 Teaching

Areas of Expertise: Control of pathogens in food processing plants; dairy microbiology, pathogen response to adverse food environments, sanitation of food and nonfood surfaces.
Current Research or Demonstration Projects: 1) Sanitizer effectiveness on food processing surfaces;
2) Control of E. coli 0157:H7 and Listeria monocytogenes in dairy products; 3) Removal of Salmonella from food tissues surfaces.
Commodity: Dairy
Discipline: Microbiology

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Name: Seyoum Gelaye
Address: Agricultural Research Station
         Fort Valley State University
         1005 University Drive
         Fort Valley, GA 31030-3298
Phone: 912-825-6817 or 6864       FAX: 912-825-6376
E-mail: twolfork@fvs3.fvsc.peachnet.edu
%Appointment: 0 Extension; 75 Research; 25 Teaching

Areas of Expertise: Assessing animal responses and evaluating nutritional value of dairy and meat products.
Current Research or Demonstration Projects: 1) Evaluating milk and meat production potentials of milk and meat goats; 2) Assessing gross and chemical composition of goat milk and chevon.
Commodity: Small Ruminants; Dairy
Discipline: Dairy
Name: Yao-wen Huang  
Address: Department of Food Science & Technology  
          University of Georgia  
          Athens, GA 30602-7610  
Phone: 706-542-2286  
FAX: 706-542-1050  
E-mail: yhuang@uga.cc.uga.edu  
%Appointment: 0 Extension; 55 Research; 45 Teaching  

Areas of Expertise: Aquatic food technology. Quality and safety of packaged fishery products; new product research and development; biochemical indicator for seafood quality; by-product recovery and utilization; microwave cooking.  
Current Research or Demonstration Projects: 1) Safety and quality of aquatic product held in modified atmospheres and vacuum skin packaging systems; 2) Microwave cooking technology; 3) Marination technology in seafood products; 4) Complete uses of under utilized aquatic species; 5) Edible film application on value added fishery products; 6) New product development; formulation, optimization, etc.  
Commodity: Seafood  
Discipline: Seafood Processing

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Name: Yen-Con Hung  
Address: Center for Food Safety & Technology  
          University of Georgia  
          Griffin, GA 30223-1797  
Phone: 770-412-4739  
FAX: 770-229-3216  
E-mail: young@cfsque.griffin.peachnet.edu  
%Appointment: 0 Extension; 90 Research; 10 Teaching  

Current Research or Demonstration Projects: 1) Prevention of freezing crack during food freezing; 2) Microwave pasteurization of poultry products; 3) Evaluate and maintain crispness of fried foods; 4) Laser-puff; a non-destructive food firmness detector.  
Commodity: Non-specific  
Discipline: Food Engineering
Name: William C. Hurst
Address: Department of Food Science & Technology
         University of Georgia
         Athens, GA 30602-7610
Phone: 706-542-2286   FAX: 706-542-1050
E-mail: bhurst@uga.cc.uga.edu
% Appointment: 25 Extension; 0 Research; 75 Teaching

Areas of Expertise: Postharvest technology of horticultural crops (fruits, nuts, vegetables). HACCP instruction for fruit/vegetable processing, fresh product handling and minimally processed produce. Confectionery technology.

Current Research or Demonstration Projects:
Commodity: Fruits and Vegetables
Discipline: Processing; postharvest technology

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Name: Philip Koehler
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         University of Georgia
         Athens, GA 30602-7610
Phone: 706-542-2286   FAX: 706-542-1050
E-mail: Pkoehler@uga.cc.uga.edu
% Appointment: 0 Extension; 25 Research; 75 Teaching

Areas of Expertise: Biochemistry of foods; isolation, characterization, biosynthesis of food components and contaminants; food colorants and flavors, natural pigments, color measurement, biologically active amines.

Current Research or Demonstration Projects:
Commodity: Non-specific
Discipline: Food Biochemistry
Name: Anna V. A. Resurreccion
Address: Department of Food Science & Technology
         University of Georgia
         Agricultural Experiment Station
         Griffin, GA 30223
Phone: 770-412-4736        FAX: 770-229-3216
E-mail: aresurr@griffin.gaes.peachnet.edu
%Appointment: 0 Extension; 100 Research; 0 Teaching

Areas of Expertise: Product quality; sensory evaluation; consumer attitudes, perceptions and preferences; consumer-based product optimization and product improvement; product guidance research; storage stability and shelf life.

Current Research or Demonstration Projects: 1) Alternative packaging for fluid products; 2) Development and storage stability of food products; 3) Flavor enhancement properties of specific foods; 4) Consumer attitudes and purchase behaviors toward poultry products and fresh produce.

Commodity: Non-specific
Discipline: Sensory and Consumer Evaluation

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Name: A. Estes Reynolds
Address: University of Georgia
         Extension Food Science & Technology
         1143A Food Science Bldg.
         Athens, GA 30602
Phone: 706-542-2574        FAX: 706-542-9066
E-mail: ereynold@uga.cc.uga.edu
%Appointment: 75 Extension; 25 Research; 0 Teaching

Areas of Expertise: Meat Science and Food Technology. New product development; process controls; quality assurance; food plant sanitation; HACCP programs; plant layout and line design/smoked meats and sausage processing/poultry product processing seafood products.

Current Research or Demonstration Projects: 1) Assessment of fat degradation during use in food processing; 2) New product development in vegetables and seafood; 3) Resource development with new food plants; 4) Developing recommended educational programs for HACCP implementation.

Commodity: Meat and Poultry
Discipline: Food Processing; Food Safety
Name: Robert L. Shewfelt  
Address: Center for Food Safety and Quality Enhancement  
         University of Georgia Experiment Station  
         Griffin, GA 30223-1797  
Phone: 706-542-5136  
E-mail: rshewfe@cfsqe.griffin.peachnet.edu  
% Appointment: 0 Extension; 90 Research; 10 Teaching  

Current Research or Demonstration Projects: 1) Maximization of lettuce, mango, peach and banana quality in home storage; 2) Role of lipid oxidation in chilling injury of bell peppers; 3) Quality improvement of fresh tomato flavor.  
Commodity: Fruits and Vegetables  
Discipline: Food Quality  

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Name: Romeo T. Toledo  
Address: University of Georgia  
         Department of Food Science and Technology  
         Athens, GA 30602  
Phone: 706-542-2286  
E-mail: cmsromeo@uga.cc.uga.edu  
% Appointment: 0 Extension; 65 Research; 35 Teaching  

Areas of Expertise: Food process engineering. Process development and control; pasteurization/sterilization; high pressure and supercritical fluid processing.  
Current Research or Demonstration Projects:  
Commodity: Non-specific  
Discipline: Food Process Engineering
KENTUCKY

Name: Kwaku Addo
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Phone: 606-257-7784 FAX: 606-257-3707
E-mail: kaddo01@ukcc.uky.edu
% Appointment: 42 Extension; 52 Research; 6 Teaching

Areas of Expertise: Cereal and carbohydrate chemistry, cereal rheology and natural fiber
Current Research or Demonstration Projects: Analytical and rheological methods for wheat flour quality evaluation; isolation, characterization and utilization of dietary fiber from cereals, legumes, and root tubers; isolation and thermal modification of starch from cereals for use as low-caloric bulking agents in diet foods.
Commodity:
Discipline: Carbohydrates, Food Science

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Name: Margaret Barth
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Phone: 606-257-3046 FAX: 606-257-3707
E-mail: mbarth@ukcc.uky.edu
% Appointment: 0 Extension; 55 Research; 45 Teaching

Areas of Expertise: Post harvest physiology and technology of vegetable products, nutrition quality and lipid oxidation of plant tissue, modified atm packaging
Current Research or Demonstration Projects: Food quality issues in the packaging and processing of fruit and vegetables; effects of new post-harvest storage technologies on nutrient and market quality retention and enzyme activities in whole and processed fruit and vegetable tissues; development of improved vitamin methodology for extraction and determination of antioxidants vitamins in vegetables; the application of natural products for preservation of vegetable quality during post harvest storage.
Commodity:
Discipline: Postharvest Physiology, Food Science
Name: William "Luke" Boatright  
Address: Dept. of Animal Sciences  
412 W. P. Garrigus Bldg.  
University of Kentucky  
Lexington, KY 40546-0215  
Phone: 606-257-5988  
FAX: 606-323-1027  
E-mail: wlboat1@pop.uky.edu  
%Appointment: 0 Extension; 70 Research; 30 Teaching  

Areas of Expertise: Lipid derived flavors and odors; biochemistry of flavor compounds, and lipid-protein interactions  
Current Research or Demonstration Projects: Lipid protein interactions in soy isolates, oxidation of lipids and proteins, flavor attributes induced by oxidation reactions.  
Commodity:  
Discipline: Lipid Oxidation, Food Science

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Name: C. L. Hicks  
Address: Dept. of Animal Sciences  
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University of Kentucky  
Lexington, KY 40546-0215  
Phone: 606-257-7538  
FAX: 606-323-1027  
E-mail: clhicks@ca.uky.edu  
%Appointment: 0 Extension; 10 Research; 30 Teaching

Areas of Expertise: Dairy chemistry, dairy microbiology, cheese cultures and media, milk coagulators, and food processing  
Current Research or Demonstration Projects: Cheese yield studies on heal time, curd firmness, internal pH control media, etc.; development of a diffused reflectance probe to monitor curd firmness, and development of techniques to inhibit culture agglutination and phage proliferation, including homogenization, competitive binders, and antigenic blockers.  
Commodity:  
Discipline:
Name: Bruce E. Langlois
Address: Dept. of Animal Sciences
        204 W. P. Garrigus Bldg.
        University of Kentucky
        Lexington, KY 40546-0215
Phone: 606-257-5881      FAX: 606-257-5318
E-mail: blanglo@ca.uky.edu
%Appointment:  0 Extension;  70 Research;  30 Teaching

Areas of Expertise: Food microbiology, food pathogens, microbial resistance to antibiotics
Current Research or Demonstration Projects: Use of Natural Occurring Volatile Compounds to
Control Bacterial Pathogens on Foods
Factors Influencing Antibiotic Resistance in Bacteria from Swine
Microbial Safety of Cook/Chill Systems
Toxins of Campylobacter
Growth and Survival of Selected Pathogens on Vacuum Packaged Dry Cured Ham Slices
Staphylococcal Bovine Mastitis
Commodity:
Discipline: Food Microbiology, Food Science

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Name: William Benjy Mikel
Address: 205 W. P. Garrigus Bldg.
        University of Kentucky
        Lexington, KY 40546
Phone: 606-257-5318      FAX: 606-257-7550
E-mail: wmkel@ca.uky.ed
%Appointment:  75 Extension;  0 Research;  25 Teaching
Areas of Expertise: Meat Processing, Meat Microbiology
Current Research or Demonstration Projects: Methods of microbial decontamination of muscle foods;
Value added production from low quality muscle raw materials.
Commodity:
Discipline: ********

Name: William G. Moody
Address: Dept. of Animal Sciences
        209 W. P. Garrigus Bldg.
        University of Kentucky
        Lexington, KY 40546-0215
Phone: 606-257-7551      FAX: 606-257-5318
E-mail: wmoody@ca.uky.edu
%Appointment:  0 Extension;  46 Research;  54 Teaching

Areas of Expertise: Meat processing, muscle histology and histochemistry, tenderness & palatability of
meat.
Current Research or Demonstration Projects: Restructured beef technology, sensory attributes and
economic value of grass fed beef; low fat beef processing; use of additives to enhance beef flavor, shelf
life, consumer acceptance.
Commodity:
Discipline: Muscle Physiology, Food Science
Name: Joseph O'Leary
Address: Dept. of Animal Sciences
        203 W. P. Garrigus Bldg.
        University of Kentucky
        Lexington, KY 40546-0215
Phone: 606-257-5882     FAX: 606-323-1027
E-mail: joleary@ca.uky.edu
% Appointment:  70 Extension;  0 Research;  30 Teaching

Areas of Expertise: Food microbiology, food manufacturing plant sanitation, HACCP plan development
Current Research or Demonstration Projects: Food plant sanitation programs and training, food safety
for food service, dairy production TQM, HACCP plan development for food processors.
Commodity:
Discipline: Food Science

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Name: Fred Payne
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        220 Agricultural Engineering #2
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Phone: 606-257-3000 Ext. 220     FAX: 606-257-5671
E-mail: payne@engr.uky.edu
% Appointment:  0 Extension;  70 Research;  30 Teaching

Areas of Expertise: CO₂ puffing of fruit and vegetables and sensor development.
Current Research or Demonstration Projects: Process development of puffed and dehydrated food
products, development of milk coagulation sensors, development of sensors to monitor cottage cheese
culture growth.
Commodity:
Discipline: Automation Control, Food Engineering

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Name: James H. Tidwell
Address: Aquaculture Research Center
        103 Athletic Drive
        Frankfort, KY 40601
Phone: 502-564-9104     FAX: 502-564-9118
E-mail: 
% Appointment:  0 Extension;  100 Research;  0 Teaching

Areas of Expertise: Aquaculture
Current Research or Demonstration Projects: Aquaculture of shrimp, paddlefish, catfish, yellow
peach, walleye and other species.
Commodity: Fisheries
Discipline: Process Quality
Name: Youling Xiong
Address: Dept. of Animal Sciences
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University of Kentucky
Lexington, KY 40546-0215
Phone: 606-257-3822    FAX: 606-323-1027
E-mail: ascxiong@ukcc.uky.edu
% Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Muscle and protein chemistry
Current Research or Demonstration Projects: Thermal denaturation and aggregation of meat and milk proteins; gelation, emulsification, and water-binding of food proteins; textural and rheological properties of muscle foods; use of antioxidants to improve food protein functionality and meat flavor; muscle fiber type and its relation to quality of processed meats; low-fat and value-added meat and milk products.
Commodity:
Discipline: Protein Chemistry, Food Science
LOUISIANA

Name: J. David Bankston, Jr.
Address: Louisiana State University
P.O. Box 25100
Baton Rouge, LA 70894-5100
Phone: 504-388-6731    FAX: 504-388-2478
E-mail: envprog@lsuvwm.sncc.lsu.edu
% Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Heat transfer, thermodynamics, energy conservation; computerized data collection, refrigeration, rapid cooling
Current Research or Demonstration Projects: Pasteurization of seafood products utilizing in product temperature monitoring and control of heating medium.
Commodity:
Discipline:

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Name: Michael W. Moody
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Louisiana State University
P.O. Box 25100
Baton Rouge, LA 70894-5100
Phone: 504-388-2152    FAX: 504-388-2152
E-mail: xtecon@lsuvwm.sncc.lsu.edu
% Appointment: 90 Extension; 10 Research; 0 Teaching

Areas of Expertise: Seafood technology and processing, including harvesting, processing, storage and distribution. Expertise also includes government regulations and guidelines.
Current Research or Demonstration Projects: Seafood decomposition; HACCP; Process monitoring and improvements.
Commodity:
Discipline:
MISSISSIPPI

Name:       Dr. Keith Cadwallader
Address:    Box 9805
            Mississippi State, MS 39762
Phone:      601-325-3200    FAX: 601-325-8728
E-mail:     krcmail@ra.msstate.edu
%Appointment: 0 Extension; 73 Research; 27 Teaching

Areas of Expertise: Food/flavor chemistry, Instrumental analysis of food components, Sensory evaluation of food flavor.

Current Research or Demonstration Projects: Flavor extracts from seafood processing wastes. Characterization of food aromas: lobster, prawn, crab, watermelon, saffron, muscadine, hickory and mesquite smoke, blueberry. Enzymatic hydrolysis of soybean for flavor extract production.

Commodity: Seafood, soybeans, fruits, spices
Discipline: Flavor Chemistry, Sensory (Food Science), Enzymology

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Name:       Dr. Custy F. Fernandes
Address:    Experimental Seafood and Processing Laboratory
            Coastal Research & Extension Center
            3611 Frederic Street
            Pascagoula, MS 39567
Phone:      601-762-7783    FAX: 601-762-7784
E-mail:     custyfer@ces.msstate.edu
%Appointment: 50 Extension; 50 Research; 0 Teaching

Areas of Expertise: Fish

Current Research or Demonstration Projects: vibrio vulnificus education kit; evaluate processing equipment for yields and quality; product development and reformulation.

Commodity: Seafood, including aquacultured fish.
Discipline: Fisheries technology

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Name:       Dr. Mary Anne Drake
Address:    Box 9805
            Mississippi State, MS 39762
Phone:      601-325-3200    FAX: 601-325-8728
E-mail:     
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Food Microbiology/Dairy Emphasis

Current Research or Demonstration Projects: Rapid methods for food borne pathogen detection, improving sensory quality of reduced/low-fat cheese

Commodity: Dairy Foods
Discipline: Food Science
Name: Dr. Zahur U. Haque
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        Mississippi State, MS 39762
Phone: 601-325-3200  FAX: 601-325-8728
E-mail: haque@ra.msstate.edu
%Appointment: 0 Extension; 65 Research; 35 Teaching

Areas of Expertise: Food protein chemistry/Functionality in Food Systems. Colloidal dispersions in foods, food proteins, Protein-protein interactions, food protein functionality, protein-lipid interactions, standard research techniques in the areas of biochemistry and nutritional biochemistry including use of computers in research and data scanning management, standardization of methodology related to food technology.

Current Research or Demonstration Projects: Protein Functionality (Member and Chair of National Committee on Functionality); Colloidal Systems in foods, including food emulsions and microemulsions, gels and foams, protein-lipid and carbohydrate interactions; Nutritional biochemistry as it relates to impact of additives and ingredients in food on biological systems (using animals as model).

Commodity: Dairy
Discipline: Biochemistry, Protein Chemistry, Colloids

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Name: Anna F. Hood
Address: Food and Fiber Center
        Box 9642
        Mississippi State, MS 39762
Phone: 601-325-2160  FAX: 601-325-7844
E-mail: annah@mcies.msstate.edu
%Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Quality assurance control; product development and improvement; process development; interpretation of government regulations

Current Research or Demonstration Projects: Development of TQA/HACCP manual for catfish processing industry.

Commodity: All food products
Discipline: Food Science

* * * * * *
Name: Dr. Roger P. Jones  
Address: Box 10460 - Hinds Community College  
Raymond, MS 39154  
Phone: 601-857-3408  
FAX: 601-857-3577  
E-mail:  
%Appointment: 0 Extension; 0 Research; 100 Teaching  
Areas of Expertise: Meat Science - Food Processing Technology; Preparing men and women for careers in the Food Processing and related industries in areas of Quality Control Technician, Laboratory Technician, Management Trainee, Sanitation, Purchasing, Product Development and others.  
Current Research or Demonstration Projects: Work with several companies in the food industry with internships and training.  
Commodity: Red Meats, Poultry  
Discipline: Processing

Name: Dr. Douglas Marshall  
Address: Box 9805  
Mississippi State, MS 39762  
Phone: 601-325-3200  
FAX: 601-325-8728  
E-mail: microman@ra.msstate.edu  
%Appointment: 0 Extension; 75 Research; 25 Teaching  
Areas of Expertise: Food Microbiology/Safety; Aquaculture products quality and safety; general food science; control of foodborne pathogens; seafood microbiology; use of antimicrobials in foods; modified atmosphere packaging; HACCP  
Current Research or Demonstration Projects: Seafood harvesting, processing and marketing; food safety of aquacultured catfish; food safety and sanitation of aquacultured products - Microbial Regional Food Safety Research  
Commodity: Seafood, Catfish  
Discipline: Food Microbiology

Name: Dr. Robert W. Rogers  
Address: Box 9815  
Mississippi State, MS 39762  
Phone: 601-325-2802  
FAX: 601-325-8873  
E-mail: rrogers@ra.msstate.edu  
%Appointment: 0 Extension; 53 Research; 47 Teaching  
Areas of Expertise: Meat Processing; sausage and cured meats processing; food law; food packaging  
Current Research or Demonstration Projects: Affects of rBST on beef quality and processing characteristics  
Commodity: Red Meats  
Discipline: Animal Science, Food Science & Processing, Quality, Product Development

* * * * * * *
Name: Dr. Juan L. Silva
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         Box 9805
         Mississippi State, MS 39762
Phone: 601-325-3200 or 2160    FAX: 601-325-8728 or 7844
E-mail: juans@mces.msstate.edu
%Appointment: 40 Extension; 50 Research; 10 Teaching

Areas of Expertise: Catfish/aquaculture; processing/quality improvement; catfish safety; fruits &
vegetables processing; food processing plants; layouts (preliminary) and manufacturing scheme
Current Research or Demonstration Projects: Technologies/ingredients to improve quality of
channel catfish products; modified atmosphere packaging; total utilization of catfish; development of
products from by-products; post-harvest treatment of fruits and vegetables for quality extension; quality
of foods: biophysical and chemical evaluation; irradiation of foods, emphasis on fish.
Commodity: All food products; especially seafoods including aquaculture products, fruit and
vegetable products, sauces and preserves.
Discipline: Processing, Engineering, Quality Assurance, Packaging, Refrigeration/Freezing Extension

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Name: Dr. Charles H. White
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         Mississippi State, MS 39762
Phone: 601-325-3200    FAX: 601-325-8728
E-mail: chwhite@ra.msstate.edu
%Appointment: 0 Extension; 66 Research; 34 Teaching

Areas of Expertise: Food Microbiology/Dairy Emphasis, Dairy Processing
Current Research or Demonstration Projects: Rapid shelf-life prediction tests; survival of
bifidobacteria in cultured dairy products; high pressure homogenization; establishment and verification
of HACCP Programs
Commodity: Dairy Products
Discipline: Sensory, Quality Assurance, Product Development

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NORTH CAROLINA

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FAX: 919-515-2124
E-mail: jon_allen@ncsu.edu
%Appointment: 0 Extension; 80 Research; 20 Teaching

Areas of Expertise: Nutrition; mineral metabolism; food allergy; milk components secretion; and lactation.

Current Research or Demonstration Projects: Methods for predicting allergic potential of new food components or processes; providing highly available calcium sources.
Commodity: Non-specific
Discipline: Nutrition

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Name: Dr. Charles Apperson
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Dept. of Entomology
Box 7613
Raleigh, NC 27695-7613
Phone: 919-515-2703
FAX: 919-515-7746
E-mail: charles_apperson@ncsu.edu
%Appointment: 61 Extension; 39 Research; 0 Teaching

Areas of Expertise: Management of public health pests, including insects (and related arthropods) and commensal rodents; pesticide applicator certification training for public health (subclass B)
Current Research or Demonstration Projects: None related to food processing.
Commodity: Non-specific
Discipline: Entomology

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Name: Leon C. Boyd, Ph.D.
Address: North Carolina State University
Box 7624 Rm 218 Schaub Hall
Raleigh, NC 27695-7624
Phone: 919-954-9077
FAX: 919-515-2968
E-mail: leon_boyd@ncsu.edu
%Appointment: 0 Extension; 80 Research; 20 Teaching

Areas of Expertise: Food lipids: lipid oxidation products.
Current Research or Demonstration Projects: Antioxidant properties of phospholipids and other natural plant by-product and their functional and biological activity in food systems.
Commodity: Non-specific
Discipline: Food Chemistry

******
Name: M. D. Boyette  
Address: North Carolina State University  
         Box 7625  
         Raleigh, NC 27695  
Phone: 919-515-6790  
E-mail: boyette@eos.ncsu.edu  
%Appointment:  
     80 Extension;  
     20 Research;  
     0 Teaching  

Areas of Expertise: Postharvest cooling and handling of fresh produce.  
Current Research or Demonstration Projects: Sweet potato curing and storage; postharvest cooling of peppers and cucumbers.  
Commodity: Sweet potatoes, peppers, cucumbers  
Discipline:  

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Name: Pat Curtis  
Address: North Carolina State University  
         Dept. of Food Science  
         Box 7624  
         Raleigh, NC 27695-7624  
Phone: 919-515-2956  
E-mail: pat_curtis@ncsu.edu  
%Appointment:  
     80 Extension;  
     20 Research;  
     0 Teaching  

Areas of Expertise: Poultry and egg processing and produce technology issues related to product safety and wasteload reduction.  
Current Research or Demonstration Projects: Shell egg processing (HACCP Plans Rapid Cooling Microbial Safety Characterization of Processing Waste Water); development of online training programs.  
Commodity: Poultry and egg products  
Discipline:
Name: Kenneth L. Esbenshade  
Address: North Carolina State University  
Animal Science Dept./Asst. Provost, International Affairs  
Box 7621  
Raleigh, NC 27695-7621  
Phone: 919-515-3201  
FAX: 919-515-6884  
E-mail: ken_esbenshade@ncsu.edu  
%Appointment: Extension; Research; Teaching  

Areas of Expertise: In-vivo and in-vitro body composition expertise in ruminants, monogastrics, and some primates; growth/development energetics of lean and fat deposition.  
Current Research or Demonstration Projects: Not involved currently (administrative responsibility).  
Commodity: Non-specific  
Discipline: Non-specific  

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Name: Brian E. Farkas  
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Box 7624  
Raleigh, NC 27695  
Phone: 919-515-2959  
FAX: 919-515-7124  
E-mail: befarkas@ncsu.edu  
%Appointment: 0 Extension; 80 Research; 20 Teaching  

Areas of Expertise: Heat, mass, momentum transfer; thermal processing; numerical modeling of unit operations; food engineering.  
Current Research or Demonstration Projects: Thermal processing; aseptic processing; mathematical modeling of phase change problems.  
Commodity: Non-specific  
Discipline: Engineering  

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Name: Angela Fraser  
Address: North Carolina State University  
Department of Family & Consumer Sciences  
Box 7605  
Raleigh, NC 27695-7605  
Phone: 919-515-9150  
FAX: 919-515-3483  
E-mail: afraser@amarog.ncsu.edu  
%Appointment: 100 Extension; 0 Research; 0 Teaching  

Areas of Expertise: Food safety education, particularly for food service and consumers.  
Current Research or Demonstration Projects: The evaluation of food handling practices and factors that influence these practices.  
Commodity: Food Science  
Discipline:
Name: David P. Green, Ph.D.
Address: North Carolina State University
        Seafood Laboratory
        P.O. Box 1137
        Morehead City, NC 28557
Phone: 919-726-7341     FAX: 919-726-9870
E-mail: dave_green@ncsu.edu
%Appointment: 80 Extension; 20 Research; 0 Teaching

Areas of Expertise: Fish and Seafood products; food processing and engineering of aquatic food products with emphasis on improving unit operations to assure product safety and quality, reduce energy and waste generation, and improve overall management efficiencies including HACCP and TQA programs.

Current Research or Demonstration Projects: Seafood quality and safety education training; automating process and record-keeping requirements under the U.S. FDA Program; feasibility of detecting discoloration and off-flavors in thermally processed blue crab meat using spectroscopic techniques; HACCP study of time and temperature abuse in batter operations; reengineering the handling of fresh (cooked) crab claws for improved meat qualities and new product development; process engineering of a "pasteurized" raw oyster for institutional users.

Commodity: Seafood Products
Discipline:

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Name: Margaret J. Hinds, Ph.D.
Address: North Carolina A&T State University
        Human Environment & Family Sciences
        161 Carver Hall
        Greensboro, NC 27411
Phone: 910-334-7963     FAX: 910-334-7779
E-mail: hindsma@athena.ncat.edu
%Appointment: 0 Extension; 75 Research; 25 Teaching

Areas of Expertise: Food chemistry/functional properties, flavors, lipids; physical, chemical and sensory analysis of plant and animal components and processed foods.

Current Research or Demonstration Projects: Physical, chemical and sensory quality of poultry treated with antimicrobial dips; functional properties of and flavors in flours from partially-defatted roasted peanuts.

Commodity: Non-specific
Discipline: Food Chemistry
Name: Thomas J. Hoban, Ph.D.
Address: Department of Sociology
        NCSU Box 8107
        Raleigh, NC 27695-8107
Phone: 919-515-1676          FAX: 919-515-2610
E-mail: tom_hoban@ncsu.edu
%Appointment: 50 Extension; 50 Research; 0 Teaching

Areas of Expertise: Survey research, public perceptions, change management, marketing, communication, strategic planning, risk perception, food safety, biotechnology, retailer relations, efficient consumer response (ECR) innovation.

Current Research or Demonstration Projects: Analysis of results from numerous consumer survey in U.S. and internationally. These focus on such topics as: acceptance of biotechnology, shopping behavior, attitudes about food safety and nutrition, and market segmentation. I am also conducting an in-depth study of the food retail (supermarket) industry; as well as the marketing and creation of new food products.

Commodity: Non-specific
Discipline: Risk perception/public attitudes

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Name: Ervin G. Humphries
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        Box 7625
        Raleigh, NC 27695-7625
Phone: 919-515-6728          FAX: 919-515-7760
E-mail: humphrie@eos.ncsu.edu
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Materials handling; cleaning, grading, cooling of cucumbers and similar products; fermentation and storage of cucumbers and other brined vegetables.

Current Research or Demonstration Projects: Hydrocooler investigations; sizing equipment; simulation techniques; tanzing systems.

Commodity: Vegetables
Discipline:
Name: Lee-Ann Jaykus, Ph.D.
Address: North Carolina State University
          Food Science Department
          Box 7624
          Raleigh, NC 27695-7624
Phone: 919-515-2971          FAX: 919-515-7624
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%Appointment: 0 Extension; 80 Research; 20 Teaching

Areas of Expertise: Development of rapid molecular methods for the detection of human pathogenic bacteria and viruses in foods; development of quantitative risk assessment for the evaluation of human health risks due to foodborne pathogenic microorganisms.
Current Research or Demonstration Projects: Development of rapid, molecular methods to detect human enteric viruses in foods; development of methods to concentrate and purify microorganisms from foods for detection using PCR and RT-PCR.
Commodity: Non-specific
Discipline: Microbiology

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Name: Todd R. Klaenhammer
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          Raleigh, NC 27695-7824
Phone: 919-515-2951          FAX: 919-515-7124
E-mail: klaenhammer@ncsu.edu
%Appointment: 0 Extension; 80 Research; 20 Teaching

Areas of Expertise: Fermentation; dairy starter cultures; biomass production bacterial), culture preservation, genetic modification of fermentative lactic and bacteria.
Current Research or Demonstration Projects: Genetics of lactic acid bacteria and their bacteriophages.
Commodity: Dairy
Discipline: Microbiology/Biotechnology
Name: Tyre C. Lanier  
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         Food Science Department  
         Box 7624  
         Raleigh, NC 27695-7624  
Phone: 919-515-2964  FAX: 919-515-7124  
E-mail: tyre@unity.ncsu.edu  
%Appointment: 0 Extension; 80 Research; 20 Teaching

Areas of Expertise: Protein gelation, esp. muscle proteins; freeze and heat stability of proteins; gel texture measurement; processing of proteins and protein-rich foods, esp. muscle-based foods; muscle freshness assessment; proteolyne enzyme degradation of foods and its inhibition.  
Current Research or Demonstration Projects: Freeze stabilization of muscle proteins and intact muscle; proteolytic degradation and inhibition; gel structure, chemistry and texture.  
Commodity: Muscle Foods  
Discipline: Protein Chemistry

Name: R. E. Lichtenwalner  
Address: Vernon James Center  
         North Carolina State University  
         207 Research Station Rd.  
         Plymouth, NC 27962  
Phone: 919-793-4428  FAX: 919-793-5142  
E-mail: richten  
%Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Beef carcass grading  
Current Research or Demonstration Projects: N/A  
Commodity: Beef  
Discipline:

Name: Dr. Aubrey F. Mendonca  
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         Human Environment & Family Sciences  
         176 Carver Hall  
         Greensboro, NC 27411  
Phone: 910-334-7328  FAX: 910-334-7674  
E-mail:  
%Appointment: 0 Extension; 75 Research; 25 Teaching

Areas of Expertise: Food microbiology: destruction of food-borne pathogens on raw agricultural products; detection of injured bacterial pathogens in foods; effects of processing on survival and growth of food-borne pathogens.  
Current Research or Demonstration Projects: Effect of high pH on survival of poultry pathogens in poultry scald water; surface sanitization of melons for destruction of gram-negative enteric pathogens;  
Commodity: Non-specific  
Discipline: Food Microbiology
Name: Dale C. Miller
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        Box 7621
        Raleigh, NC 27695
Phone: 919-515-7772  FAX: 919-515-9061
E-mail: dale_miller@ncsu.edu
%Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Detection of osteomyelitis in turkey carcasses with real time ultrasound; reference U.S. Patent #5,140,988 of 8/25/92.
Current Research or Demonstration Projects: No current activity in this area.
Commodity: Poultry
Discipline: 

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Name: Dwain H. Pilkinson
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        Department of Food Science
        Box 7624
        Raleigh, NC 27695-7624
Phone: 919-515-2956  FAX: 919-515-7124
E-mail: dpilking@wolf.ces.ncsu.edu
%Appointment: 80 Extension; 20 Research; 0 Teaching

Areas of Expertise: Slaughter of red meat animals, processed meat products, HACCP-USDA, FSIS, fermented meat products, country hams, sodium reduction with potassium chloride.
Current Research or Demonstration Projects: Development of a process for sodium reduction in boneless country hams; application of rice starch for fresh pork and poultry.
Commodity: Red Meats
Discipline: 

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Name: M. R. Reddy, Ph.D.
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        Natural Resources & Environmental Design
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        Greensboro, NC 27411
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%Appointment: 0 Extension; 75 Research; 25 Teaching

Areas of Expertise: Food chemistry/functional properties, flavors, lipids; physical, chemical and sensory analysis of plant and animal components and processed foods.
Current Research or Demonstration Projects: Physical, chemical and sensory quality of poultry treated with antimicrobial dips; functional properties of and flavors in flours from partially-defatted roasted peanuts.
Commodity: 
Discipline: Chemistry
Name: Roger P. Rohrbach
Address: North Carolina State University
        Box 7625
        Raleigh, NC 27695-7625
Phone: 919-515-6763        FAX:
E-mail: rohrbach@eos.ncsu.edu
%Appointment: 0 Extension; 65 Research; 35 Teaching

Areas of Expertise: Machine systems engineering; automatic control/instrumentation; computers/CAD; electron bean surface sterilization.
Current Research or Demonstration Projects: Machine systems for production of small fruits in North Carolina.
Commodity:
Discipline: Engineering

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Name: John E. Rushing, Ph.D.
Address: North Carolina State University
        Box 7624  129 Schaub Hall
        Raleigh, NC 27695-7624
Phone: 919-515-2956        FAX: 919-515-7124
E-mail: john_rushing@ncsu.edu
%Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Dairy products; refrigerated foods; fruitsy vegetable products; specialty foods; food technology and manufacturing food safety; food regulations.
Current Research or Demonstration Projects: Residues of therapeutic drugs in milk; milk fortification; composition testing; supervisor training for dairy cow acidified; entrepreneurs and small business; chair, state major program "Food and Forest Products Manufacturing."
Commodity: Dairy & Refrigerated Foods
Discipline:
Name: Dr. Chung W. Seo
Address: North Carolina A&T State University
         Food Science Program, Dept. of Human
         Environment & Family Sciences
         161 Carver Hall
         Greensboro, NC 27411
Phone: 910-334-7933         FAX: 910-334-7265
E-mail: seoc@athena.nca&t.edu
%Appointment: 0 Extension;       50 Research;       50 Teaching

Areas of Expertise: Lipid oxidation in food, including methods for following lipid oxidation; analysis of fatty acid profile and cholesterol in food; analysis of vitamins and amino acids.
Current Research or Demonstration Projects: Preparation of low-fat ground meat by using supercritical carbon dioxide; preparation of adsorbents made from agricultural by-products such as peanut shells.
Commodity: 
Discipline: Lipid Chemistry

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Name: Dr. Brian W. Sheldon
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         Dept. of Food Science
         Box 7624
         Raleigh, NC 27695-7624
Phone: 919-515-2971         FAX: 919-515-7124
E-mail: brian_sheldon@ncsu.edu
%Appointment: 0 Extension;       80 Research;       20 Teaching

Areas of Expertise: Feed microbiology; food safety of muscle food systems; biopreservatives; pathogen reduction; shelf life extension.
Current Research or Demonstration Projects: Efficacy of bacteriocins and other biopreservatives in reducing microbial pathogens and spoilage organisms associated with muscle foods and eggs; aseptic processing of food particulates.
Commodity: Poultry
Discipline: Microbiology
Name: Harold E. Swaisgood
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Box 7624
Raleigh, NC 27695-7624
Phone: 919-515-2968    FAX: 919-515-7124
E-mail: harold_swaisgood@ncsu.edu
%Appointment: 0 Extension; 90 Research; 10 Teaching

Areas of Expertise: Properties of proteins and enzymes: functionality in foods; digestibility; use of enzymes in bioprocessing; use of bioselective adsorbents as a processing aid.
Current Research or Demonstration Projects: Design of protein functionality; development of enzyme bioreactors; bioselective adsorption of proteins as a processing aid.
Commodity: Non-specific
Discipline: Protein Chemistry

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Name: Dr. Michael Waldvogel
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Phone: 919-515-2703    FAX: 919-515-7746
E-mail: mike_waldvogel@ncsu.edu
%Appointment: 86 Extension; 0 Research; 14 Teaching

Areas of Expertise: Management of wood-destroying and household arthropod pests, including stored product pests in commercial structures; pesticide applicator certification training for household (P-phase), wood-destroying (W-phase), and fumigation (F-phase) and public health (subclass B).
Current Research or Demonstration Projects: None related to food processing.
Commodity: 
Discipline: Entomology

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Name: Donn Ward
Address: North Carolina State University
Dept. of Food Science
Box 7624
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Phone: 919-515-2951    FAX: 919-515-4694
E-mail: donn_ward@ncsu.edu
%Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Food microbiology; food safety; seafood processing HACCP
Current Research or Demonstration Projects: HACCP education and training programs for the food processing industry; HACCP education and training programs for the food service industry.
Commodity: Seafoods
Discipline: Microbiology
OKLAHOMA

Name: Gerald H. Brusewitz
Address: Biosystems and Agricultural Engineering Department
216 Agricultural Hall
Oklahoma State University
Stillwater, OK 74078-6021
Phone: 405-744-8395  FAX: 405-744-6059
E-mail: jbrusew@agen.okstate.edu
%Appointment: 0 Extension; 75 Research; 25 Teaching

Areas of Expertise: Physical properties of biological materials; quality assessment of fresh fruit and vegetables; food process engineering.
Current Research or Demonstration Projects: Mechanical properties of fruits and vegetables; supercritical CO₂ extraction of oil from pecans; packaging of pecans for extended shelf-life.
Commodity: Non-specific
Discipline: Food process engineering

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Name: Brett F. Carver
Address: Agronomy Department
368 N. Ag Hall
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Stillwater, OK 74078-6028
Phone: 405-744-6414  FAX: 405-744-5269
E-mail: bfc@soilwater.agr.okstate.edu
%Appointment: 0 Extension; 90 Research; 10 Teaching

Areas of Expertise: Plant genetics and wheat quality.
Current Research or Demonstration Projects: Genetic improvement of traits conferring end-use quality of hard red and hard white wheat.
Commodity: Wheat
Discipline: 

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Name: Stanley E. Gilliland, Ph.D.
Address: Oklahoma State University
104 Animal Science Bldg.
Stillwater, OK 74078
Phone: 405-744-6616  FAX: 405-744-7390
E-mail: seg@okway.okstate.edu
%Appointment: 0 Extension; 60 Research; 40 Teaching

Areas of Expertise: Food Microbiology; Starter Cultures; Probiotic Bacteria.
Current Research or Demonstration Projects: Production and Storage of concentrated cultures of Lactobacilli and Bifidobacteria; Potential role of Lactobacillus acidophilus in control of serum cholesterol; Inhibition of escherichia coli 0157:H7 by Lactobacilli.
Commodity: Non-specific
Discipline: Food Microbiology

48
Name: Shida Rastegarie Henneberry  
Address: Oklahoma State University  
Ag Economics  
308 Agricultural Hall  
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Phone: 405-744-6164  
FAX: 405-744-8210  
E-mail: srh@okway.okstate.edu  
%Appointment: 0 Extension; 75 Research; 25 Teaching

Areas of Expertise: Agricultural Marketing; International Agricultural Market Development; Price Analysis.
Current Research or Demonstration Projects: U.S. Export Promotion of Value-Added Products; Food Safety Issues and Changes in Marketing Institutions for Horticultural Crops; Internal Marketing Policy of Food Processors in Oklahoma.
Commodity: Non-specific
Discipline: Agricultural Marketing

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Name: Niels Maness  
Address: Dept. of Horticulture and L.A.  
Room 360 Agricultural Hall  
Stillwater, OK 74078  
Phone: 405-744-5423  
FAX: 405-744-9673  
E-mail:  
%Appointment: 0 Extension; 80 Research; 20 Teaching

Areas of Expertise: Postharvest handling for fresh market fruits, nuts and vegetables. Harvesting and handling systems for fresh and processing markets. Shelf life extension of pecans; partial oil extraction of whole pecan halves with supercritical CO₂.
Current Research or Demonstration Projects: Handling systems for improved peach quality. Partial oil extraction of pecans for reducing calorie content and extending shelf life. Supercritical CO₂ extraction processes.
Commodity: Fruits, Nuts, Vegetables
Discipline: Postharvest Handling
Name: Dean McCraw  
Address: Dept. of Horticulture  
Oklahoma State University  
360 Ag Hall  
Stillwater, OK 74078-6027  
Phone: 405-744-5409  
E-mail: dmccraw@okway.okstate.edu  
%Appointment: 75 Extension; 25 Research; 0 Teaching  

Areas of Expertise: Tree fruit and pecan culture and management. Irrigation, weed control, nutrition and orchard floor management.  
Current Research or Demonstration Projects: Effects of bed configuration and irrigation on peach tree establishment; peach variety evaluation; irrigation and weed control effects on pecan tree establishment.  
Commodity: Tree fruits, pecans  
Discipline: Horticulture

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Name: Brad Morgan  
Address: Oklahoma State University  
104B Animal Science  
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Phone: 405-744-6616  
E-mail: bmorgan@okway.okstate.edu  
%Appointment: 0 Extension; 70 Research; 30 Teaching  

Areas of Expertise: Meat tenderness, muscle/meat aging and impact of proteinases, meat safety -- pesticides, antibiotics and hormone residues, HACCP, shelf life of meat products.  
Current Research or Demonstration Projects: 1) HACCP Training to meat suppliers to McDonalds; 2) Impact of Vitamin E on meat shelf life.  
Commodity: Meat  
Discipline: Meat Science

**********

Name: James E. Motes  
Address: Oklahoma State University  
Horticulture & L.A.  
360 Ag Hall  
Stillwater, OK 74078-6027  
Phone: 405-744-5408  
E-mail: jemhort@okway.okstate.edu  
%Appointment: 65 Extension; 35 Research; 0 Teaching  

Areas of Expertise: Pepper breeding for processing varieties. Culture and management of field production of vegetables for processing. Variety evaluation for processing and fresh use.  
Current Research or Demonstration Projects: Chile and paprika breeding and variety development for processing. Spinach, southern pea, squash, chile and paprika production for processing.  
Commodity: Vegetables, peppers  
Discipline: Horticulture

50
Name: Fred Ray  
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Phone: 405-744-6058  
FAX: 405-744-7390  
E-mail: fkray@okway.okstate.edu  
%Appointment: 100 Extension; 0 Research; 0 Teaching  
Areas of Expertise: Food Safety and HACCP; Food Sanitation; Carcass Evaluation; Value Based Marketing; Process Meats and Value Added Products; Consumer Education Programs  
Current Research or Demonstration Projects:  
Commodity: Meat  
Discipline: Meat Science

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Name: Dr. Lowell Satterlee  
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Phone: 405-744-6690  
FAX: 405-744-6313  
E-mail: slowell@okway.okstate.edu  
%Appointment: X Extension; X Research; 0 Teaching  
Areas of Expertise: Food toxicology and food protein biochemistry  
Current Research or Demonstration Projects:  
Commodity: Grains  
Discipline: Food chemist, Bio-chemist

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Name: Edward L. Smith  
Address: 469 Agriculture Hall  
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Phone: 405-744-6410  
FAX: 405-744-5269  
E-mail: els@soilwater.agr.okstate.edu  
%Appointment: 0 Extension; 80 Research; 20 Teaching  
Areas of Expertise: Breeding and genetics of hard winter wheat. Breeding and development of winter barley.  
Current Research or Demonstration Projects: Breeding and genetics of hard winter wheat with emphasis on yield and yield stability, bread-making quality, and diseases/insect resistance. Breeding and development of winter barley with satisfactory malting qualities.  
Commodity: Wheat  
Discipline: Agronomy, Breeding
Name:    Daniel S. Tilley
Address: Department of Agricultural Economics
        422 Agricultural Hall
        Oklahoma State University
        Stillwater, OK 74078-6026
Phone:  405-744-6180      FAX:  405-744-8210
E-mail: ddtilley@okway.okstate.edu
%Appointment:  0 Extension;  70 Research;  30 Teaching

Areas of Expertise:  Agribusiness, food marketing, marketing planning, international trade, feasibility studies, agribusiness planning, demand analysis, applied econometrics.

Current Research or Demonstration Projects:  High-value food trade with Indonesia, wheat shipment and marketing system efficiency, small fruit applicability in Oklahoma.

Commodity:  Non-specific
Discipline:  Agricultural Marketing
SOUTH CAROLINA

Name: James C. Acton
Address: Clemson University, Department of Food Science
222 Poole Agr. Center
Clemson, SC 29634-0371
Phone: 803-656-5681     FAX: 803-656-0331
E-mail: jcaction@clemson.edu
%Appointment: 8 Extension; 57 Research; 35 Teaching

Areas of Expertise: All processing activities related to meat and poultry product manufacture encompassing safety, preservation techniques, packaging requirements and shelf life extension. Emphasis on functional properties such as water finding, fat emulsification, packaging film adhesion, and meat-to-meat binding. Expertise in fermented meat products and meat starter cultures. Other expertise areas include dietary fiber utilization, amino acid analyses, and protein quality evaluation. Actively work with HACCP education and implementation.

Current Research or Demonstration Projects: 1) Factors enhancing quality of cook-in-the-film meat products; 2) Shelf life studies on meat and poultry products; 3) Antimicrobial treatments for fresh meat and poultry products; 4) Packaging film effects on color stability of cured meat products.

Commodity: Emphasis on Meat and Poultry
Discipline: Muscle Foods

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Name: Susan F. Barefoot
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224 Poole Ag Center Box 34037
Clemson, SC 29634-0371
Phone: 803-656-5682     FAX: 803-656-0331
E-mail: sbrft@clust1.clemson.edu
%Appointment: 0 Extension; 45 Research; 55 Teaching

Areas of Expertise: Food microbiology; molecular biology of dairy propionibacteria and lactic acid bacteria; microbiological food safety.

Current Research or Demonstration Projects: Molecular biology of propionibacteria bacteriocins; antimicrobials from lactic acid bacteria to improve food safety; enhancing food safety through the control of foodborne disease agents.

Commodity: All Commodities
Discipline: Food Microbiology
Name: Felix Barron  
Address: Clemson University  
Food Science & Packaging Science Departments  
224 Poole Agricultural Center  
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Phone: 803-656-5694  
FAX: 803-656-0331  
E-mail: fbarron@clemson.edu  
%Appointment: 80 Extension; 0 Research; 20 Teaching  

Areas of Expertise: Food engineering, food packaging, HACCP.  
Current Research or Demonstration Projects: Hazard Analysis Critical Control Points (HACCP); optimization of food processing and packaging operations.  
Commodity: All Commodities  
Discipline: Packaging  

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Name: Joe M. Bunn  
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Clemson, SC 29634-0357  
Phone: 803-656-4042  
FAX: 803-656-0338  
E-mail:  
%Appointment: 33 Extension; 34 Research; 33 Teaching  

Areas of Expertise: Value added processing.  
Current Research or Demonstration Projects: Edible films, thermal properties of particular foods.  
Commodity: Pumpable Particulate Food Commodities  
Discipline: Thermal Process Engineering  

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Name: Dr. Paul L. Dawson  
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Clemson, SC 29634-0371  
Phone: 803-656-1138  
FAX: 803-656-0331  
E-mail: pdawson@clemson.edu  
%Appointment: 0 Extension; 60 Research; 40 Teaching  

Areas of Expertise: Food packaging; food processing and shelf-life evaluation, especially related to poultry meat and eggs. Focus on the oxidation of food flavors and colors. Packaging treatments to extend product shelf-life and migration of packaging components into food and their affect on food quality.  
Current Research or Demonstration Projects: 1) Use of the oxidative stability instrument to assess and predict the oxidative stability of meat; 2) migration of styrene into model food systems; 3) incorporation of antimicrobial compounds into biodegradable films; 4) fresh peach shelf-life extension; 5) effect of packaging-type and antioxidant treatment on the color and quality of ground chicken leg meat; 6) biodegradability of cast and heat-set protein films; 7) production of heat-set films from good-grade proteins; 8) volatile compound profile of bacteria associated with fresh poultry meat.  
Commodity: Poultry and Egg Products
Name: Michelle A. Hall "Mickey"
Address: Clemson University, Poultry Science Department
         Poole Agr. Center
         Box 340379
         Clemson, SC 29634-0379
Phone: 803-656-4022       FAX: 803-656-1033
E-mail: mahall@clusl1.clemson.edu
%Appointment: 85 Extension; 0 Research; 15 Teaching

Areas of Expertise: Processing small flock "poultry," gamebirds; microbiology and quality control during poultry processing; ratite processing.
Current Research or Demonstration Projects: 
Commodity: Flock poultry, game birds & ratite Food Processing
Discipline: 

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Name: Dr. Young J. Han
Address: Dept. of Agr. & Biol. Engineering
         229 McAdams Hall
         Clemson, SC 29634
Phone: 803-565-4046       FAX: 803-565-0338
E-mail: yhan@clemson.edu
%Appointment: 0 Extension; 67 Research; 33 Teaching

Areas of Expertise: Instrumentation and control; machine vision.
Current Research or Demonstration Projects: Static and dynamic heating characteristics of meat and their effects on quality; study on sensing and separation technology for quality inspection of agricultural products.
Commodity: All Meats
Discipline: Thermal process and machine vision engineering

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Name: Elizabeth Kunkel
Address: 217 Poole Agriculture Center
         Department of Food Science
         Clemson University
         Clemson, SC 29634-0371
Phone: 803-656-5690       FAX: 803-656-0331
E-mail: bkunkel@clemson.edu
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Nutrition
Current Research or Demonstration Projects: Research emphasis is on factors affecting availability and digestibility of macrominerals, carbohydrates, and proteins. We run in vitro and in vivo digestibility trials.
Commodity: All food commodities
Discipline: Digestibility and nutrition
Name: D. Dixon Lee Jr.
Address: Department of Animal, Dairy & Veterinary Sciences
115 Poole Agr. Ctr. Box 340361
Clemson, SC 29634
Phone: 803-656-3164  FAX: 803-656-7259
E-mail: 
%Appointment: 66 Extension; 34 Research; 0 Teaching

Areas of Expertise: Animal manure utilization, ruminant nutrition.
Current Research or Demonstration Projects: Growth & lactational responses of tropical corn, survey of nutrient management on dairy farms in South Carolina.
Commodity: Dairy Production
Discipline: Nutrient and Ration Management

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Name: James W. Rushing
Address: Clemson University
Coastal Research & Education Center
2865 Savannah Hwy.
Charleston, SC 29414
Phone: 803-766-3761  FAX: 803-571-4654
E-mail: jrhing@clemson.edu
%Appointment: 75 Extension; 25 Research; 0 Teaching

Areas of Expertise: Postharvest physiology of horticultural crops; Management of postharvest systems.
Current Research or Demonstration Projects: Enhancing export potential of SC fruits and vegetables with in-transit controlled atmosphere.
Commodity: Fruits and Vegetables
Discipline: Postharvest physiology and management

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Name: George C. Skelley
Address: Animal, Dairy and Veterinary Science Dept.
114 P&A Bldg. Clemson University
Clemson, SC 29634-0361
Phone: 803-656-5151  FAX: 803-656-3131
E-mail: 
%Appointment: 8 Extension; 46 Research; 46 Teaching

Areas of Expertise: Meat science; beef carcass evaluation; pork carcass evaluation; meat cookery.
Current Research or Demonstration Projects: Effect of genetics on composition of beef; effect of nutrition on composition of pork; cookery of pork products and yield of edible lean.
Commodity: Beef and Pork
Discipline: Red Meat Products
Name: Peter Skewes  
Address: Poultry Science Department  
          Poole Ag Building  
          Box 340379  
          Clemson, SC 29634-0379  
Phone: 803-656-3163  
E-mail: pskewes@clemson.edu  
%Appointment: 90 Extension; 0 Research; 10 Teaching  

Areas of Expertise: Electrical Stunning  
Current Research or Demonstration Projects: (Recent Research) Determination of optimum stunning parameters for turkeys.  
Commodity: Turkey  
Discipline: Poultry Products

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Name: David C. Smith  
Address: P.O. Box 189  
          Beaufort, SC 29901  
Phone: 803-525-7118  
E-mail: dcsmith@cluster1.clemson.edu  
%Appointment: 100 Extension; 0 Research; 0 Teaching  

Areas of Expertise: Commercial seafood harvesting; post-harvest handling; fisheries; technology transfer.  
Current Research or Demonstration Projects: S.C. Sea Grant Seafood Safety Coordinator; Sea Grant HACCP Alliance  
Commodity: Shrimp, crab, and fish  
Discipline: Seafood harvest and handling

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Name: John G. Surak  
Address: Department of Food Science  
          Clemson University  
          224 Poole Agriculture Center  
          Clemson, SC 29634  
Phone: 803-656-2786  
E-mail: jsurak@clemson.edu  
%Appointment: 80 Extension; 0 Research; 20 Teaching  

Areas of Expertise: Application of total quality management, continuous process improvement, statistical process control, ISO9000 to the commercial food processing industry; Development of improved customer/supplier relations from the form to the consumer.  
Current Research or Demonstration Projects: Development of multimedia training in quality improvement; development of an economic model for incorporating ISO14000 (environmental management system) into business plans.  
Commodity: All commodities  
Discipline: Total Quality Management and ISO 9000

57
Name: Robert F. Testin  
Address: Clemson University  
226 Poole Agricultural Center  
Clemson, SC 29634-0370  
Phone: 803-656-2229  
FAX: 803-656-0031  
E-mail: rtestin@clemson.edu  
%Appointment: 8 1/4 Extension; 41 1/2 Research; 50 1/2 Teaching  

Areas of Expertise: Food packaging, recycling, solid waste disposal, environmental aspects of packaging design & disposal.  
Current Research or Demonstration Projects: Modified atmosphere food packaging; edible films produced from grain proteins.  
Commodity:  
Discipline: Food Packaging

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Name: Ronald L. Thomas  
Address: Department of Food Science  
216 Poole Agriculture Center  
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Clemson, SC 29634-0371  
Phone: 803-656-5697  
FAX: 803-656-0331  
E-mail: rthms@clemson.edu  
%Appointment: 0 Extension; 80 Research; 20 Teaching

Areas of Expertise: Food chemistry, separation technology, microfiltration/ultrafiltration  
Current Research or Demonstration Projects: Recovery and use of natural pigments; protein hydrolysates; soy protein uses.  
Commodity:  
Discipline: Food chemistry, separation technology and ultrafiltration

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Name: Terry C. Titus  
Address: Food Science Department  
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Clemson, SC 29634-0371  
Phone: 803-656-5399  
FAX: 803-656-0331  
E-mail: ttitus@clemson.edu  
%Appointment: 100 Extension; 0 Research; 0 Teaching

Areas of Expertise: Thermal preservation, sanitation, food regulations.  
Current Research or Demonstration Projects: Retort temperature distributions; heat penetration determinations; seafood pasteurization; low acid & acidified foods BPC Course of Certification (FDA/USDA).  
Commodity: All food commodities  
Discipline: Thermal Food Preservation

58
Name: Dr. Peter J. Vergano
Address: Packaging Science Department
225 Poole Agr. Ctr. Box 340370
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Clemson, SC 29634-0370
Phone: 803-656-5684          FAX: 803-656-0331
E-mail: pwrgn@clemson.edu
%Appointment: 0 Extension; 50 Research; 50 Teaching

Areas of Expertise: Packaging, food packaging, shock and vibration package testing, distribution abuse, glass packaging, glass manufacture.

Current Research or Demonstration Projects: Edible protein films; packaging for fresh fruits and vegetables.

Commodity: Fruits and vegetables

Discipline: Food packaging, shock and vibration and glass containers
TENNESSEE

Name: Sam Beattie, Ph.D.
Address: The University of Tennessee
         Department of Food Science and Technology
         P.O. Box 1071
         Knoxville, TN 37901-1071
Phone: 423-974-7331       FAX: 423-974-7332
E-mail: sbeatte@utk.edu
%Appointment: 80 Extension; 20 Research; 0 Teaching

Areas of Expertise: Food and Dairy Microbiology and Safety
Current Research or Demonstration Projects: n/a
Commodity: Dairy
Discipline: Food and Dairy Microbiology and Safety

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Name: Clark J. Brekke, Ph.D.
Address: The University of Tennessee
         Department of Food Science and Technology
         P.O. Box 1071
         Knoxville, TN 37901-1071
Phone: 423-974-7331       FAX: 423-974-7332
E-mail: brekke@utkvs.edu
%Appointment: 33 Extension; 34 Research; 33 Teaching

Areas of Expertise: Biochemical, microbial, and physical changes occurring in postmortem mammalian, avian and finfish muscle that influence the quality of processed products. Areas include basic, fundamental research on muscle proteins and enzyme reactions, their changes and interactions postmortem, and the application of this information in processed product technology. Recent research has been focused on the functional and physiochemical properties of muscle proteins.
Current Research or Demonstration Projects: n/a
Commodity: Red Meats
Discipline: Food Processing
Name: Jim L. Collins, Ph.D.
Address: The University of Tennessee
         Department of Food Science and Technology
         P.O. Box 1071
         Knoxville, TN 37901-1071
Phone: 423-974-7717  FAX: 423-974-7332
E-mail: %Appointment: 0 Extension; 70 Research; 30 Teaching
Areas of Expertise: Vegetable products; value-added; various vegetables, but primarily Tennessee grown.
Current Research or Demonstration Projects: Osmotic concentration/dehydration of thick flushed tomato to produce a natural product with red color and excellent keeping quality and sensory attributes.
Commodity: Fruit and Vegetables
Discipline: Food Processing

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Name: Ann Draughon, Ph.D.
Address: The University of Tennessee
         Department of Food Science and Technology
         P.O. Box 1071
         Knoxville, TN 37901-1071
Phone: 423-974-7425  FAX: 423-974-7450
E-mail: draughon@utk.edu
%Appointment: 0 Extension; 65 Research; 35 Teaching
Areas of Expertise: Food safety, mycotoxins, microbial quality of meats and processed foods.
Current Research or Demonstration Projects: Growth of Listeria, Salmonella, E. coli 0157 and Yersinia in ready-to-eat salads and fresh meat products - Degradation of aflatoxin by microbial enzymes.
Commodity:  
Discipline: Food Microbiology
Name: David A. Golden, Ph.D.
Address: The University of Tennessee
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P.O. Box 1071
Knoxville, TN 37901-1071
Phone: 423-974-7147  FAX: 423-974-7332
E-mail: dgolden@utk.edu
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Food microbiology (food safety and spoilage; detection and enumeration methodology; sublethal injury and recovery; controlling pathogens and spoilage organisms in foods; food mycology).

Current Research or Demonstration Projects: Growth and survival of sublethally injured pathogens on foods with microbial growth barriers; detection and enumeration of injured pathogens; Growth and survival of osmophilic spoilage yeasts.

Commodity:
Discipline: Food Microbiology

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Name: Greg Hulbert, Ph.D.
Address: The University of Tennessee
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P.O. Box 1071
Knoxville, TN 37901-1071
Phone: 423-974-0844  FAX: 423-974-7332
E-mail:
%Appointment: 0 Extension; 70 Research; 30 Teaching

Areas of Expertise: Use of MRI to study heat and mass transfer in foods, thermal processing, supercritical extraction, recovery of useful products from food plant waste streams (Bioconversion).

Current Research or Demonstration Projects: New faculty member
Commodity:
Discipline: Food Process Engineering

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Name: H. Dwight Loveday, Ph.D.
Address: The University of Tennessee
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P.O. Box 1071
Knoxville, TN 37901-1071
Phone: 423-974-7334  FAX: 423-974-7332
E-mail:
%Appointment: 25 Extension; 0 Research; 75 Teaching

Areas of Expertise: Meat Science, 4-H Youth Development
Current Research or Demonstration Projects: Meat Animal Composition and Palatability
Commodity: Meat
Discipline: Food Processing

62
Name: Curtis C. Melton, Ph.D.
Address: The University of Tennessee  
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P.O. Box 1071  
Knoxville, TN 37901-1071  
Phone: 423-974-7331  
FAX: 423-974-7332  
E-mail:  
%Appointment: 100 Extension; X Research; 0 Teaching  
Areas of Expertise: Meat Science, Food Safety, Meat Processing, 4-H Youth  
Current Research or Demonstration Projects: Train-the-Trainer Food Safety In Tennessee  
Commodity: Meats  
Discipline: Food Processing

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Name: William C. Morris, Ph.D.
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Phone: 423-974-7331  
FAX: 423-974-7332  
E-mail:  
%Appointment: 100 Extension; 0 Research; 0 Teaching  
Areas of Expertise: Food Processing in Fruits and Vegetables, Sweet Sorghum and Food Safety  
Current Research or Demonstration Projects: Train-the-Trainer in Food Safety for Food Service Operations in Tennessee  
Commodity: Fruits, vegetables, and sorghum  
Discipline: Food Processing

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Name: John Mount, Ph.D.
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Phone: 423-974-7747  
FAX: 423-974-7332  
E-mail: jmount@utk.edu  
%Appointment: 0 Extension; 60 Research; 40 Teaching  
Areas of Expertise: Preservation of fruits and vegetables; MAP of Fruit or vegetable products; Quality Assurance and HACCP  
Current Research or Demonstration Projects: Evaluation of modified atmosphere; Processed Food Crop Products; Osmotic Dehydration for Processing intermediate moisture frozen potatoes.  
Commodity: Fruits and vegetables  
Discipline: Food Processing
Name: Marjorie Penfield, Ph.D.
Address: The University of Tennessee
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Knoxville, TN 37901-1071
Phone: 423-974-7331  FAX: 423-974-7332
E-mail: %Appointment: 0 Extension; 68 Research; 32 Teaching
Areas of Expertise: Sensory Evaluation, Grain and Bakery Products, Food Texture
Current Research or Demonstration Projects: Effects of sensory methods on test results
Commodity: Baked goods
Discipline: Sensory evaluation

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Name: Riëtte van Laack, Ph.D.
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Phone: 423-974-7331  FAX: 423-974-7332
E-mail: (coon) rlaack@utk.edu
%Appointment: 0 Extension; 65 Research; 35 Teaching
Areas of Expertise: Meat quality, especially physical-chemical characteristics such as water holding capacity, color and tenderness. Experience with pork, beef and poultry (turkey). Prediction and control of meat quality.
Current Research or Demonstration Projects: Relationship between water holding capacity and color (PSE) of pork; PSE in turkey; Tenderness of beef.
Commodity: Meats
Discipline: Food Processing
TEXAS

Name: Dr. Gary R. Acuff
Address: Texas A&M University
         Animal Science Department
         College Station, TX 77843-2471
Phone: 409-845-4425     FAX: 409-862-3475
E-mail: gacuff@tamu.edu
%Appointment: 33 Extension; 33 Research; 34 Teaching

Areas of Expertise: Food microbiology, food safety, foodborne pathogens
Current Research or Demonstration Projects: Methods of microbiological decontamination of beef carcass surfaces.
Commodity: Meats
Discipline: Food Microbiology

Name: Sarah G. Birkhold
Address: Texas A&M University
         Poultry Science Department
         107 A Kleberg Center
         College Station, TX 77843-2472
Phone: 409-845-4318     FAX: 409-845-1921
E-mail: sbirkhol@poultry.tamu.edu
%Appointment: 80 Extension; 20 Research; 0 Teaching

Areas of Expertise: Poultry products technology, meat and muscle biology
Current Research or Demonstration Projects: Consumer education about food irradiation, poultry meat products.
Commodity: Poultry
Discipline: Poultry Products Technology

Name: H. Russell Cross
Address: Texas A&M University
         Institute of Food Science and Engineering
         120 Rosenthal
         College Station, TX 77843-2259
Phone: 409-862-2036     FAX: 409-862-3075
E-mail: hrcross@zeus.tamu.edu
%Appointment: 0 Extension; 100 Research; 0 Teaching

Areas of Expertise: Safety of red meat and poultry products; antemortem & postmortem factors affecting meat quality; conversion of muscle to meat; animal & carcass gradi systems; growth & composition of animals & carcasses; the role of beef, pork & lamb in the human diet; marketing systems for red meat; value based marketing system for animals & animal products; total quality management.
Current Research or Demonstration Projects:
Commodity: Meats
Discipline: Food Safety
Name: Cady R. Engler
Address: Texas A&M University
        Agricultural Engineering Research Lab
        Route 4A West Campus
        College Station, TX 77843
Phone: 409-845-3685  FAX: 409-847-8627
E-mail: c-engler@tamu.edu
%Appointment: 0 Extension; 21 Research; 79 Teaching

Areas of Expertise: Bio process engineering, fermentation and enzyme technology, waste utilization.
Current Research or Demonstration Projects: Anaerobic digestion of animal wastes as an energy source (viogas production). Laboratory studies and a demonstration project both underway.
Commodity:
Discipline: Bioprocess Engineering

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Name: Jimmy T. Keeton, Ph.D., Professor
Address: Department of Animal Science
        338 Kleberg Center
        Texas A&M University
        Forestry Building
        College Station, TX 77843-2471
Phone: 409-845-3936  FAX: 409-845-9454
E-mail: jkeeton@acs.tamu.edu
%Appointment: 0 Extension; 25 Research; 75 Teaching

Areas of Expertise: Processed Meat Technology-Teaching & Research* Meat Processing Techniques; formulation of products/rines; ingredient functionality and use; HACCP, GMP's SOP's; species effects; Analytical methods; process quality control and assurance; development of new technologies for food safety; nutritional enhancement; factors affecting product quality and safety broadly; food safety; nutritional value; product quality; new technologies.
Current Research or Demonstration Projects: Development of rapid and accurate endpoint temperature (heating) tests for the meat processing industry; evaluating of low-fat meat products and assessment of fat mimics; assessing new technologies for increasing processing efficiencies development of new technologies. Services for industry clients-specialized analyses--chemical. Biochemical and physical; objective textural assessments; sensory analyses (flavor & texture).
*Available for (conducting) research involving quality assessment, application of new technologies, analytical methodologies, nutritional enhancement, food safety improvement, functional properties and basic investigations. Partnering with Food Microbiologists, Food Engineers, Food Scientists and other is available.
Commodity:
Discipline: Processed Meat Technology
Ronald E. Lacey  
Department of Agr. Engineering  
Texas A&M University  
College Station, TX 77843-2117  
Phone: 409-845-3967  
FAX: 409-845-3932  
E-mail: ron-lacey@tamu.edu  
%Appointment: 0 Extension; 50 Research; 50 Teaching

Areas of Expertise: Food process automation, processing sensors, process control, food waste treatment & byproduct recovery.

Current Research or Demonstration Projects: Applications at ultrasound in food processing; NDE assessment of food quality; networked odor sensing electronics; recovery of whey protein with optical functional properties using ultrafiltration; measurement & control of odors.

Commodity:
Discipline: Food Process Automation

Joanne R. Lupton, Ph.D.  
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Phone: 409-845-2142  
FAX: 409-862-2378  
E-mail: jlupton@vetmed.tamu.edu  
%Appointment: 0 Extension; 60 Research; 40 Teaching

Areas of Expertise: Nutrient content of food, particularly dietary fiber and its physiological effects on the colon.

Current Research or Demonstration Projects: Dietary Fiber and Colon Carcinogenesis, NIH Grant; Dietary Fat and Colonic Cell Signaling, NIH Grant; Dairy Fat and Colon Carcinogenesis, Norwegian Dairies Association.

Commodity:
Discipline: Nutrient content of food and effects on colon

Dr. Edmund W. Lusas  
Food Protein R&D Center  
Texas A&M University  
College Station, TX 77843-2476  
Phone: 409-845-2741  
FAX: 409-845-2744  
E-mail:  
%Appointment: 0 Extension; 100 Research; 0 Teaching

Areas of Expertise: Oilseeds extraction, fats and oils processing and utilization, foods and feeds extrusion, food proteins preparation and utilization, water activity ($A_w$) preserved foods, research management. Pet foods processing.

Current Research or Demonstration Projects: Replacement of hexane with isopropyl alcohol as an extraction solvent. Low cost extrusion of texturized soybean food proteins; chill fractionation of oils and tallow; practical short courses in oils processing, margarine and low-cost spread manufacture, feeds extrusion, aquaculture nutrition and feeds.

Commodity: Food Protein
Discipline: Research
Name: Rhonda K. Miller  
Address: Department of Animal Science  
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College Station, TX 77843-2471  
Phone: 409-845-3935  
FAX: 409-845-9454  
E-mail: rmiller@acs.tamu.edu  
%Appointment: 0 Extension; 60 Research; 40 Teaching  

Areas of Expertise: Meat animal composition and palatability determination; meat sensory evaluation; factors influencing meat palatability; development of automated grading; use of non-meat ingredients to extend the safety of meat products.  
Current Research or Demonstration Projects: Use of elastography to predict beef and pork quality; evaluation of Reahman sires for meat tenderness; use of sodium lactate and sodium propionate to extend the shelf-life of beef; integrated tenderness management of beef.  
Commodity: Meat Animal Composition  
Discipline: Sensory & Safety  

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Name: Dr. Elsa Murano  
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College Station, TX 77843-2471  
Phone: 409-845-4425  
FAX: 409-862-3475  
E-mail: eamurano@tamu.edu  
%Appointment: 0 Extension; 50 Research; 50 Teaching  

Areas of Expertise: Food safety of animal products, food irradiation, virulence mechanisms of bacterial foodborne pathogens, shelf-life extension of meats.  
Current Research or Demonstration Projects: Novel processing methods to improve food safety.  
Commodity: Animal Products  
Discipline: Food Safety  

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Name: Ronald L. Richter  
Address: Department of Animal Science  
Texas A&M University  
College Station, TX 77843  
Phone: 409-845-4409  
FAX: 409-862-3475  
E-mail: rlr8942@venus.tamu.edu  
%Appointment: 0 Extension; 30 Research; 70 Teaching  

Areas of Expertise: Dairy product processing and chemistry  
Current Research or Demonstration Projects: Evaluation of high pressure homogenization on the physical and chemical properties of milk and milk products.  
Commodity:  
Discipline: Dairy Processing and Chemistry
Name: Lloyd W. Rooney  
Address: Cereal Quality Lab  
Texas A&M University  
College Station, TX 77843-2474  
Phone: 409-845-2925  
FAX: 409-845-0456  
E-mail: lrooney@tamu.edu  
%Appointment: 0 Extension; 50 Research; 50 Teaching  

Areas of Expertise: Cereal technology, cereal quality, post-harvest technology of grains and legumes, alkaline cooking and processing of maize and sorghum, baking quality, dry milling extrusion, cereal chemistry and analyses, wet milling tortillas and snack foods, starch technology, feed processing, breakfast food technology, food processing, SEM and environmental SEM, food microstructure.  
Current Research or Demonstration Projects: Food and nutritional quality improvement of sorghum and millets; food corn quality; alkaline processing properties of maize; tortilla quality improvement - reduction in staling; corn dry masa production and evaluation; microstructure of cereals - ESEM, SEM, fluorescence and light microscopy; hard wheat quality evaluation; steam flaking properties/quality of sorghum; starch characteristics of new sorghums.  
Commodity:  
Discipline: Cereal Technology/Quality  

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Name: Alan Sams  
Address: Poultry Science Department  
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College Station, TX 77843-2472  
Phone: 409-862-1518  
FAX: 409-845-1921  
E-mail: asams@poultry.tamu.edu  
%Appointment: 0 Extension; 75 Research; 25 Teaching  

Areas of Expertise: Poultry processing and products, specifically the effects of stress and slaughtering processes on meat quality and muscle metabolism.  
Current Research or Demonstration Projects: Gas preslaughter stunning; electrical stimulation postmortem to tenderize poultry meat; pale, soft, exudative poultry meat.  
Commodity: Poultry  
Discipline: Processing Technology  

69
Name: Dr. Jeff W. Savell  
Address: Department of Animal Science  
348 Kleberg Center  
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TX, 77843-2471 409-845-3935  
Phone: 409-845-9454  
FAX: j-savell@tamu.edu  
E-mail:  
%Appointment: 0 Extension; 0 Research; 0 Teaching  
Areas of Expertise: Carcass composition, packaging and shelf-life, meat quality, nutrition and safety.  
Current Research or Demonstration Projects: Broad area in quality and consistency of meat; specifically, research into the improvement of tenderness and other factors associated with palatability. Also, major effort in identifying quality losses and their impact on value of livestock and meat products is underway. Collaborate with food microbiologists to conduct meat safety research.  
Commodity: Meats  
Discipline: Consumption & Quality

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Name: Vincent E. Sweat  
Address: Ag Engineering Department  
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College Station, TX 77843  
Phone: 409-845-3659  
FAX: 409-845-3932  
E-mail: v-sweat@tamu.edu  
%Appointment: 0 Extension; 10 Research; 90 Teaching  
Areas of Expertise: Teaching, advising, heat transfer and thermal properties of foods.  
Current Research or Demonstration Projects:  
Commodity:  
Discipline: Heat transfer and thermal properties of food

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Name: Dr. Al B. Wagner, Jr.  
Address: 225 Horticulture/Forestry Bldg.  
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College Station, TX 77843-2134  
Phone: 409-845-7341  
FAX: 409-845-8906  
E-mail: a-wagner@tamu.edu  
%Appointment: 100 Extension; 0 Research; 0 Teaching  
Areas of Expertise: Processing acid and acidified foods, food additives, pesticide residues and natural toxins.  
Current Research or Demonstration Projects: Recognized "process authority" by F.D.A. and U.S.D.A. I limit my process authority work to "acidified foods."  
Commodity:  
Discipline: Fruit & Vegetable Processing

70
Name: Ralph D. Waniska
Address: Cereal Quality Laboratory
         Soil & Crop Sciences Department
         Texas A&M University
         College Station, TX 77843-2474
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E-mail: rwaniska@tamu.edu
%Appointment: 0 Extension; 50 Research; 50 Teaching

Areas of Expertise: Cereal chemistry, cereal technology, starch chemistry and functionality during processing into foods, protein functionality in foods, antifungal properties of proteins and phenols in cereals, new and traditional food formulation and process development, wheat flour tortilla chemistry and technology, corn quality, formulation, and alkaline processing of corn into tortillas and chips, improving shelf-life and shelf-stability of cereal-based foods, food and nutritional improvement of wheat, sorghum, millet and maize.

Current Research or Demonstration Projects: Ingredient functionality in wheat flour tortillas; rheological properties of dough and tortillas; alternative processing of corn tortillas and chips; improving the shelf-stability of wheat and corn tortillas; composition of antifungal proteins during seed development; mobility of antifungal proteins in cereals grains; increasing bioactivity of antifungal proteins in cereals; pasta from non-wheat cereals.

Commodity: 
Discipline: Cereal Chemistry
VIRGINIA

Name: James R. Claus
Address: Virginia Polytechnic Institute and State University
         Department of Food Science and Technology
         Room 2101
         Blacksburg, VA 24061-0418
Phone: 540-231-3283  FAX: 540-231-9293
E-mail: clausjr@vt.edu
%Appointment: 0 Extension;  85 Research;  15 Teaching

Areas of Expertise: Postmortem technologies, processing, muscle color chemistry, ingredient interactions and functional properties of muscle food proteins.

Current Research or Demonstration Projects: VA Poultry Processing/Product Technology Research Program, VA Poultry Fed.
Innavong, Ewhudit. Thermal processing of no-fat processed meats. M.S. Thesis. VPI&SU.
Green, Bren K. "Interactive Effects of Halothane gene and chromium supplementation on procine quality." M.S. Thesis. VPI&SU.
Schwarz, Stephen J. "Inhibition of Pinking in Cooked Turkey Through Competitive Binding of Adjuncts to Muscle Pigments." M.S. Thesis. VPI&SU.

Commodity: Muscle Foods
Discipline: Food Biochemistry

* * * * * * *

Name: Susan E. Duncan
Address: Virginia Polytechnic Institute and State University
         Department of Food Science and Technology
         Blacksburg, VA 24061-0418
Phone: 540-231-8675  FAX: 540-231-9293
E-mail: duncans@vt.edu
%Appointment: 0 Extension;  80 Research;  20 Teaching

Areas of Expertise: Food chemistry, sensory, and dairy food products and processing.

Chung, Y. J. "Influence of Enzymes and Whey Protein Concentration on Coffee Cream Feathering." M.S. Thesis. VPI&SU.
Davidson, R. H. "Culture Enumeration, Lactose Hydrolysis and Sensory Changes in Stored Frozen Yogurt Fermented with Two Culture Systems". M.S. Thesis. VPI&SU.
Elling, J. L. "Chemical Composition and Physical Properties of 20% Milk Fat Reformulated Creams Manufactured From Reduced-cholesterol Butteroil." M.S. Thesis. VPI&SU.

Commodity: Dairy
Discipline: Food chemistry, flavor chemistry
Name: William N. Eigel  
Address: Virginia Polytechnic Institute and State University  
Department of Food Science and Technology  
Room 115  
Blacksburg, VA 24061-0418  
Phone: 540-231-6877  
E-mail: weigel@vt.edu  
%Appointment: 0 Extension; 50 Research; 50 Teaching

Areas of Expertise: Food proteins and enzymes, neonatal diarrhea and immune responses to food, milk synthesis. 
Current Research or Demonstration Projects: 
Commodity: Dairy  
Discipline: Food Biochemistry

* * * * * * *

Name: George J. Flick, Jr.  
Address: Virginia Polytechnic Institute and State University  
Department of Food Science and Technology  
Room 25-C  
Blacksburg, VA 24061-0418  
Phone: 540-231-6965  
E-mail: flickg@vt.edu  
%Appointment: 66 Extension; 34 Research; 0 Teaching

Areas of Expertise: Chemistry, technology and microbiology of seafood products, food lipids and oils, institutional food products.  
Current Research or Demonstration Projects: C-Fast Initiative (VA Trout Industry); C-Fast Initiative (VA Crab Meat); C-Fast Initiative (Quahog Clams); C-Fast Initiative (Legal Assistance).  
A National Satellite TQM & HACCP Training Program for Fish & Shellfish Firms (USDA/CSREES)  
An Integrated Communications Project for the VT Marine Advisory Service Program (VA Grad. Marine Sci. Cons.)  
Quality and Shelflife Indicators for Pasteurized Crab Meat (VA Grad. Marine Sci. Cons.)  
VA Sea Grand Marine Advisory Program (VA Grad. Marine Sci. Cons.)  
Rawles, Dafne D. "The Presence and Growth Characteristics of Listeria monocytogenes in Blue Crab (Callinectes sapidus) Meat and the Effectiveness of Microwave Energy in a Pasteurization Process".  
Ph.D. Dissertation. VPI&SU.  
Commodity: Seafood  
Discipline: Food Chemistry
Name: Paul P. Graham  
Address: Virginia Polytechnic Institute and State University  
Department of Food Science and Technology  
Room 106-C  
Blacksburg, VA 24061-0418  
Phone: 540-231-7632  
FAX: 540-231-9293  
E-mail: grahamp@vt.edu  
%Appointment: 50 Extension; 15 Research; 35 Teaching

Areas of Expertise: Muscle food processing and product development research.

Current Research or Demonstration Projects:

Commodity: Muscle Foods

Discipline:

* * * * * * *

Name: Cameron R. Hackney  
Address: Virginia Polytechnic Institute and State University  
Department of Food Science and Technology  
Room 22-A  
Blacksburg, VA 24061-0418  
Phone: 540-231-5247  
FAX: 540-231-9293  
E-mail: hackneyc@vt.edu  
%Appointment: 65 Extension; 25 Research; 10 Teaching

Areas of Expertise: Microbiology of food products, foodborne pathogens and indicator microorganisms.

Current Research or Demonstration Projects: C-Fast Initiative (Vibrio Vulnificus); Food Safety Program for Industry, Inspectors and Consumers (ES/USDA FY 1995 Project); VA Dairy Research Program (VA Dairy Products Assn.); Quality and Shelflife Indicators for Pasteurized Crabmeat (VA Grad. Marine Sc. Cons.).

Davidson, Richard. "Survival of Bifidobacterium sp. in Frozen Yogurt." M.S. Thesis. VPI&SU.
Snow, Kathleen. "Biofilm formation on reusable plastic containers." M.S. Thesis VPI&SU.
Ostrander, Vicki. "Effect of processing on Vibrio vulnificus." M.S. Thesis. VPI&SU.

Commodity: Seafood

Discipline: Food Microbiology, Food Safety
Name: Micheal Jahncke  
Address: Virginia Seafood Research & Extension  
P.O. Box 369 (102 S. King St.)  
Hampton, VA 23669  
Phone: 757-727-4861  
FAX: 757-727-4871  
E-mail: vtsrc@global.gc.net  
%Appointment: 65 Extension; 35 Research; 0 Teaching  

Areas of Expertise: Seafood safety; seafood quality; handling and processing.  
Current Research or Demonstration Projects:  
Commodity: Seafood and Red Meat  
Discipline: Food Science

********

Name: Joseph E. Marcy  
Address: Virginia Polytechnic Institute and State University  
Department of Food Science and Technology  
Room 118  
Blacksburg, VA 24061-0418  
Phone: 540-231-7850  
FAX: 540-231-9293  
E-mail: jmarcy@vt.edu  
%Appointment: 0 Extension; 70 Research; 20 Teaching  

Areas of Expertise: Food processing and packaging. Interaction between food packaging and its contents.  
Current Research or Demonstration Projects: Improved Quality of Shredded Cheese (University of Wisconsin)  
Microleak Detection & Sterility Maintenance Assurance for Aseptic Packages (NC State University [CAPP3])  
VA Poultry Processing/Product Technology Research Program (VA Poultry Fed.)  
Zoecklein, Bruce W. "Effect of Canopy Manipulation and Fermentation on Grape Aroma Components." Ph.D. Thesis. VPI&SU.  
Commodity:  
Discipline: Packaging

********

Name: Norman G. Marriott  
Address: 103 Food Science Bldg.  
VPI&SU  
Blackburn, VA 24062-0418  
Phone: 540-231-7460  
FAX:  
%Appointment: 75 Extension; 10 Research; 15 Teaching  

Areas of Expertise: Accelerated processing of dry cured meats, restructured foods.  
Current Research or Demonstration Projects:  
Commodity:  
Discipline: Food Sanitation, Meat Science
Name: Merle D. Pierson
Address: Virginia Polytechnic Institute and State University
Department of Food Science and Technology
Room 20-A
Blacksburg, VA 24061-0418
Phone: 540-231-8641   FAX: 540-231-9293
E-mail: piersonm@vt.edu
%Appointment: 0 Extension; 85 Research; 15 Teaching

Areas of Expertise: Inhibition and control of foodborne pathogens, mechanisms of antimicrobials, rapid methods, new preservation methods.
Current Research or Demonstration Projects: Defining MCE Antagonistic to Campylobacter APP. and Salmonella spp. (USDA/ARS)
Commodity:
Discipline: Food Microbiology

* * * * * * *

Name: Mark S. Price
Address: Dept. of Food Science & Technology
VPI&SU
Blacksburg, VA 24061-0418
Phone: 540-231-8678   FAX: 540-231-9293
E-mail: maprice@vt.edu
%Appointment: 0 Extension; 0 Research; 0 Teaching

Areas of Expertise: Slaughter and processing of meat animals
Current Research or Demonstration Projects:
Commodity:
Discipline:

* * * * * * *

Name: Hengjian Wang
Address: Department of Food Science and Technology
VPI&SU
Blacksburg, VA 24061-0418
Phone: 540-231-5058   FAX: 540-231-9293
E-mail: hewang@vt.edu
%Appointment: 0 Extension; 0 Research; 100 Teaching

Areas of Expertise: Strong background in analytical techniques, sensory evaluation, meat processing, computer and software, statistical analysis, as well as engineering technique.
Current Research or Demonstration Projects: Skeletal alteration to improve beef tenderness.
Commodity:
Discipline:
Name: Bruce W. Zoecklein
Address: Virginia Polytechnic Institute and State University
Department of Food Science and Technology
Room 14
Blacksburg, VA 24061-0418
Phone: 540-231-5325 FAX: 540-231-9293
E-mail: bzoekkle@vt.edu
%Appointment: 55 Extension; 35 Research; 10 Teaching

Areas of Expertise: Analytical chemistry of grapes and wines. Secondary plant metabolites, grape aroma components and their precursors.

Current Research or Demonstration Projects: "Determination of Glycosyl Glucose Means of Quantifying the Effects of Selected Viticultural and Enological Practice (VA Winegrowers Advisory Board)
"Evaluation and Refinement of Grape Disease Forecast Models and Effect of Copper Sprays on Berry Skin" (VA Winegrowers Advisory Board)
Yoder, Carlton. "Effect of vineyard management and processing on glycosyl glucose content of Cabernet Sauvignon (Vitis vinifera L.) grapes. M.S. Thesis. VPI&SU.
Drake, Scott. Effect of vineyard management on hydrolyzed aroma precursors of Chardonnay and Cabernet Sauvignon (Vitis vinifera L.) grapes.
Commodity: Grapes, Wine
Discipline: Grape and Wine Chemistry, Wine Technology
Support Facilities
# SUPPORT FACILITIES

## ALABAMA

<table>
<thead>
<tr>
<th>Facility Type:</th>
<th>Analytical Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Department of Nutrition and Food Science</td>
</tr>
<tr>
<td>Location:</td>
<td>Spidle Hall, Auburn University</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Amarat H. Simonne</td>
</tr>
<tr>
<td>Address:</td>
<td>328 Spidle Hall</td>
</tr>
<tr>
<td></td>
<td>Auburn University, AL 36849</td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
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</tbody>
</table>

**Focus Area**: Evaluation of nutritional quality of foods as affected by various treatments. Evaluation of physical properties and sensory properties of foods and agricultural materials.

**Services Offered/**

**Capabilities**: Proximate composition, carotenoid and vitamin A and other basic properties of food

**Fee**: case by case

**Equipment**: HPLC unit; Instron Universal testing machine; Colorimeter (Hunter Lab); Ultralow freezer (-80 degrees C.); Autoclave; Spectrophotometer, etc.

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<table>
<thead>
<tr>
<th>Facility Type:</th>
<th>Analytical Lab</th>
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</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Food Science Testing Laboratory</td>
</tr>
<tr>
<td>Location:</td>
<td>328 Spidle Hall, Auburn University, Alabama</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Jean Olds Weese, Ph.D.</td>
</tr>
<tr>
<td>Address:</td>
<td>328 Spidle Hall</td>
</tr>
<tr>
<td></td>
<td>Auburn University, AL 36849-5605</td>
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<tr>
<td>Phone:</td>
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</tbody>
</table>

**Focus Area**: General product testing; nutrition labeling; shelf life studies; water activity

**Services Offered/**

**Capabilities**: The Food Science Testing Laboratory is a complete applications, product development and analytical facility. The laboratory emphasizes acidic products and bakery products.

**Fee**: None to access, but fee for services.

**Equipment**: HPLC for vitamin analysis; Atomic absorption for mineral analysis; water activity measurement; GC-Mass Spec for flavor analysis; Sensory analysis; GC for lipid and fatty acid analysis; Other minor tests.
Facility Type: Extension and Research Center
Name: Auburn University Marine Extension & Research Center
Location: Mobile, AL
Contact Person: Brian E. Perkins, Sr., M.S.
Address: A.U.M.E.R.C.
        4170 Commanders Drive
        Mobile, AL 36615-1413
Phone: 334-438-5690

Focus Area: A.U.M.E.R.C. has no food processing support facilities on site.
Services Offered/
Capabilities: Training, Assistance; Crisis Mediation
Fee: Considered on a case-by-case basis.
Equipment: None

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Facility Type: Meat Science Pilot Plant
Name: Lambert Meat Science Laboratory
Location: Auburn University, Alabama
Contact Person: Linda S. Mikel
Address: 209 Animal Sciences
        Auburn University, AL 36849
Phone: 334-844-1566

Focus Area: Red meat animal slaughter; fabrication; processing.
Services Offered/
Capabilities: Slaughter; fabrication; processing.
Fee: Determined on an individual case basis.
Equipment:
Facility Type: Research Lab
Name: Dept. of Nutrition and Food Science Research Lab
Location: Dept. of Nutrition and Food Science, Auburn University
Contact Person: Dr. Nancy R. Green, Dept. Head
Address: Dept. of Nutrition and Food Science
Auburn University, AL 36849
Phone: 334-844-4261

Focus Area: Protein purification and characterization; monoclonal antibody production; and ELISA techniques.

Services Offered/
Capabilities: Species identification of raw and cooked fish; detection of species adulteration in raw and cooked meats.

Fee: case by case basis

Equipment: Protein separation system; including electrophoresis apparatus; Bio-rad Econo system, Prep Cell and Rotoford; Microplate reader and washer; Microcentrifuge and ultracentrifuges; Chromotography refrigerator; ultra-low freezer; autoclave; incubator.
Facility Type: Institute for development of interdisciplinary research approaches in food processing value added applications.
Name: Institute of Food Science and Engineering (IFSE)
Location: University of Arkansas, Fayetteville, AR
Contact Person: Justin R. Morris, Director
Address: Department of Food Science & Engineering
272 Young Avenue
Fayetteville, AR 72704
Phone: 501-575-4040 [FAX: 501-575-2165]

Focus Area: Food processing research

Services Offered/
Capabilities: Food processing continues to be the number one manufacturing industry in the Southern Region. The production of agricultural commodities remains a vital part of the regional economy. Arkansas ranks first in the nation in broilers and rice, second in catfish, fourth in turkeys, sixth in eggs, seventh in soybeans and eighth in grape production and processing. Already a $14 billion industry in Arkansas, the food processing industry could contribute even more to the state and regional economy by further value-added processing.

To serve this important industry, the Division of Agriculture and the Dale Bumpers College of Agricultural, Food, and Life Sciences created an Institute of Food Science and Engineering (IFSE) composed of three interactive technology Centers: the Center for Food Processing and Engineering (CFPE), the Center for Food Safety and Quality (CFSQ) and the Center for Human Nutrition (CHN). The Center for Food Processing and Engineering is the flagship of the Centers. It is developing interdisciplinary research approaches which add value to regional agricultural raw products in the critical and expanding area of food processing.

This Center is developing alliances between academia and industry, alliances that will provide an appropriate balance between fundamental and applied research in program areas that are critical for growth of food processors in the state, region and nation. The ultimate mission of the IFSE is to take a scientific, interdisciplinary approach to research in order to create a high-quality, wholesome, palatable, safe, economically sound and nutritionally balanced food supply.

Fee:

Equipment:
Facility Type: Pilot Plant and Analytical Laboratories
Name: Food Science Pilot Plant and Faculty Laboratories
Location: University of Arkansas Campus at Fayetteville, AR
Contact Person: Carolyn Sharp or Phil Crandall
Address: Department of Food Science
Fayetteville, AR 72704

Phone:

Focus Area: Fruit and vegetable processing from production through processing; some fish and poultry processing

Services Offered:

Capabilities: Custom formulation for product development, transfer of new technologies, custom processing, quality assessment and food safety.

Fee: Fees are charged on a case by case basis.

Equipment: Equipment housed in facility (with applicable usage fees). Conventional fruit and vegetable unit operations, canning and retourting operations, steam jacketed kettles, spray dryer, freeze driers, plate type heat exchanger, air/steam impingement cooker, homogenizer, sensory evaluation facilities, focus group and training facilities.

Analytical laboratories are available to support each Professor's areas of expertise.
FLORIDA

Facility Type: Citrus Processing Pilot Plant
Name: Citrus Research and Education Center
Location: Lake Alfred, FL 33850-2290
Contact Person: Robert J. Braddock
Address: Citrus Research and Education Center
700 Experiment Station Rd.
Lake Alfred, FL 33850-2299
Phone: 941-956-1151

Focus Area: Citrus and other fruit juice processing technology; packing house operations for post-harvest handling of fresh citrus fruit; processing and manufacture of frozen concentrated juice and related citrus by-products.

Services Offered/
Capabilities: Duplication of commercial citrus industry handling and processing operations on a semi-works and/or pilot plant basis. Research on new and novel process technologies such as freeze concentrator, membrane concentration, and automation.

Fee: Project related, or case-by-case basis.

Equipment: 1) Fresh fruit packing house equipment (receiving, sorting, grading case packing, etc.); 2) Juice extraction machines (FMC, other); 3) Heat exchangers, coolers; 4) Multi-stage evaporation (5 effect, 5 stage @ 500 lbs/hr water removal capacity; 5) Continuous freezers; 6) Cold/frozen storage facilities; 7) RO/UF membrane separation equipment; 8) Citrus peel and pulp by-product processing plant; 9) Screw press, rotary kiln dryer, etc.

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Facility Type: Pilot Plant
Name: Food Science Pilot Plant
Location: Food Science and Human Nutrition Dept. Bldg.
University of Florida Campus
Gainesville, FL
Contact Person: Charles A. Sims/Rob Pellick
Address: P.O. Box 110370, University of Florida
Gainesville, FL 32611-0370
Phone: 352-392-1991

Focus Area: Seafood and Aquatic Foods Processing/Packaging/Handling. Fruit and vegetable processing, fruit juices and related products.

Services Offered/
Capabilities: Custom set-up of pilot scale processing equipment for most standard unit processing operations including mixing, blending, heating & cooling, filtration, drying, pasteurization, sterilization, thermal processing/canning, fermentation, cold and frozen storage.

Fee: Project related, or case-by-case basis.

Equipment: Walk-in coolers and/or environment chambers; walk-in freezer; dryers (drum, spray, cabinet, freeze dryer); evaporator (lab scale); plate heat exchanger, and swept surface heat exchangers (2); steam blancher, continuous centrifuge; extruder, reverse osmosis and ultrafiltration membrane systems; presses (juice extraction) (2); still cook vertical retort; can/pouch sealing equipment; fish processing & handling equipment.
<table>
<thead>
<tr>
<th><strong>Facility Type:</strong></th>
<th>Pilot Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong></td>
<td>Meat Processing Center</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>Animal Science Building 459</td>
</tr>
<tr>
<td><strong>Contact Person:</strong></td>
<td>Larry Eubanks</td>
</tr>
<tr>
<td><strong>Address:</strong></td>
<td>Animal Science Department</td>
</tr>
<tr>
<td></td>
<td>P.O. Box 110910</td>
</tr>
<tr>
<td></td>
<td>Gainesville, FL 32611-0910</td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td>352-376-6944</td>
</tr>
</tbody>
</table>

**Focus Area:** Teaching and Research in the area of beef, pork, lamb, and goat.

**Services Offered:**

**Capabilities:** Slaughter, carcass data, fabrication, meat processing.

**Fee:** Slaughter beef $50; Pork, lamb, goat $20 Fabrication $.25/lb. processing $.35/lb.

**Equipment:** Mixers, tumblers, stuffer, grinders, band saws, vacuum packagers, slaughter equipment (USDA Inspection); smoke house; coolers - 40 beef carcass capacity; walk-in freezers; sensory area with kitchen and booths for 11 panelists.
GEORGIA

Facility Type: Analytical Lab
Name: Food Science Research Lab
Location: University of Georgia Campus
Contact Person: Mike Doyle, Head
Address: Department of Food Science & Technology
University of Georgia
Athens, GA 30602
Phone: 706-542-2286

Focus Area: Fats and oils, oil stability, fat substitutes, lipid modification with enzymes, structured lipids.
Services Offered/
Capabilities: Analytical services and lipid analysis; custom synthesis/modification of lipids.
Fee: Project related or case-by-case basis.
Equipment: HPLC; short path distiller (lab scale); omnion oxidative stability index instrument; GLC; freezer (lab).

*****

Facility Type: Meat Processing Plant
Name: Food Science Meat Laboratory
Location: University of Georgia Food Science Building
Contact Person: A. Estes Reynolds or John A. Carpenter
Address: Dept. of Food Science and Technology
University of Georgia
Athens, GA 30602
Phone: 706-542-2574 or 706-542-2286

Focus Area: Meat and poultry processing formulation, packaging, safety, process control, equipment utilization and employee training.
Services Offered/
Capabilities: Custom formulation study; new product development; new processing methods; equipment trials. Technology transfer with hands-on training and workshops for employee education. Laboratory has capabilities for all types of sausage, smoked meat, batter and breaded products and marination studies.
Fee: Project related or case-by-case basis.
Equipment: Chopper, grinders, stuffers, vacuum tumbler, injectors and marination equipment, forming equipment, batter and breading system, deep fat fryers, smokehouse, driers, temperature control room, slaughter floor, kettle cooking, stationary retort.

88
Facility Type: Pilot Plant
Name: Pilot processing plant
Location: University of Georgia Poultry Research Center
Contact Person: D. L. Fletcher or Reg Smith
Address: Department of Poultry Science
          University of Georgia
          Athens, GA 30602
Phone: 706-542-2473

Focus Area: Poultry slaughter and processing.
Services Offered:
Capabilities: Yield studies; laboratory support.
Fee: No policy -- case-by-case.
Equipment: Standard processing and meat lab facilities. New facility to be completed in 1996.

* * * * * * *

Facility Type: Pilot Plant
Name: Food Science Pilot Plant
Location: University of Georgia Campus, Athens, GA
Contact Person: Yao-wen Huang
Address: Department of Food Science and Technology
          University of Georgia
          Athens, GA 30602-7610
Phone: 706-542-2286

Focus Area: Seafood and aquatic foods processing/packaging/safety. Poultry meat shelf life extension.
Services Offered:
Capabilities: Custom formulation study for product development. Technology transfer: processing, preservation safety. Hands-on demonstration: Handling, quality assessment, regulations for food processing.
Fee: Project related or case-by-case basis.
Equipment: Vacuum seamer; steam jacketed kettles; stationary retort; Sterilmatic cooker simulator; CO₂ freezer; blast freezer; tunnel drier (parallel air flow) low temperature heat pump drier; spray drier; freeze drier; fluidized bed drier; APV twin screw extruder; plate type heat exchanger; tubular heat exchanger; No-Bac Unitherm UHT sterilizer; falling film evaporator; Schroeder N16 injector; 100 lb. capacity vacuum tumbler; forming system; batter and breading system; continuous deep fat fryer; chopper and stuffer; smokehouse; air impingement cooker; colloid mill; supercritical fluid extraction system; homogenizer; 20 L fermentor; ultra high pressure system (60,000 psi); sensory evaluation facility; focus group/sensory training facility.
<table>
<thead>
<tr>
<th>Facility Type:</th>
<th>Pilot Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Georgia Goat Research and Extension Center</td>
</tr>
<tr>
<td>Location:</td>
<td>Agricultural Research Station, Fort Valley State University</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Seyoum Gelaye</td>
</tr>
<tr>
<td>Address:</td>
<td>Agricultural Research Station</td>
</tr>
<tr>
<td></td>
<td>Fort Valley State University</td>
</tr>
<tr>
<td></td>
<td>1005 University Drive</td>
</tr>
<tr>
<td></td>
<td>Fort Valley, GA 31030-3298</td>
</tr>
<tr>
<td>Phone:</td>
<td>912-825-6817</td>
</tr>
</tbody>
</table>

**Focus Area:** Goat milk processing; packaging and storage of goat slaughtering; chew on processing and storage.

**Services Offered/ Capabilities:** Custom slaughtering of small and large ruminants. Training of people handling dairy and meat products.

**Fee:** Project related or case-by-case basis.

**Equipment:** Dairy Technology Center: Vat pasteurizer; cheese vat; carton filler; walk-in freezer.

Meat Technology Center: Abattoir; meat processing packaging units; processed and fresh meat storage facilities.
KENTUCKY

Facility Type: Analytical and Pilot Laboratory
Name: Post Harvest Research Laboratory
Location: 208 Funkhouser Building, University of Kentucky
Contact Person: Margaret Barth
Address: Department of Nutrition and Food Science
Lexington, KY 40506-0054
Phone: 606-257-3046

Focus Area: Post harvest processing and packaging of fruits and vegetables products; shelf life studies of fruit and vegetable products
Services Offered/
Capabilities: Staff support, training, raw product ingredient support, analytical and microbiological support, experimental design and statistical analysis support, project summary support, consultation, and employee education.
Fee: Project related or case by case basis
Equipment: Packaging equipment, head space analysis equipment, MOCON, HPLC, pH, balances, refrigeration and environmental storage chambers.

*

Facility Type: Pilot Plant
Name: Dairy Processing Laboratory
Location: B49 W. P. Garrigus Building
Contact Person: C. L. Hicks
Address: 410 W.P. Garrigus Bldg.
University of Kentucky
Lexington, KY 40546-0215
Phone: 606-257-7538

Focus Area: Cheese, cheese cultures, fermentations, soft serve, ultrafiltration and peptide fractionation, pasteurization, homogenization, evaporation, spray drying, formulation work, and environmental storage and shelf life work.
Services Offered/
Capabilities: Staff support, training, raw product ingredient support, analytical and microbiological support, experimental design and statistical analysis support, project summary support, import/export support, consultation, employee education.
Fee: Project related or case by case.
Equipment: Mixing vessels; HTST, LTLT, and UHT pasteurization; homogenizer, Taylor freezer, fermentors, cheese vats, retorts, steam jacketed kettles, evaporator, spray dryer, packaging equipment, freezers, coolers, and environmental chamber.
Facility Type: Pilot Plant
Name: Meat Processing Laboratory
Location: B50 W. P. Garrigus Building
Contact Person: William Moody
Address: 210 W.P. Garrigus Bldg.
University of Kentucky
Lexington, KY 40546-0215
Phone: 606-257-7551

Focus Area: Meat processing, meat tenderization, electrical stimulation, hot boning, sausage formulation and preparation, country cured ham preparation, and environmental storage and shelf life work.
Services Offered:
Capabilities: Staff support, training, raw product ingredient support, analytical and microbiological support, experimental design and statistical analysis support, project summary support, import/export support, consultation, employee education.
Fee: Project related or case by case basis.
Equipment: Mixing vessels, steam jacketed kettles, silent cutter, grinder, mixers, tumbler, and environmental chamber.

**********

Facility Type: Processing Laboratory
Name: Food Engineering Laboratory
Location: 189 Agriculture Engineering Building
Contact Person: Fred Payne
Address: 220 Agriculture Engineering Bldg.
University of Kentucky
Lexington, KY 40546-0276
Phone: 606-257-3000 Ext. 220

Focus Area: CO₂ puffing of fruit and vegetables, development of dehydrated foods to be used as ingredients in products requiring rapid rehydration, shelf life of fruits and vegetable using ozone, and food instrumentation development.
Services Offered:
Capabilities: Staff support, training, raw product ingredient support, analytical and microbiological support, experimental design and statistical analysis support, project summary support, consultation, and employee education.
Fee: Project related or case by case basis.
Equipment: Freeze dryer, CO₂ puffing equipment, grinders, food slicer, washer, refrigerated and environmental storage cabinet, and electronic monitoring equipment.
Facility Type: Production/Research Facility
Name: Aquaculture Research Center
Location: 103 Athletic Drive
Contact Person: James H. Tidwell
Address: Research Center
103 Athletic Drive
Kentucky State University
Frankfort, KY 40601
Phone: 502-564-9104

Focus Area: Aquaculture of various fish species, nutrition factors of fish, sex reversal of paddlefish.
Services Offered:
Capabilities: Staff support, training, raw product ingredient support, histological and diet support, experimental design and statistical analysis support, project summary support, consultation, and employee education.
Fee: Project related or case by case basis
Equipment: Histological equipment, Varian GC-MS, Analytical equipment, ponds and aquarium.
MISSISSIPPI

Facility Type: Analytical Lab
Name: Quality Control Lab
Location: Hinds Community College, Raymond, MS
Contact Person: Roger Jones
Address: Box 10460
          Raymond, MS 39154
Phone: 601-857-3408

Focus Area: Teaching for Associate of Applied Science degree in Food Processing Technology
Services Offered:
Capabilities: Some Chemical and Bacteriological Analysis of various types of food samples.
Fee: None
Equipment: CEM - moisture/fat analyzer, microbiological analysis equipment, Kjeldhal Units, balances, PH Meter, Electronic Titrator, Other

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Facility Type: Biophysical and Quality Control Laboratory
Name: Food Science and Technology Dept
Location: Mississippi State University, Herzer Bldg.
Contact Person: Juan L. Silva
Address: Box 9805
          Mississippi State, MS 39762
Phone: 601-325-3200

Focus Area: Biophysical measurements: texture, color, Aw, viscosity
Chemical analyses: pH, Brix, sugars, EtOH, Acetic Acid, T.A.
Services Offered:
Capabilities: Texture, color analysis
Microbial loads
Water activity, pH, Brix, T.A., EtOH and V.A. in beverages
Viscosity, consistency of products
Fee: (based on client and needs)
Equipment: Instron Universal Testing Machine Model 1011
Kramer (FTC) Shear Press
Hunter Labscan 6000 Spectrocolorimeter, Spectrophotometer
Brabender VISCO Amylograph
Brookfield Viscosimeter, Consistometer
Water Activity Meter, Headspace (O₂, CO₂) Analyzer
Refractometer, pH Meter, Titrator, HPLC
Microbial Analysis: total counts, coliforms, some pathogens, yeast and molds.
Facility Type: Pilot Plant
Name: Ammerman-Hearnsberger Food Processing Plant
Location: Stone Blvd., Mississippi State University
Contact Person: Charles H. White
Address: Box 9805
Mississippi State, MS 39762
Phone: 601-325-3200

Focus Area: Assists food processing companies through research, education, and technical assistance helping to determine the feasibility for new products, new packaging technology, and other new processing procedures.

Services Offered:
Capabilities: Product development/improvement; Process development/improvement; New packaging techniques; HACCP/Food Safety guidelines for different processes; Effect of processing on nutrients and nutrition labeling.
Fee: Nominal fees include a utility charge, a maintenance cost, and an operating cost.
Equipment: Band saw, bar sealer, blancher, canning machine, catfish skinner, deep fryer, double-jacket steam kettle, dough roller machine, filtration system, food cutter, food grinder, food mixers, food tumbler, freeze dryer, freezing tunnel, homogenizer, hot-air shrink machine, laboratory port pulper, liquid filler machine, microwave moisture oven, patty molding machine, retort, slicer and dicer, smoker with generator, spray dryer, steam injection oven, tabletop food cutter, tabletop slicer, vacuum oven, vacuum seal machine, vacuumized steam kettle, vegetable/fruit washer, and vegetable peeler.

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Facility Type: Pilot Plant
Name: Meat Processing Pilot Plant
Location: Ballew Hall, Stone Blvd., Mississippi State University
Contact Person: R. W. Rogers
Address: Box 9815
Mississippi State, MS 39762
Phone: 601-325-2802

Focus Area: Meat Processing Teaching and Research
Services Offered:
Capabilities: Small batch production capacity in a semi-commercial setting
Fee: Payment of expenses for product, plus labor, plus overhead
Equipment: Chopper, tumbler, stuffer, saws, grinders, injector, comitrol, slicers, smokehouse, color meter, sensory analysis, penetrometer
Facility Type: Pilot Plant
Name: Enology Laboratory
Location: North Farm, Mississippi State University
Contact Person: Juan Silva
Address: Box 9805
          Mississippi State, MS 39762
Phone: 601-325-3200 (Fax: 601-325-8728)

Focus Area: Juice and winemaking, fruit wines, vinegar making.
Services Offered:
Capabilities: From home winemaking techniques to food processing pilot runs, small to commercial batches.
Fee: Based on needs and services provided.
Equipment: IQF tunnel freezer (CO₂); complete juice pressing operation, fermentation rooms, bottling room, cellars, analytical.

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Facility Type: Seafood Pilot Plant
Name: Experimental Seafood Processing Laboratory
Location: Coastal Research & Extension Center, Pascagoula, MS
Contact Person: Dr. Custy F. Fernandes
Address: 3411 Frederic Street
          Pascagoula, MS 39567
Phone: 601-762-7783 (Fax: 601-762-7784)

Focus Area: Seafood technology, food processing, sensory evaluation, HACCP.
Services Offered:
Capabilities: This laboratory, located in Pascagoula, is a joint effort of MAFES, MCES, NMFS, and NOAA with financial support from Jackson County, MS. Its purpose is to provide the equipment and competent scientists and support staff to do research and training to develop the technologies and strategies needed to improve the value of seafood products landed from the Gulf Coast and also for aquaculture products.

The research goals include the following: 1) Exploit latent fishery resources in the Gulf; 2) Obtain and apply information on composition, uses, handling methods, processing requirements, yield and quality retention of Gulf species to ensure quality and safety of products; 3) Do cost analyses and economic and technological feasibilities of value added and new products; 4) Provide a fish/seafood processing facility for education, training and technology transfer; and 5) Provide private industry with proprietary research and development.

A 24-station sensory analysis lab with associated teaching facility and conference room is available at the lab. It is a resident site for Seafood HACCP certification in conjunction with National Marine Fisheries Service NOAA lab.

Fee: Negotiated, service provided on a cooperative or proprietary basis.
Equipment: Analog product production, breading, fish filleting and evisceration systems, plate freezers, comprehensive food processing lab.
NORTH CAROLINA

Facility Type: Analytical Lab (Microbiology)
Name: Food Microbiology Laboratory
Location: 173, 176 Carver Hall
Contact Person: Dr. Aubrey Mendonca
Address: 176 Carver Hall, Human Environment & Family Sciences
          North Carolina A&T State University
          Greensboro, NC 27411
Phone: 910-334-7328

Focus Area: Microbiology analyses of food for spoilage and pathogenic bacteria; detection methods for injured food-borne pathogens.
Services Offered/
Capabilities: Growth of strictly anaerobic bacteria.
Fee:
Equipment: Bactron anaerobic/environmental chamber.

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Facility Type: Analytical Laboratory
Name: Food Science Lab
Location: 164 Carver Hall, North Carolina A&T State University
Contact Person: Dr. Chung W. Seo
Address: Food Science Lab 161 Carver Hall
          Dept. of Human Environment & Family Sciences
          North Carolina A&T State University
          Greensboro, NC 27411
Phone: 910-334-7933

Focus Area: Food composition analysis - fatty acid profile, cholesterol, vitamins, amino acids, minerals and proximate composition; determination of rate of lipid oxidation.
Services Offered/
Capabilities:
Fee:
Equipment: Gas chromatograph (GC); high pressure liquid chromatograph (HRLC); fluorometer; UV-Visible Spectrometer; ICP Spectrometer and other basic analytical equipment and apparatus.
Facility Type: Analytical Lab
Name: Lipids Lab
Location: 219 Schaub Hall, NCSU Campus, Raleigh, NC
Contact Person: Leon C. Boyd, Ph.D.
Address: Box 7624
North Carolina State University
Raleigh, NC 27695-7624
Phone: 919-954-9077

Focus Area: Lipid Chemistry
Services Offered/
Capabilities: Analyses of lipid containing food products for fatty acid composition, sterols, tocopherals and lipid oxidation products.
Fee: Negotiable
Equipment: Gas liquid chromatography (GLC); High performance liquid chromatography (HPLC); Wet chemistry analyses & equipment; Spectrophometer.

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Facility Type: Analytical Lab
Name: Mineral Nutrition - Food Allergy Research Group
Location: 320 Schaub Hall
Contact Person: Johathan C. Allen
Address: Dept. of Food Science
North Carolina State University
Raleigh, NC 27655-7624
Phone: 919-515-2968

Focus Area: Analysis of mineral content of various foods and food constituents; research on mineral metabolism; investigator of antigens/allergens in food proteins.
Services Offered/
Capabilities: Mineral analysis by atomic absorption; ELISA development and testing for specific antigens.
Fee: Negotiable
Equipment: Perkin Elmer 3100 AAS; Dynatech MR5000 ELISA plate reader.
Facility Type: Analytical Lab
Name: Muscle Foods Microbiology Laboratory, Room 338
Location: Schaub Hall, North Carolina State University
Contact Person: Dr. Brian W. Sheldon
Address: Department of Food Sciences
Box 7624
North Carolina State University
Raleigh, NC 27695-7624
Phone: 919-515-2971

Focus Area: Food Microbiology
Services Offered/
Capabilities: Efficacy testing of preservatives; thermal inactivation studies.
Fee: Negotiable
Equipment: Standard microbiology laboratory (water baths, incubators, spiral plater, centrifuges, colony counters, microscopes, balances, computers, package/vacuum sealers, etc.)

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Facility Type: Analytical Lab
Name: NCSU Plant Disease and Insect Clinic
Location: 1104 Williams Hall, North Carolina State University, Raleigh, NC
Contact Person: Dr. Michael Waldvogel
Address: Dept. of Entomology
NCSU Box 7613
Raleigh, NC 27695-7613
Phone: 919-515-2703

Focus Area: Identification of pests and other including arthropods infesting food and food manufacturing facilities.
Services Offered/
Capabilities: Identification of insects and other arthropods pests infesting food processing, preparation and handling facilities. Recommendations for pest management (if requested).
Fee: Free to residents and companies in North Carolina, if the sample is submitted through the local county office of the NC Cooperative Extension Service (listed under "County Government" in phone book).
Equipment:
Facility Type: Analytical Lab
Name: Postharvest Engineering Lab
Location: Dept. of Biological & Agricultural Engineering
North Carolina State University
Contact Person: M. D. Boyette
Address: Box 7625
Raleigh, NC 27695
Phone: 919-515-6790

Focus Area: Heat transfer in fruits and vegetables; instrumentation and control of processing and storage facilities
Services Offered:
Capabilities: Postharvest cooling tests on various products and packaging configurations; instrumentation and test on cooling, processing and storage facilities.
Fee: Depends on scope of work.
Equipment: Four pc-based data collection and control systems; 12 stand alone data collection systems.

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Facility Type: Cucumber Fermentation and Storage Facilities
Name:
Location: Mt. Olive, NC
Contact Person: Ervin G. Humphries
Address: Box 7625
Raleigh, NC 27695-7625
Phone: 919-515-6728

Focus Area: Aerobic and anaerobic brining techniques with the emphasis on reduction of salt.
Services Offered:
Capabilities:
Fee:
Equipment: Brining tanks of various size.
Facility Type: Extension and Research Lab with analytical, test kitchen, and pilot plant facilities
Name: NCSU Seafood Laboratory
Location: 3441 Arendell Street
            Morehead City, NC 2857
Contact Person: David P. Green
Address: NCSU Seafood Laboratory
            P.O. Box 1137
            Morehead City, NC 2857
Phone: 919-726-7341

Focus Area: Science and technology of aquatic food products including fish (freshwater) and seafood (marine) species.
Services Offered/
Capabilities: Process evaluation & facility layout; product development assistance; seafood quality & safety training (workshops and demonstrations); pilot scale processing demonstrations; nutrition education.
Fee: Determined on case-by-case basis.
Equipment: Test kitchen fully equipped with demonstration setup; analytical balances: infrared rapid moisture analyzer, labconco rapid digestor with distillation unit, fume hood, spectrophotometer (UV-visible), thermal process monitoring equipment/seam evaluation; Surimi Processing Equipment: Kolm Smoke Fish Processor, Hollymatic Vacuum Packing Machine, Togeo Vacuum Tumbler.

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Facility Type: Food Chemistry/Analytical Lab, Quantity Cookery and Home Ec Lab
Name: Human Environment & Family Science - Food Science Lab
Location: Carver Hall (Rooms 172 & 179), Bewbow Hall (Rooms 107, 110, 204)
Contact Person: Margaret J. Hinds, Ph.D.
Address: Food Science Lab - Human Environment & Family Sciences
            161 Carver Hall
            North Carolina A&T State University
            Greensboro, NC 27411
Phone: 910-334-7963

Focus Area: 1) Physical, chemical & sensor evaluation of animal & plant components and processed foods; 2) Food chemistry (functional properties, flavors, lipids).
Services Offered/
Capabilities: Proximate analysis, lipid composition, flavor components using GC/MS, Consumer Evaluation.
Fee:
Equipment: Hewlett Packard Gas Chromatogrant HP3890 Series II; GC HP5390 Series II with 5971 Series Mass Detector; Varian Cary 1E UV-Visible Spectrophotometer; Jeol EMX270 FT Nuclear Magnetic Reonance Spectramatic; Equipment being purchased: ColorTec Spectral Color Analyser; TAXTZ Texture Analyzer; Quantity Cookery & Home Ec: 6 large stoves and ovens, 2 commercial refrigerators/freezers; food preparation and serving facilities.
Facility Type: Pilot Plant
Name: Fermentation Facility
Location: Scott Hall and Schaub Hall
Contact Person: Jason Shih
Address: Poultry Science 515-C
North Carolina State University
Raleigh, NC 27695

Phone:

Focus Area: Fermentation; fermentors - 25 liters, Food Science, Schaub Hall; 100 liters - Scott Hall, NCSU Biotech
Services Offered/
Capabilities: In Scott hall, to be available within 1 year; full pilot scale fermentor and accessory equipment; no services defined at the moment -- contract use only.
Fee: Unknown
Equipment: New Brunswick Fermentation -- Support equipment: centrifuge, filtration check for cell separation and processing.

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Facility Type: Pilot Plant
Name: Fermentation Facility
Location: Scott Hall and Schaub Hall
Contact Person: Todd Klaenhammer
Address: Food Science 515-297
North Carolina State University
Raleigh, NC 27695

Phone: 919-515-2951

Focus Area: Fermentation; fermentors - 25 liters, Food Science, Schaub Hall; 100 liters - Scott Hall, NCSU Biotech
Services Offered/
Capabilities: In Scott hall, to be available within 1 year; full pilot scale fermentor and accessory equipment; no services defined at the moment -- contract use only.
Fee: Unknown
Equipment: New Brunswick Fermentation -- Support equipment: centrifuge, filtration check for cell separation and processing.
Facility Type: Office facility
Name: Ricks Hall Annex
Location: Ricks Hall, North Carolina State University
Contact Person: Angela Fraser
Address: P.O. Box 7605
North Carolina State University
Raleigh, NC 27606
Phone: 919-515-9150

Focus Area: Food preservation; food safety education; food service food safety; consumer food safety.

Services Offered:
Capabilities: Development and evaluation of food safety training programs for food service workers and of food safety programs for consumers.
Fee: -0-
Equipment: The facility is primarily designed for the development of educational materials so analytical equipment is not available.

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Facility Type: Pilot plant
Name: Dairy & Process Applications Laboratory
Location: North Carolina State University Department of Food Science
Contact Person: Gary Cartwright
Address: Box 7624
Raleigh, NC 27695
Phone: 919-515-2760

Focus Area: Processing and packaging of dairy products and a variety of aseptic foods and beverages. Dairy products include fluid milks, ice cream, lowfat ice cream, cottage cheese, cheese, yogurt, and buttermilk. Aseptic products can be processed with tube in shell heat exchangers, direct steam injection, or scraped surface heat exchangers. Aseptic packaging in brick packs or previously irradiated containers and extended shelf life capabilities are available.

Services Offered:
Capabilities: Equipment can be contracted for the pilot production of a variety of food products for uses other than retail sales, including sales samples, taste panels, shelf-life studies, and ingredient optimization. Batch sizes vary by equipment, but range from 2 to 1,000 gallons.
Fee: Varies by equipment utilized.
Equipment: HTST pasteurization & homogenization: $1,000/day; Unitherm shell in tube thermal processing: $1,750/day; Scholle extended shelf life bag in box filler: $1,000/Day; Liqui-Box bag in box filler: $500/day; Continuous ice cream freezing & packaging: $750/day; Cheese vats: $500/day; Cherry Burrel EQ3 extended life packaging: $1,000/day; Direct steam injection: $1,750/day; Scraped surface heat exchangers: $1,500/day; Aseptic bottle filling: $500/day.
Facility Type: Thermal Analysis Facility
Name: Thermal Analysis Facility
Location: Schaub Hall, North Carolina State University
Contact Person: Brian Farkas
Address: 

Phone: 919-515-2959

Focus Area: Thermal analysis of food materials.
Services Offered/
Capabilities: Differential scanning calorimetry (DSC), Dynamic Mechanical Analysis (DMA), Dilute Solution calorimetry.
Fee: Undetermined at this time.
Equipment: Department of Food Science, Schaub Hall, North Carolina State University.
Facility Type: Pilot Plants  
Name: Food Science - Biology - Ag. Engr.  
Location: Raleigh, NC  
Contact Person: George A. Rutledge  
Address: NCSU Food Science Dept.  
Box 7624  
Raleigh, NC 27695  

Phone:

Focus Area: Foods processing - post harvest to packaged products - includes field crops, animal, poultry, seafoods, dairy products.

Services Offered:
Capabilities: Pilot commercial scale processing of still beverages, milk & dairy products -- pilot processing of all other foods. Packaging of dairy & still beverages at pilot & commercial levels -- all other pilot.
Fee: Depends on application
Equipment: Aseptic processing scraped wall, heat exchangers, unitherms shell & tube, IP-SA3 aseptic farm-fill seal carton equipment, HIST pasteurizer, homogenizers, bag-in-box, ice cracker, cheese vats, gable top extended shelf life carton, aseptic bottle filling and closure, pilot line for vegetables, caustic porlari vacuum retort, vertical retort, glass & cans - can 211 to #10 package for shipment; post harvest cooling, H₂O recovery, machine shops.

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Facility Type: Pilot Plant  
Name: Piedmont Research Station  
Location: Salisbury, NC  
Contact Person: Dr. Ken Anderson  
Address: Dept. of Poultry Science  
Box 7608  
Raleigh, NC 27695-7608  
Phone: 919-515-5527  

Focus Area: Layer management and shell egg processing.
Services Offered:
Capabilities: Detergent sanitizer and deframer testing; microbiological testing; cooling studies; strain comparisons.
Fee: Reg. based on size, type, and complexity of study.
Equipment: Modified Aquamagic Shell Egg Processing System designed to simulate commercial processing with recirculating tanks, pressure regulated wash and rinse nozzles, etc. Fee is negotiable based on size, type, and complexity of study.
Facility Type: Laboratory
Name: Muscle Biology Laboratory
Location: Animal Science Bldg., Stillwater, OK 74078
Contact Person: Brad Morgan, Linda Guenther
Address: Dept. of Animal Science
Oklahoma State University
Stillwater, OK 74078
Phone: 405-744-6616

Focus Area: Meat tenderness, product testing (i.e., sensory analysis), nutritional labeling, HACCP training.
Services Offered/
Capabilities: Tenderness testing, sensory analysis, proximate analysis, cholesterol analysis, fatty acid determination, pesticide/antibiotic residue testing.
Fee:
Equipment:

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Facility Type: Pilot Plant; Analytical Labs, Research Labs
Name: Oklahoma Food & Agricultural Products Research & Technology Center
Location: Oklahoma State University Campus
Contact Person: Dr. Lowell Satterlee, Director
Address: 148-A Food Technology Center
Oklahoma State University
Stillwater, OK 74078-6055
Phone: 405-744-6690 (Fax: 405-744-6313)

Focus Area: Primarily food processing and related research activities.
Services Offered/
Capabilities: Facilities are under construction; to be completed in Fall 1996.
Fee: Not yet determined.
Equipment: Not completed. Facilities will be available for grant or contract research.
Facility Type: Analytical Lab
Name: Nobel Research Center (NRC)
Location: Oklahoma State University Campus
Contact Person: Niels Maness
Address: Dept. of Horticulture and L.A.
Oklahoma State University
Stillwater, OK 74078
Phone: 405-744-5423

Focus Area: Supercritical fluid extraction processes; harvest mechanization - postharvest handling systems.
Services Offered/
Capabilities: None, collaborative research on a case-by-case basis.
Fee:
Equipment: Dionex 703M Supercritical Fluid Extractor; HPLC, GC, spectrophotometer, chromameter.

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Facility Type: Analytical Lab
Name: Wheat Quality Laboratory
Location: Oklahoma State University Campus
Contact Person: Connie Shelton, 303 Ag Hall
Brett Carver, 368 Ag Hall
Address: Stillwater, OK 74078
Phone: 405-744-9614/405-744-6414

Focus Area: End-use quality of wheat (primarily breadmaking)
Services Offered/
Capabilities: Wheat milling, grain protein and moisture determination, kernel hardness testing, dough property evaluation, pan bread quality evaluation.
Fee:
Equipment: Analytical balances; Kjeldahl apparatuses; baking oven; fermentation cabinet and stand; Buhler Flour Mill; Quadrumat Sr. Flour Mill; dough mixer 100g; moisture oven; hobart grinder; technicon 400 NIR; mxograph 10g; UDY Cyclone Sample Mill; Perten Falling Number 1400; 10 gram computerized mixograph with Mixsmart Software; Perten instruments; SKCS 4100.
Facility Type: Analytical Lab  
Name: Human Nutrition Laboratory  
Location: B213 Poole Agricultural Center, Clemson University  
Contact Person: E. Kunkel  
Address: Department of Food Science  
Clemson University  
217 Poole Agricultural Center  
Clemson, SC 29634-0371  
Phone: 864-656-5690

Focus Area: Analytical lab in nutrient analysis, especially for minerals and for conducting in vitro and in vivo digestibility trials.  
Services Offered/  
Capabilities: Mineral and protein analysis; in vitro digestibility trials  
Fee: The only fees would reflect cost of the analysis itself.  
Equipment: Equipment includes HPLC, atomic absorption and UV/visible spectrophotometry, and electrophoresis

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Facility Type: Animal Research Facility  
Name: Godley-Snell Research Center  
Location: Clemson University, Cherry Road  
Contact Person: Dr. H. E. Farris, Jr.  
Assoc. VP for Research Compliance  
Address: Godley-Snell Research Center  
Clemson University  
Clemson, SC 29634  
Phone: 864-656-1849

Focus Area: Animal Research  
Services Offered/  
Capabilities: Full range of capabilities for experimentation with animals in an AAALAC approved facility. Services include basic experiments, GLP testing, surgery, and P-E containment areas.  
Fee: Individually determined based on species and numbers of animals to be used and type of experiment to be conducted.  
Equipment: Animal use and care equipment.
SOUTH CAROLINA

Facility Type: Analytical lab, small scale processing and packaging equipment
Name: Shelf-Life Evaluation Laboratory
Location: Clemson University
Contact Person:
Dr. Paul L. Dawson (864) 656-1138
Dr. Felix H. Barron (864) 656-5694
Dr. James C. Acton (864) 656-5681
Address: Food Science Department
Clemson University
Clemson, SC 29634-0371
Phone: As noted above by contact name.

Focus Area: Assessment of the shelf-life stability of a variety of food products. Determination of the first mode of spoilage and optimization of shelf-life quality through new and current packaging and processing techniques.

Services Offered/
Capabilities: Determination of the compositional makeup and changes (including water activity) during storage. Evaluation of the sensory status of food products. Determination of oxidative changes during storage and the presence of specific volatile compounds. Identification of common package components. Storage testing under a variety of temperature, humidity and lighting conditions. Evaluation of product color status and changes due to processing and packaging. Determination of the nutritional labeling requirements and nutritional quality of food products.

Fee: Variable upon size and complexity of the shelf-life evaluation.

Equipment: Drying ovens; fat extractors; Kjeldahl nitrogen determination units (micro and macro), amino acid analyzer, headspace auto-injector interface to a gas chromatograph (cryogenic system) with FID, Gas chromatograph with FPD for sulfur and phosphorous detection, Gas chromatograph with TCD to determine package headspace gases (O₂, N, CO₂ and CO), freezers, refrigerated cabinets, nutritional composition software, freeze-drier, spectrophotocolorimeter, hand-held colorimeter, hunter colorimeter, water activity meter, sensory testing facility and kitchen; temperature and humidity-controllable oven and smoke house, Instron Universal texture testing machine; microbiological testing facility, Brookfield viscometers, Torsion texture instrument for solid and semi-solid homogenous foods, Oxidative stability instrument, pH meters, analytical and top loading scales, hoods, water baths, etc. for determination of a variety of food chemical assays, spectrophotometers, vacuum packaging equipment; access to modified atmosphere packaging equipment. Fees available upon request.
Facility Type: Pilot Meat Abattoir and Processing Plant
Name: Clemson ADVSC Meat Lab
Location: Clemson Campus, Newman Hall
Contact Person: John Duke
Address: ADVSC Dpt B 108 P&A Building
          Clemson University
          Clemson, SC 29634-0361
Phone: 864-656-5167

Focus Area: Beef, Pork, Lamb Slaughter; Beef, Pork, Lamb Cutting and Processing; Sausages, Curing.
Services Offered:
Capabilities: Facility is for use only for teaching, research and extension of Meat Science, Poultry
Science, Food Science and ADVSC Programs.
Fee: Registration fee only.
Equipment: Equipment not available for general use except as part of teaching, research, and extension.
Slaughter equipment including hoists, dehairers, splitting saws. Alkar processing oven, portion suffer,
injector machines, vacuum packaging machine.

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Facility Type: Pilot Plant
Name: Food Science Pilot Plant - Newman Hall
Location: Clemson University
Contact Person: Food Science Dept.
Address: Box 340371
          Clemson University
          Clemson, SC 29634-0371
Phone: 864-656-3398

Focus Area: Food Processing & Preservation; meats (beef, pork, lamb, cured & sausage), poultry,
seafood, fruit & vegetables, and dairy (fluid milk, frozen desserts, blue cheese).
Services Offered:
Capabilities: Canning - still retort; metal, glass, flexible, & semi-rigid packaging; drying - spray, force
air, drum (ATMO) & freeze drying; ultra filtration - metallic membranes & sinter S.S. support; HTST
Pasteurization; Abattoir (cattle, pork & poultry).
Fee: Variable
Equipment: Walk-in cooler storage; mixing/heating/cooling jacketed vats, pumps, 3-A piping, etc.;
vertical spray drier; horizontal tray drier; H-shelf/rotary gas fired oven; double drum atmospheric drier;
shelf-life storage & light study storage cabinets; freeze drier/aw determinations; smoke
house/sugger/linker/needle injector/batterer & breader; vertical retort (steam or water with over pressure);
fees = variable.
Facility Type: Image Processing Laboratory
Name: Image Processing Laboratory
Location: 135-B McAdams Hall
Contact Person: Young J. Han
Address: 229 McAdams
               Clemson, SC 29634
Phone: 864-656-4046

Focus Area: Non-destructive quality evaluation of agricultural and food products.
Services Offered/
Capabilities: Non-destructive quality evaluation research using machine vision/image processing.
Fee:
Equipment: B/W image processing equipment.

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Facility Type: Laboratory
Name: Sonoco Packaging Science Laboratory
Location: Newman Hall, Clemson University, Clemson, SC
Contact Person: Dr. Peter Vergano
Address: Clemson University
         225 Poole Agr. Ctr. Box 340370
         Clemson, SC 29634-0370
Phone: 864-656-5684

Focus Area: Packaging
Services Offered/
Capabilities: Package and packaging materials evaluation, testing, design, research services
Fee: Fee basis (typically $1,000/day)
Equipment: Vertical load tester, vibration system, shock system, oxygen permeability ($100/material),
moisture permeability ($100/material), incline plane impact tester, universal tester, environmental
chambers, corrugated burst tester, mullin tester, glass strength testers.
Facility Type: Analytical Laboratory
Name: The University of Tennessee, Department of Food Science and Technology
Location: The University of Tennessee, Département of Food Science and Technology
Contact Person: William C. Morris, Ph.D.
Address: P.O. Box 1071
The University of Tennessee
Knoxville, TN 37901-1071
Phone: 423-974-7331

Focus Area: Analysis of oils, pesticides, flavors, and super critical extractions.
Services Offered:
Capabilities: Extractions of caffeine, product development, analysis via mass spectrophotometer, sensory evaluations, and meat processing
Fee: Negotiable on a case-by-case basis
Equipment: Spectrophotometer M203 P&RK/G, centrifuge w/rotor, centrifuge SP biofuge, microscope M20, model CU spiral plater, sublimator #153732 W/Acc, texture analyzer, moisture tester, spectrophotometer, spectrophotometer SP-1100, spectro densi tometer12. #GK10060 spectrophotometer/RDR, gas chromatograph/glass cap system, data processor chromatopag, single stage homogenizer, instrum food testing instr., colorimeter D25M-2, charm tester, gas chromatograph, Hp spectrophotometer UV/VIS, HP Vectra, photometric detector single FL, osmometer model 303, mini reader, water activity measuring device, auto clave sterilizer, biological cabinet/base support, HPLC analytical system, vacuum packaging machine single chamber, gas chromatograph system - HP, pressure display, HPLC System Dionex, Detectro Pulsed Amperometer, column module with 4-way valve, GC Mass Spectrometer w/Accs, Tech Mar Concentrator, water activity test set, MDL 6000A SOL DEL system 115 V/ACC, auto gradient controller waters, GC main frame w/optx, spectrophotometer, solid liquid extraction unit, color eye w/Accs, fibertec system E, distilling unit, digester unit, kjetec distillation unit, extraction system, colony counter, GC 9APF gas chromatography, AOL-9 automatic sampler, G.C. detector FID-14, liquid chromatograph/Z module, evaporative mass detector, integrator, computerized sensory laboratory.
Facility Type: Sensory Evaluation Lab
Name: Sensory Evaluation Facility
Location: 223 Poole Agr. Ctr.
Contact Person: Food Science Dept., Clemson University
Address: Box 340371
          Clemson, SC 29634-0371
Phone: 864-656-3398

Focus Area: Food product sensory evaluations: new product development, product formula improvement, least cost formula evaluations, shelf-life determinations, packaging materials, selection & evaluations, etc.

Services Offered/
Capabilities: Preparation methodologies, trained & untrained panels, statistical analysis of evaluations, competitor comparisons; all organoleptic attributes, color light controls.

Fee: Variable

Equipment: Product storage (dry, refrig., freezer); Sample preparations "Kitchen" Area (mixing, blending, cooking, baking, etc.); individual panelist booths (through wall presentation, color light control, etc.); Univ. Computer Center Support for Data Analysis; Aux. Training Facility to Train "Expert" Panels; full-time sensory specialist; Fee = variable

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Facility Type: Test Lab (Physical Properties)
Name: Agri Engr Food Engr Lab
Location: McAdams Hall
Contact Person: Joe M. Bunn
Address: 114 McAdams
          Clemson University
          Clemson, SC 29634-0357
Phone: 864-656-4042

Focus Area: Properties measurable with a Universal Test Machine

Services Offered/
Capabilities: Education and Graduate Student training
Fee: Negotiable

Equipment: Instron Universal Test Machine; Environmental Control Chamber; Ovens, scales, etc.; Gas Chromatograph; Specialized instrumentation, etc.
TEXAS

Facility Type: Analytical Laboratory
Name:
Location: Kelberg Center, Room 305, Texas A&M University
Contact Person: Ron Richter
Address:
Department of Animal Science
Texas A&M University
College Station, TX 77843
Phone: 409-845-4409

Focus Area: Dairy Product Chemistry and Technology
Services Offered/
Capabilities:
Fee:
Equipment: HPLC, GLC (2), laser light scattering particle sizer, Photon correlation spectrometer with zeta potential; brookfield viscometer; pH stat; electrophoresis.

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Facility Type: Analytical Lab
Name:
Location: 335 Kleberg Center, Texas A&M University, College Station, TX
Contact Person: Alan Sams
Address:
Poultry Science Department
Texas A&M University
College Station, TX 77843-2472
Phone: 409-862-1518

Focus Area: Muscle metabolism and meat quality.
Services Offered/
Capabilities: A full range of muscle and meat techniques including enzyme and metabolite assays, protein analysis, shear value (tenderness), color measurement, water binding, chemical composition, etc.
Fee: Depends on use.
Equipment: Depends on use.
Facility Type: Pilot Plant
Name: The University of Tennessee, Department of Food Science and Technology
Location: The University of Tennessee, Department of Food Science and Technology
P.O. Box 1071
McLeod Building
Knoxville, TN 37901-1071
Contact Person: William C. Morris, Ph.D.
Address: P.O. Box 1071
The University of Tennessee
Knoxville, TN 37901-1071
Phone: 423-974-7331

Focus Area: Fruit and vegetable processing, meat slaughter and processing facilities, bakery products, sensory evaluations and microbiological evaluation and involvement in food safety.

Services Offered/
Capabilities: Many standard processing operations including drying, freezing, pasteurization, thermal processing/canning, fermentation: frozen storage, blending and mixing, etc.

Fee:

Equipment: CRCO Bean Snapper Mod FP 2188, CRCO #3-5 Double Bean Grader, urschel Mod 30C Bean Cutter, vert emulsifier w/Acc, hydraulic stuffer, Urschell Comitrol, batch mixer, meat scale, lab scale spray dryer #1784, pasteurizing vat type MV, Taylor Batch Freezer, Colloid Mill, conveyORIZED electric oven, tilt kettle, tray drier Mol GL UOP, lab finisher pulper, solid liquid extraction unit, fryer Fw12, Schnell Cutter 40 qt., VBP bacon slicer, Hammer Mill Viking, steam tbl 2LG22SMKETTLES, VM400 food forming machine, biro meat saw, A-20 analytical mill, cincinnati dehairer, food processing oven, meat cutter, meat chopper MDL 548, table model cider press, abrasive peeler, apple peeler and carver, table top PGA sheller, stainless steel kettle, 2-28 gal steam kettles, steam blancher, Koch vacuum packing machine, pea sheller, blanching tunnel, Chisholm - Ryder Co. - Vibrator, can closer, retort - 3' x 4 1/2', sorghum mill.
Facility Type: Fats and Oils Products Pilot Plant
Name: Food Protein R&D Center
Location: Texas A&M University, College Station, TX 77843-2476
Contact Person: Dr. Edmund W. Lusas
Address: Food Protein R&D Center
          Texas A&M University
          College Station, TX 77843-2476
Phone: 409-845-2741

Focus Area: Refining, bleaching, deodorizing, hydrogenation of edible and industrial oils, interesterification and fractionation of fats; use of fats in animal feeds; processing of margarines and reduced-calorie spreads; practical short courses and workshops.

Services Offered:
Capabilities: Extraction, rendering of oils and fats; refining, bleaching, deodorization, hydrogenation of oils; modification of triglycerides structures, chill fractionation, derivitization; margarine and spreads processing; practical short courses and workshops.
Fee: Project, hourly, short course fees.
Equipment: Full line of oils and fats processing equipment; Gersterberg & Agger Perfector Pilot Plant for margarines and spreads.

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Facility Type: Foods and Feeds Extrusion Pilot Plant
Name: Food Protein R&D Center
Location: Texas A&M University, College Station, TX 77843-2476
Contact Person: Dr. Edmund W. Lusas
Address: Food Protein R&D Center
          Texas A&M University
          College Station, TX 77843-2476
Phone: 409-845-2741

Focus Area: Research, industry process development in extrusion of snack foods, cereal products, texturized proteins, pet foods and aquaculture feeds, food and feed ingredients. Practical short courses.

Services Offered:
Capabilities: 8 extruders; upstream and downstream equipment; process and product development; practical short courses.
Fee: Project or daily rates for industry services.
Equipment: InstaPro 600 Extruder; Anderson International 4-1/2 in expander; Wenger X-20 single screw extruder; Wenger TX-52 twin-screw extruder; Braebender extruder; continuous belt dryers; upstream and downstream grinding, mixing, product coating equipment; vacuum pouch sealer.
Facility Type: Analytical Lab
Name: Food Microbiology Laboratory
Location: Kleberg Center, Room 309, Texas A&M University, College Station, TX 77843-2471
Contact Person: Gary Acuff
Address: Animal Science Department
Texas A&M University
College Station, TX 77843-2471
Phone: 409-845-4425

Focus Area: Microbiology of Foods
Services Offered/
Capabilities: Full microbiological analyses-aerobic plate counts, pathogen isolation, shelf-life studies.
Fee: Based upon number of samples.
Equipment: Incubators, water baths, microscopes, autoclaves, drying ovens, cold room facility, pH meters, stomacher, anaerobic incubators, automated media preparation, pathogen containment hoods.

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Facility Type: Analytical Lab: SEM, ESEM, light and fluorescence microscopy
Name: Electron Microscopy Center/Cereal Quality Lab
Location: Biochemistry and Biophysics Bldg., West Campus, Texas A&M University, College Station, TX
Contact Person: Ms. Cassandra McDonough, Senior Research Associate
Dr. Lloyd W. Rooney, Professor
Address: Cereal Quality Lab
Texas A&M University
College Station, TX 77843-2474
Phone: 409-845-2925 (Fax: 409-845-0456)
Email: lrooney@tamu.edu

Focus Area: Food microstructure/changes during processing/location of oil in snacks, etc. using environmental SEM, regular SEM, light and fluorescence microscopy. The Texas A&M Electron Microscopy Center is utilized, with over 30 years experience.
Services Offered/
Capabilities: Utilization of light fluorescence, SEM and ESEM to evaluate quality and changes in structure of food and feed products from original kernels to final products. Specialists in cereal processing and quality. Includes changes in oil location in various snack foods prepared from cereals and tubers.
Fee: $167.50/our (+ assistance)
Equipment: Complete facilities for microscopy, photography, etc.; charges available on request; SEM/TEM/light/fluorescent microscopies; environmental scanning electron microscope, SEM, electron probe, atomic force, TEM and confocal laser microscope.
Facility Type: Pilot Poultry Processing Plant  
Name: Texas A&M University Poultry Research Center  
Location:  
Contact Person: Dale Hyatt  
Address: 107 Kleberg Center  
College Station, TX 77843-2472  
Phone: 409-845-4367

Focus Area: Poultry and egg processing technology; further processing of meat products.  
Services Offered/  
Capabilities: Access through joint research projects with faculty members; pilot plant for slaughter and further processing of poultry meat.  
Fee: Fee dependent on specific project needs  
Equipment: In-line processing equipment and further processing equipment, automated in-line egg processing equipment.

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Facility Type: Pilot Plant  
Name: Texas A&M University Poultry Science Center  
Location: FM 2818 at Leonard Road, College Station, TX  
Contact Person: Dale Hyatt  
Address: Department of Poultry Science  
Texas A&M University  
College Station, TX 77843-2472  
Phone: 409-845-4367

Focus Area: State inspected poultry slaughter and fabrication plant with further processing capabilities.  
Services Offered/  
Capabilities: Poultry slaughter (Including pre-slaughter treatments), cut-up debone, emulsifiers, tumblers, packaging (including modified atmosphere), refrigerated/frozen storage, cooking, smoking.  
Fee: Depends on use  
Equipment: Fee services offered above. Fee depends on the specific use.
Facility Type: Pilot Plant (University teaching and research)
Name: E. M. "Manny" Rosenthal Meat Science & Technology Center
Location: Texas A&M University, College Station, TX
Contact Person: Ray Riley
                Jeff Savell
Address: Animal Science Department
          Texas A&M University
          Mail Stop 2471
          College Station, TX 77843
Phone: 409-845-5651 or 409-845-3935

Focus Area: Meat safety, meat quality, meat palatability, slaughtering, processing, fabrication, curing and smoking, meat packaging, meat shelf-life.

Services Offered:
Capabilities: Industry training, workshop and seminars; slaughtering; fabrication (We can cover from "Farm to Fork" or "Gate to Plate"); packaging; processing; curing and smoking.
Fee: Negotiable
Equipment: On the rail slaughter facility, hide puller, electrical stimulator, saws, grinders, slicers, mixers, vacuum packaging machines, retail cases, piston stuffer, vemag stuffer, bowl chopper, vacuum tumbler, multi-needle pickle machine, smokehouse, patty machine, press, cleaver, massager, shrink tunnel, large fabrication classroom.

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Facility Type: Pilot Plant
Name: Horticulture Department, Fruit & Vegetable Processing Laboratory
Location: Room 130, Horticulture Department, Texas A&M University
Contact Person: (vacant)
Address: Horticulture Department Room 202
          College Station, TX 77843-2133
Phone: 409-845-5341

Focus Area: Thermal processing of low and high acid foods; modified atmosphere packaging.

Services Offered:
Capabilities: Heat penetration studies; thermal processing in water or steam; freeze drying; dehydration; modified atmosphere packaging storage studies.
Fee: $250.00/Day
Equipment: Stock Pilot Rotor 900 Retort; Blancher (stem); freeze drier; dehydrator; 35°F Refrigerated cooler, 0°F freezer and -40°F freezer, can seamer, Impulse sealer for modified atmosphere packages, kettles.
VIRGINIA

Facility Type: Analytical Laboratory
Name: Muscle Food Research Lab
Location: 106-A Food Science & Technology
Contact Person: Paul P. Graham
               H. Wang
Address: grahamp@vt.edu or hewang@vt.edu
Phone: 540-231-7632 or 540-231-5058

Focus Area: Chemical Analyses
Services Offered:
Capabilities: Composition
Fee:
Equipment:

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Facility Type: Pilot Plant
Name: Department of Food Science and Technology
Location: Virginia Polytechnic Institute and State University
Contact Person: Cameron R. Hackney
Address: Food Science and Technology
         22-A Food Science and Technology Bldg.
         Virginia Polytechnic Institute and State University
         Blacksburg, VA 24061-0418
Phone: 540-231-5247 (Fax: 540-231-9293)

Focus Area: The mission of the University's Department of Food Science and Technology and its associated Virginia Seafood Agricultural Experiment Station (Hampton, VA) is to pursue academic activities that apply the principles of science and technology to areas of processing, preservation, packaging, distribution and utilization of food and food ingredients. These activities include undergraduate and graduate education, basic and applied research, and extension services. The activities of the Department and the Station are complementary and interdependent. Currently, the Department has 13.25 full-time faculty positions (3 positions are currently vacant), 2 research associates, 2 Post-Docs, and 6 Adjunct and Visiting Professors. Two members of the faculty have split appointments in Ag. Engineering or Biochemistry. The faculty's expertise is based on a blend of academic and industrial experiences. The faculty have many cooperative programs within the department, with other academic units in the University, and throughout the world.

Services Offered:
Capabilities: The Department is housed in a separate 34,000 square foot building. Facilities include three comprehensive and well-equipped pilot plants for muscle foods (live animal processing, carcass fabrication and process meat manufacturing), dairy food products, and advanced food processing. There are eleven laboratories dedicated to food analysis, chemistry, biochemistry and microbiology. The food microbiology facilities are specially designed and equipped for research with foodborne pathogens such as Clostridium botulinum and Listeria monocytogenes.
Fee:
Facility Type: Pilot Plant/Analytical Support Cereal Quality Laboratory
Name: Tortilla/_snack Food Pilot Plant
Location: Heep Center, Room 117, West Campus, Texas A&M University, College Station, TX
Contact Person: Dr. Lloyd W. Rooney
Dr. Ralph D. Waniska
Helbert Almeida-Dominguez
Address: Cereal Quality Lab
Texas A&M University
College Station, TX 77843-2474
Phone: 409-845-2925 (Fax: 409-845-0456)
Email: lrooney@tamu.edu

Focus Area: Complete equipment for production of bread, flour and corn tortillas. Includes corn cooking, steeping, washing, stone grinding (12" stones), mixing, sheeters, triple pass ovens, coolers, deep-fat fryer, other support equipment.

Services Offered:
- Pilot plant facilities, and graduate student and professional staff support to produce prototype snacks, flour/corn tortillas, evaluate ingredient functionality in tortillas/snacks.

Fee: $1,000/day (depending upon assistance required)

Equipment:
- (1) Analytical services for starch HPSEC/etc.; (2) viscosity studies on starch-based products:
  - a) amylograph, b) rapid viscosity analyses, c) Brookfield and other viscometers; (3) texture measurements: TATX2 + accessories, and tortilla experience; (4) Near infra-red analyzers - Technicon 500, Dickey-John, etc.; (5) bread baking test ovens, mixers, proof boxes, etc.; (6) dry milling equipment - wheat, rice, corn and sorghum; (7) pilot scale micronizer (infra-red cooking); (8) microscopy equipment - light, fluorescence; (9) high pressure liquid chromatography (especially for starch and phenol analyses)

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Facility Type: Sensory Lab
Name: Sensory Testing Facility
Location: 343 Kleberg, Dept. of Animal Science, Texas A&M University
Contact Person: Rhonda K. Miller
Address: 348 Kleberg Center
Department of Animal Science
College Station, TX 77843-2471
Phone: 409-845-3935

Focus Area: Sensory evaluation of meat products using trained descriptive attribute testing or consumer sensory evaluation.

Services Offered:
- Sensory evaluation of food products using trained descriptive attribute sensory evaluation or consumer sensory evaluation.

Fee: Approximately $28/sample

Equipment: Consumer and foodservice cooking equipment-variable; Warner-Gratzler shear force-$6/sample.
Facility Type: Pilot Processing Plant
Name: Food Science Bldg.
Location: Virginia Polytechnic Institute & State University
Contact Person: Norman G. Marriott
Address: 103 Food Science Bldg.
          Blacksburg, VA 24061
Phone: 540-231-7460

Focus Area: Food processing technology related to food products.
Services Offered:
Capabilities: Basic food processing equipment with walk-in coolers and freezers and analytical laboratories.
Fee: N/A
Equipment: Processing equipment for meats, dairy products, wine, and fruits and vegetables.
Equipment: **Instrumentation** – Bactometer Microbial Monitoring System, catalasemeter, epifluorescent microscope, processing scale spray driers, Beckman DU and DE-G recording spectrophotometer, spectrofluorometer, high speed refrigerated centrifuges (3), color difference meter, high performance liquid chromatography systems; gas, paper, and liquid chromatography, Gel electrophoresis equipment, fraction collectors, supercritical fluid extractor, Soxhlet extraction apparatus, Foss-Let fat analyzer, Haacke Model RV12 viscometer, atomic absorption spectrophotometer, phase contrast, light and dark field microscopes, IBM-PC and HP85 computers (35), computer terminals, pilot plant scale freeze-dehydration, quick freezer, anaerobic microbiology systems, lab-line environ-shaker, programmable constant temperature incubators, Beckman Acculab II infrared spectrometer, goldfish extraction apparatus, refractometers.

**Pathogen Isolation and Identification** – Equipped for working with CDC class three pathogens. Virus work is done in conjunction with Vet. Med.

**Sensory Evaluation Laboratory** – Sensory panel booths, variety of cooking equipment, Instron Universal testing machine with PC&P interface.

**Dairy Foods Pilot Plant Facility** – Batch ice cream freezer, homogenizer & separators for milk proc., UHT/HTST pasteurizing system, vacuum packager, cheese processing equipment, blast freezer & cold room storage.

**Muscle foods pilot plant facility** – Slaughter facility for beef, pork and lamb; fabrication room with coolers & freezing capabilities; bowl chopper; mincemeat emulsion equipment; various grinders, mixers, presses; globus vacuum massager; modified atmosphere packager; smokehouses (gas and electric); adjoining analytical support lab; display cases; sous vide cooking system.

**Fruit and vegetable processing pilot facility** – Various cleaning, screening, prep & processing equipment; retorts and canning units; vacuum and MAP packages.

**Other on campus support facilities equipment** – Flow cytometer, scanning & transmission electron microscopes; auto. ELISA HP 5890 gas chromatography & software for microbial identification; Organon Teknika automated ELISA system; fermenter; amino acid analyzers; mass spectrometer; surface analysis laboratory; biotechnology facilities; ICP (for mineral analysis); hormone assays; differential scanning calorimeter.

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**Facility Type:** Pilot Plant  
**Name:** Virginia Tech Meat Laboratory  
**Location:** Department of Food Science & Technology  
**Contact Person:** Paul P. Graham  
**Address:** 106-C FST Bldg.  
Virginia Tech  
Blacksburg, VA 24061  
**Phone:** 540-231-7632 (email: graham@vt.edu)

**Focus Area:** Meat animal slaughtering, fabrication, evaluation; meat product manufacturing; meat preservation/processing  
**Services Offered/ Capabilities:** Slaughtering, carcass evaluation, experimental product manufacturing, consultations, sensory evaluation.  
**Fee:** Negotiable  
**Equipment:** Air conditioned environmentally controlled smokehouses; particle reduction - grinders - flaker; mixers; press/former.
Other Resources
Type Resource: Newsletters

Title/Fee
How to Obtain: Goat Newsletters
Project related or case-by-case basis
Contact the Georgia Goat Research and Extension Center
912-825-6817

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Type Resource: Publications

Title/Fee
How to Obtain: Goat Meat and Milk Technology Center
Project related or case-by-case basis.
Contact the Georgia Goat Research and Extension Center
912-825-6817
# OTHER RESOURCES

## ALABAMA

<table>
<thead>
<tr>
<th>Type Resource:</th>
<th>Consumer-oriented Extension publications</th>
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</thead>
<tbody>
<tr>
<td>Title/Fee</td>
<td></td>
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<tr>
<td>How to Obtain:</td>
<td>Most are available free of charge</td>
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<tr>
<td></td>
<td>Contact the Auburn Marine Center (334-438-5690)</td>
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<tr>
<th>Type Resource:</th>
<th>Satellite downlink</th>
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<td>Title/Fee</td>
<td></td>
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<tr>
<td>How to Obtain:</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Contact the Auburn Marine Center (334-438-5690)</td>
</tr>
</tbody>
</table>
Type Resource: Publication
Title/Fee How to Obtain: Proceedings of the 1996 Catfish Processors Workshop
Free
Contact Dr. Anna Hood or Dr. Juan Silva, Food and Fiber Center, Box 9642, Mississippi State, MS 39762; Phone: 601-325-2160; Fax: 601-325-7844.
KENTUCKY

Type Resource: Notebooks
Title/Fee How to Obtain: J. O’Leary. Food Safety
J. O’Leary. HACCP

Type Resource: Textbook
Title/Fee How to Obtain: C. L. Hicks. Food Packaging. 1996
Call 606-257-7538 for additional information

Type Resource: Video
Title/Fee How to Obtain: Food Safety for Food Service
Introduction to HACCP

Type Resource: World Wide Web
Title/Fee How to Obtain: Food Science Links -- http://www.uky.edu/agriculture/foodscience/links.html
Foodborne Pathogens -- http://www.uky.edu/agriculture/foodscience/fsc632.html
Undergraduate -- http://www.uky.edu/agriculture/foodscience/ungradinfo.html
Graduate -- http://www.uky.edu/agriculture/foodscience/gradinfo.html
Food Science Courses -- http://www.uky.edu/agriculture/foodscience/gradcour.html
**Type Resource:** Computer Software (Refrigerator Load Calculations)

**Title/Fee**
**How to Obtain:** Cool
Free (single copies)
M. D. Boyette
NCSU Box 7625
Raleigh, NC 27695
(Also available on WWW - http://www2.ncsu.edu/BAE/Programs/Extension/Publicat/Postharv/index.html)

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**Type Resource:** Course Trainer’s Manual and Video

**Title/Fee**
**How to Obtain:** Safe Handling of Extended Shelf Life Refrigerated Foods
$50.00
L. Gordon
Dept. of Food Science
NCSU
Phone: 919-515-2956

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**Type Resource:** Fact Sheet Series (18 publications)

**Title/Fee**
**How to Obtain:** "Proper Postharvest Handling of Fresh Produce"
Free (single copies)
Dept. of Ag Communications, NCSU
(Also available on WWW - http://www2.ncsu.edu/BAE/Programs/Extension/Publicat/Postharv/index.html)

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NORTH CAROLINA

Type Resource: BAE Departmental Engineering Computer Lab

Title/Fee
How to Obtain: Room with 12 workstations for demo/training
Fee negotiable
Contact R. P. Rohrbach

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Type Resource: Book

Title/Fee
How to Obtain: Surimi Technology
$1.75 each
Marcel Dekker Publ.
NY, NY

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Type Resource: Computer Software (Economic Analysis of Refrigeration)

Title/Fee
How to Obtain: PreCool Advisor
Free (single copies)
Dept. of Ag Communications, NCSU
(Also available on WWW -
http://www2.ncsu.edu/BAE/Programs/Extension/Publicat/Postharv/index.html)
Type Resource: Handbook - Industry

Title/Fee
How to Obtain: Sanitation & Supervisor Training for Listeria Control
$12.50
NCSU Seafood Laboratory
PO Box 1137
Morehead City, NC 28557
Phone: 919-726-7341

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Type Resource: Newsletter

Title/Fee
How to Obtain: "Mariner's Menu"
No Charge
Joyce Taylor
NCSU Seafood Laboratory
PO Box 1137
Morehead City, NC 28557
Phone: 919-726-7341

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Type Resource: Newsletter

Title/Fee
How to Obtain: "Seanotes"
No charge
NCSU Seafood Laboratory
PO Box 1137
Morehead City, NC 28557
Phone: 919-726-7341
Type Resource: Fact Sheets, Various

Title/Fee
No Charge (single copies available for reproduction from L. Gordon)
L. Gordon
Dept. of Food Science
NCSU
Phone: 919-515-2956

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Type Resource: Gel Testing Equipment - Texture Assessment

Title/Fee
How to Obtain: Torison Geometer
$12,000
Gel Consultants, Inc.
Weaver Drive
Raleigh, NC

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Type Resource: Handbook

Title/Fee
How to Obtain: Seafood Quality and Safety
$90.00
NCSU Seafood Laboratory
PO Box 1137
Morehead City, NC 28557
Phone: 919-726-7341
Type Resource: Publication

Title/Fee
How to Obtain: "Public Perception and Communication of Risk"
Free
Dr. Thomas J. Hoban
NCSU Box 8107
Raleigh, NC 27695-8107

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Type Resource: Textbook

Title/Fee
How to Obtain: Design in Agricultural Engineering
Type Resource: Newsletter, Departmental

Title/Fee
How to Obtain: "Food Science News"
No Fee
Request addition to mail list from:
Editor
"Food Science News"
Dept. of Food Science
Raleigh, NC 27695-2624

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Type Resource: Publication

Title/Fee
How to Obtain: "Consumer Acceptance of Bovine Somatotrop in (BST)"
Free
Dr. Thomas J. Hoban
NCSU Box 8107
Raleigh, NC 27695-8107

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Type Resource: Publication

Title/Fee
How to Obtain: "Consumer Attitudes About Food Biotechnology"
Free
Dr. Thomas J. Hoban
NCSU Box 8107
Raleigh, NC 27695-8107
Effect of vitamin E on the oxidative stability of refrigerated and frozen turkey meat.
No fee
See Poultry Science Abstracts 1995, No. 356 or contact author.

Flaxseed form does not influence sensory characteristics of omega-3 fatty acid rich eggs
No fee
See Poultry Science Abstracts 1995, No. 97 or contact author

Incorporation of lysozyme and nisin into biodegradable packaging films.
No fee
See Poultry Science Abstracts 1995, No. 494 or contact author.

Measuring oxidation rates of turkey meat using the oxidative stability instrument.
No fee
See Poultry Science Abstracts 1995, No. 87 or contact author.
OKLAHOMA

Type Resource: HACCP Handbook

Title/Fee
How to Obtain: Beef Slaughter & Fabrication HACCP

Brad Morgan
Dept. of Animal Science
Oklahoma State University
Stillwater, OK 74078
405-744-6616
Type Resource: Circular, Extension - EC685

Title/Fee
How to Obtain: Food Safety and Hazard Analysis and Critical Control Points
$2.50
Bulletin Room
Extension Service
Clemson University
Clemson, SC 29634

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Type Resource: Circular, Extension - EC686

Title/Fee
How to Obtain: Food Packaging and Shelf Life: Practical Guidelines for Food Processors
$2.00
Bulletin Room
Extension Service
Clemson University
Clemson, SC 29634

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Type Resource: Film oxygen transmission rate effects on ground chicken meat quality.

Title/Fee
How to Obtain: No fee
Found in August issue of Poultry Science, 1995, pages 1381-1388
Type Resource: Abstract

Title/Fee
How to Obtain: Response surface modeling of the properties of ultrapasteurized liquid whole egg.
No fee
See Poultry Science Abstracts 1995, No. S86 or contact author.

*

Type Resource: Book Chapter

Title/Fee
IN "Protein Functionality of Foods". Marcel Dekker Inc. New York
None (until supply exhausted); reprint
Contact Author

*

Type Resource: Book Review Chapter

Title/Fee
gelation in processed meat. IN "Food Proteins", Amer. Oil Chem. Soc.,
Champaign, IL.
None (until supply exhausted); Reprint
Contact Author

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Type Resource: Brochure

Title/Fee
How to Obtain: Clemson University-Package and Packaging Materials Evaluation, Testing, and
Research Services
No Fee
Packaging Science Dept.
Clemson University
Type Resource: Journal Article
Title/Fee
None
Reprint by contact with J. C. Acton

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Type Resource: Newsletter
Title/Fee
How to Obtain: South Carolina Marine Extension Commercial Fishing Report
Distribution limited to members of regional seafood harvesting, processing & distribution industries.

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Type Resource: Publication
Title/Fee
How to Obtain: Beef, Pork, Lamb, Veal, Cutting and Processing - Student Notebook
$10.00
ADVSC Dept.
Clemson

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Type Resource: Publication
Title/Fee
How to Obtain: Pork Curing Zero
ADVSC Dept.
Clemson
Type Resource: Info. Lft. 23  FRLIFC FACTS

Title/Fee
How to Obtain: Commercially Canning Acidified Foods; Pickled Vegetables, Meats & Seafood Free
T.C. Titus
Box 340371
Poole Agr. Ctr.
Clemson, SC 39634-0371

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Type Resource: Info. Lft. 24  FRLIFC FACTS

Title/Fee
How to Obtain: Commercially Canning Low-Acid Foods; Vegetables, Meats & Seafood Free
T.C. Titus
Box 340371
Poole Agr. Ctr.
Clemson, SC 39634-0371

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Type Resource: Info. Lft. 25  FRLIFC FACTS

Title/Fee
How to Obtain: Commercially Canning Acidified Foods; Fruits, Jams, Jellies, Dressings, and Sauces Free
T.C. Titus
Box 340371
Poole Agr. Ctr.
Clemson, SC 39634-0371
Type Resource: Publication

Title/Fee
How to Obtain: Pretreatment effects on the texture and integrity of aseptically processed chicken meat particulates.
No fee
Dietary menhaden oil influences sensory characteristics and headspace volatiles of shell eggs.
No fee
Found in Jan-Feb issues of the Journal of Food Science, 1995 pages 85-89.

Film type effects on meat-to-film adhesion examined by scanning electron microscopy.
No fee
Found in June issue of Poultry Science, 1995, pages 1053-1057

Effect of ultrapasteurization with and without homogenization on the electrophoretic patterns of aseptically processed liquid whole egg.
No fee
Found in February issue of Poultry Science, 1994, pages 317-321

The effects of ultrapasteurization with and without homogenization on the chemical, physical and functional properties of aseptically packaged liquid whole egg.
No fee
Type Resource: Monthly Newsletter

Title/Fee

How to Obtain: *Food Protection Report*
$135/year
Food Protection Report
P.O. Box 1581
Leesburg, VA 22075

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Type Resource: Monthly Journal

Title/Fee

How to Obtain: *Food Quality*
Free
Attn: Rick Biros
415 Briggs Road Suite 200
Langhorne, PA 19047-8228

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Type Resource: Publication - Research Paper

Title/Fee

How to Obtain: "Production and Evaluation of Milk-Sweet Potato Mixtures Fermented with Yogurt Bacteria"
Free
The University of Tennessee
Department of Food Science and Technology
P.O. Box 1071
Knoxville, TN 37901-1071
Attn: Dr. J. L. Collins

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146
TENNESSEE

Type Resource: Book

Title/Fee
How to Obtain: The Experimental Study of Food (Penfield, M.P. and Campbell, A.)
$50.00
Contact publisher Academic Press, Inc.

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Type Resource: Extension Booklet

Title/Fee
How to Obtain: Getting Started in a Food Manufacturing Business in Tennessee
Free
The University of Tennessee
P.O. Box 1071
Knoxville, TN 37901-1071
Attn: Dr. W. C. Morris

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Type Resource: Internet

Title/Fee
How to Obtain: Federal Register, Morbidity, & Mortality, others
Gopher USDA - none
use "gopher" Washington, D.C., USDA and Look

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145
TEXAS

Type Resource: Handbook for entrepreneurs starting in food processing

Title/Fee How to Obtain: Food Processors Handbook
$25.00 payable to Food Handbook #237001
Mail check to my attention at: Texas A&M University, 225 Hort./Forestry Bldg.,
College Station, TX 77843-2134

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Type Resource: Internet Home Page

Title/Fee How to Obtain: Institute of Food Science and Engineering Home Page
No fee
http://ifse.tamu.edu/ifsehome.html

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Type Resource: Internet Home Page

Title/Fee How to Obtain: International Meat and Poultry HACCP Alliance
No fee
http://ifse.tamu.edu/haccpa11.html
Type Resource: Publication - Research Paper

Title/Fee
How to Obtain: "Unrefined, Dried Apple Pomace as a Potential Food Ingredient"
Free
The University of Tennessee
Department of Food Science and Technology
P.O. Box 1071
Knoxville, TN 37901-1071
Attn: Dr. J. L. Collins

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Type Resource: Publication - Research Paper

Title/Fee
How to Obtain: "Winter Squash Makes Delicious Pies"
Free
The University of Tennessee
Department of Food Science and Technology
P.O. Box 1071
Knoxville, TN 37901-1071
Attn: Dr. J. L. Collins

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Type Resource: Yearly compilation of agricultural statistics, including some food processing

Title/Fee
How to Obtain: Tennessee Agriculture - 1994
Free
Tennessee Department of Agriculture
Ellington Agricultural Center
P.O. Box 40627 Melrose Station
Nashville, TN 37204
Type Resource: Booklet

Title/Fee
How to Obtain: Removal of Nutrients and Ammonia from Crab Processing Waters
$15.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Booklet

Title/Fee
How to Obtain: Total Quality Assurance and HACCP Manual for the Catfish Processing Industry
$25.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Booklet

Title/Fee
How to Obtain: Using the Computer for Preventive Maintenance & Parts Inventory Control
Free
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: List of Teaching/Learning Aids for Meat Science

Title/Fee
How to Obtain: Teaching/Learning Aids for Meat Science
Request from graham@vt.edu

150
VIRGINIA

Type Resource: Booklet

Title/Fee How to Obtain: Characterization and Utilization of Waste from Ocean Quahog and Surf Clam Processing Plants, Civil Engineering Section: Part I
$10.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Booklet

Title/Fee How to Obtain: Characterization and Utilization of Waste from Ocean Quahog and Surf Clam Processing Plants, Civil Engineering Section, Part II
$10.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Booklet

Title/Fee How to Obtain: Marketing Aquaculture Products: A Retail Market Case Study for Sunshine Bass
$3.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Newsletter
Title/Fee
How to Obtain: *Meat Matters*
  None
  Via E-mail request from graham@vt.edu


Type Resource: Video
Title/Fee
How to Obtain: *Can Seam Evaluation Video*
  $45.00
  Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418


Type Resource: Video
Title/Fee
How to Obtain: *Crabmeat Pasteurization*
  $45.00
  Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418
Type Resource: Manual

Title/Fee
How to Obtain: *Financial Planning and Analysis for Aquaculture Enterprises*
$15.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Manual

Title/Fee
How to Obtain: *Quality Assurance and Operating Policy Manual for the Blue Crab Industry*
$30.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Manual

Title/Fee
How to Obtain: *Seafood Pasteurization and Minimal Processing Manual*
$20.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Manual

Title/Fee
How to Obtain: *Smoked Fish and Seafood Manual*
Type Resource: Video

Title/Fee
How to Obtain: Seafood Plant Sanitation Video, Part II
$45.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Video

Title/Fee
How to Obtain: Techniques for Smoking Fish Video
$45.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418
Type Resource: Video

Title/Fee
How to Obtain: Pest Control in Seafood Processing Video
$45.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Video

Title/Fee
How to Obtain: Picking the Blue Crab
$20.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Video

Title/Fee
How to Obtain: Sanitation for Seafood Processing Personnel Video
$45.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418

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Type Resource: Video

Title/Fee
How to Obtain: Seafood Plant Sanitation Video, Part I
$45.00
Complete order form and send to Sea Grant, Virginia Tech, Food Science and Technology Building, Blacksburg, VA 24061-0418
Facility Type: Food Microbiology Lab
Name: Rooms 318, 335 Schaub Hall
Contact Person: Dr. Lee-Ann Jaykus
Address: Food Science Dept.
Box 7624
Raleigh, NC 27695-7624
Phone: 919-515-2971

Focus Area: Development of rapid, molecular methods for the detection of foodborne bacteria and viruses.
Services Offered/
Capabilities: Rapid and traditional cultural methods to detect pathogenic bacteria in foods. Molecular techniques such as polymerase chain reaction (PCR). Epidemiological investigation of outbreaks of foodborne disease.
Fee:
Equipment: Molecular biology equipment including that used in PCR, agarose gel electrophoresis, and DNA hybridization.

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Facility Type: Meat Pilot Plant and Analytical Lab, etc.
Name: Meat Lab and Cooperative Extension Analytical Laboratory
Contact Person: Room 32 and 238 Schaub Hall, North Carolina State University
Contact Person: Dwain H. Pilkinton
Address: Department of Food Science
Box 7624, NCSU
Raleigh, NC 27695-7624
Phone: 919-515-2956

Focus Area: Meat processing
Services Offered/
Capabilities: Development of new meat products and processes; analytical equipment for proximate analysis, minerals and pH.
Fee: Negotiable
Equipment: Meat grinders, chopper, vacuum stuffer, linker, hollymatic patty former, environmental units, smokehouse, water cookers, band saw, meat slicer, CEM (Rapid Moisture & Fat), ashing, drying ovens, pH meter, rapid sodium & potassium system, atomic absorption spectrophotometer.
The SRDC is one of four regional rural development centers in the nation. It coordinates cooperation between the Research (Experiment Station) and Extension (Cooperative Extension Service) staffs at land-grant institutions in the South to provide technical consultation, research, training, and evaluation services for rural development. For more information about SRDC activities and publications, write to the Director.

Southern Rural Development Center
Box 9656
Mississippi State, MS 39762

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