The Food Science Club presented its 1984 Meritorious Service Award to Mr. Norfleet "Jleet" L. Sugg.

Mr. Sugg graduated from N.C. State in 1948 with a Bachelor of Science Degree in Agronomy. Mr. Sugg is a leader in N.C. agriculture. His experience has included serving as Executive V.P. of the N.C. Agribusiness Council; Vice Pres. Planters National Bank and Trust Company; and Pres. Planters Industries, Agrichemical Division. Now working as the Executive Secretary of the North Carolina Peanut Growers Association, he has made outstanding contributions to the Food Science Department. Projects on the "Flavor Evaluation of North Carolina Peanut Lines" have been funded, and his enthusiastic support for the present research program has increased the national reputation of the Food Science Department.

DEPT. HEAD: "For two days in November, approximately 175 selected food scientists, representing government, industry and academia, gathered near Chicago to address current and future needs and trends in the field. The participants in the Institute of Food Technologists' Workshop on Research Needs were organized into seven working groups addressing preselected topics. The co-leaders for each topic had previously written a "reaction paper" which formed the basis for each discussion. Each group developed approximately ten recommendations over the two-day period. These will later be reduced to four to six major items which will form the basis for action at the national level to increase the visibility, priority and funding for food science. I was privileged to be invited to be part of the group addressing Human Resource Needs.

A number of problems are rapidly emerging for food science which have direct impact on our Department. Federal research support is eroding for agriculture, particularly in post-harvest technology. Even though the U.S. consumer expects a safe, nutritious, varied food supply at a relatively low cost, it is increasingly difficult to obtain federal research funding for most food science research. This forces our faculty to increasingly depend on funding from industry. Such support is normally directed to applied problem-oriented research of a more short-range nature. While such research is important and should be done, long-range basic research needs are understated.

Our Department is affected in three major ways: (a) it is increasingly difficult for our faculty to secure the funding necessary to sustain their basic and applied research programs and the training of graduate students; (b) money needed for the replacement of aging scientific equipment and the purchase of new scientific equipment is critically short and threatens the initiation, progress and accomplishment of important research and (c) our ability to invite lecturers to enrich our teaching and research programs, to help support faculty travel to scientific meetings (particularly for our younger faculty), and to outfit the purchase of equipment or supplies is severely curtailed. The latter has normally been funded through small ($500.00 - $2,000.00) unrestricted gifts in support of research that give a tremendous boost since they can be used where most needed.

If any of you have suggestions for ways in which we can alleviate these problems, please contact me. Your advice and assistance will be greatly appreciated."

Academic Affairs (W.A. Jones)
Other top awards announced at the banquet went to Anne Tielemans (Forbes Leadership Award) and Sara McGuire (Crook Scholaristic Achievement Award - Junior with highest GPA). Twenty-eight students were recognized for winning scholarships or fellowships. Donors of scholarships include organizations (IFT, N.C. Dairy Products Association, Phillips Morris, Boeueer Foods, Tarheel Supplyman's Association) and individuals (Harvey and Kathleen Barnes, Rose and Helen Kiser, J. Frank and Margaret Meeky, Hase and Lena Hake-Smith). Although scholarship funds have grown in recent years, the total value of Food Science scholarships for B.S. candidates represents less than 6% of the cost of college for all majors in Food Science.

Officers of the Food Science Club, in addition to Ruth Heinrich, are: Karen Grippen - Vice President, Annette Snow - Secretary, Phil Bakes - Treasurer, David Green and Anne Tielemans - Activities Co-chairperson, Helen Watters - Ag Life Council Rep., and Jan Carrington - Historian. P.M. Forrester and B.M. Flinkington are the faculty advisors.

New Food Science Curriculum

The Food Science curricula and several courses were changed this fall. Following a two-year study, both the Science and Technology curricula were modified to better serve the needs of students and the food industry. Advice was sought from both alumni and employers of our graduates as a background for recommending the changes. Both discipline and commodity course requirements have been strengthened. A two-course sequence covering muscle foods and eggs integrates red meat, poultry and seafood products and processing technology. The dairy area was also extended to two courses, Food Preservation, will be required of all majors and will be a prerequisite for the second course in muscle foods or dairy products.

All students enrolling in Food Science will be required to take Food Science and the Consumer, Food Chemistry, Food Analysis, Food Microbiology, Food Engineering, and Food Preservation. Foods and Nutrition is required in the Science emphasis curriculum and Quality Control of Food Products in the Technology emphasis. The Science curriculum was designed to meet guidelines established by IFT.

Each student in the Science curriculum will have a minimum of one year of calculus, one year of physics, and two and a half years of chemistry/biochemistry. Not quite as much science is required in the Technology curriculum. Technology students frequently use business courses to complement the required science and food science courses. Students in both curriculum are required to take two years of English and three and a half years of humanities and social sciences. The revised curricula apply to new students entering fall 1984.

Sixteen students graduated in December upon the completion of B.S., M.S., Ph.D. or two-year degrees in Food Science. The B.S. candidates were: Elaine Barnes (Winston-Salem); Julie Bier (Fairport, NY), Donna Bond (Durham), Richard Johnson, Jr. (Ohio State), L.J. Piar (Oak Hill), Joyce Richter (Chapel Hill), Eric Smith (Goldsboro), and Annette Snow (Elon College). M.S. degrees were awarded to: Karen Croner (Raleigh), Robin Floyd Blankenship (Raleigh), Laura Hawar (New Brunswick, NJ), and Halima Ali Mohammed (Malaysia). James Hui (Malaysia), Edward Jett (Urbana, IL) and Jing-Cheng Wu (Taiwan) received Ph.D. degrees. Lorene Davis (Littleton) finished the two-year program in December. Two students, Brenda Cheek (Winston-Salem) and Cheryl Higgins (Raleigh), also graduated at the end of summer school. Barry Nash received the M.S. degree, and the Ph.D. degree was awarded to Mohammad Hamid-Samimi.

Many students have benefited from summer work experience in the food industry. Students will begin looking soon for employment for next summer. This is a good time to take a look at potential employees for the future. Call V.A. Jones (919/737-2952) for more information.”

Ag. Institute Program (L.G. Turner)

“The Food Processing Distribution and Service Program was established in 1974 to provide technical training for students with a desire to enter the food industry at the associate (two-year) degree level. Graduates of the program are filling positions where four-year expertise is not required. Approximately ninety percent of the graduates have accepted and maintained employment within North Carolina.

Students entering the program have diverse backgrounds, interests and career goals. Entrance to the program is available to any high school graduate or any applicant who has passed the Certification Examination administered by the N.C. Department of Public Instruction. Applications are considered on a first come basis and are accepted as long as space is available since there is an enrollment ceiling. Admission in the special student category is also available and allows full-time employees, with permission of their employer, the opportunity to enroll in one or two courses each semester.”
The curriculum has been designed to provide a variety of courses so that graduates will have information and training to enter several different areas of the food industry. Ten courses are currently offered to students with emphasis on preservation and processing principles and methods, sanitation, food cost controls, quantity food preparation, and quality control including routine microbiological and composition tests. Laboratory sessions are included in most courses to relate principles discussed in lecture to practices employed in industry. Elective courses allow students the flexibility of designing an educational program that will complement interest areas while increasing technical expertise for individual career goals.

Graduates of the program have been employed in many areas of the food industry. Supervisors of production facilities for various commodities, laboratory technicians and quality control supervisors, technical sales positions, assistant managers and managers of both food service operations and retail food stores, and inspectors and graders for federal and state agencies are examples of employment.

Graduate Studies (H.E. Swalsgood)

"Presently, our Graduate Studies program is serving 56 students from around the world. Four of our students have received NSF Graduate Fellowships. Our program continues to build its reputation for quality on a national and international level.

The Graduate Studies program has undergone several changes during the past year. To improve the quality of our program by ensuring that every student has a foundation of courses in the various food science disciplines, a minimum requirement has been established. Thus, of the five course categories: microbiology, chemistry-biochemistry, nutrition, engineering, and processing technology, a student must include courses in two areas for a M.S. program and in three areas for a Ph.D. program. In conjunction with this requirement, the graduate courses offered in the food science have been revised and several new courses have been developed. New courses include Fermentation Biotechnology, Bacterial Toxins, Carbohydrates and Lipids, Human Nutrition, Vitamin Metabolism, Food Kinetics and Sensory Evaluation. Our students will continue to receive a fundamental background by taking core courses in the discipline of their minor, e.g., microbiology, biochemistry, nutrition, or engineering; however, their graduate experience will be enriched by the offerings of the revised graduate courses which will apply these disciplines to the food science field."

Faculty and Staff Activities

Department planning is underway! A "retreat" for Food Science Extension was held at Cedar Island in Oct. to determine the focus of future programming. In Jan., 1985, research and teaching faculty met at the NSU Faculty Club to achieve a better understanding of the framework within which the Food Science research program of the future will function.

G.L. Catignani is serving as a member of the scientific board of directors of the Inst. of Nutrition of N.C. R.E. Carawan was recently recognized in the 19th Edition of Who's Who in the South and Southeast; gave an invitational paper at the Food Industry Conf. in Calif. M.A. Dauschel gave an invitational paper at the Soo. for Indus. Micro Meeting in Colorado; served as a judge for preserved food at N. C. State Fair. P.A. Roether received new research funding; one grant from the Beef Industry Council of the Nat. Livestock and Meat Board to study "Tenderization of beef with bacterial collagenase" and one funded by the N. E. Poultry and Egg Assoc. to study "Gel-forming properties of turkey muscle proteins as the basis for texture and water-holding capacity of turkey meat products." P.H. Roether received funding from the B. E. Poultry and Egg Assoc. for "Evaluation of aseptic packaging of pasteurized and UHT treated whole eggs" (Co-investigators are H.H. Ball, R.R. Swarzel). M.E. Gregory and N.C. Miller, Jr. received 25-yr. extension awards in Nov. D.B. Hammer gave an invitational paper at the Intern. Congress of Rheology in Acapulco, Mexico; he co-authored three papers on food rheology and chaired a technical session; one of his advisees, Jane Montcane, placed third in the grad. exam, paper composition of I.P. H.M. Hassan gave an invitational paper at U. of Maine and a seminar to N.C.S.U. Micro. Dept.; is serving on editorial board of "M. of Food Science in Biol. and Med.;" and is a member of study section for "The Health Effect Inst.," to evaluate grants on oxidant injury. D.H. Elkin was an official judge at the Mead Assoc. of Meat Packers meeting in Ls. T.B. Rainwater gave an invitational paper at the Gordon Research Conf. in N.H.; and has a post doc. from Texas A & M., Ken R. Finer, who has her Ph.D. in Vet.-Micro., and will be supported by a Nati. Dairy Dev. grant. T.C. Lanier was the 1985 recipient of the Earl P. McFee Award presented at the Atlantic Fisheries Technology Conference in Wilmington; gave an invitational paper.
at the Meat Research Conf. in Las; received funding from "Sea Grant" for three projects, (1) "Gelation of Seafood Muscle Proteins in Food Products" (D.D. Hamben co-investigator), (2) "Development of Functional Food Protein Ingredients", and (3) "Mathematical Modeling and Computer Simulation of Washing for Processing of Minced Fish". D.R. Lineback is pres.-elect of Phi Tau Sigma and past pres. and chairman of the board of Amer. Assoc. of Cereal Chemists; gave invitational papers in Taipei, Taiwan in August, at Kansas St. U. in Manhattan in Sept. and Barcelona Spain in Oct.; was an invited participant at IFT workshop on research needs in Chicago in Nov., and organized a symposium on starch at Amer. Chem. Soc. meeting in Philadelphia in Aug.

R.F. McFeters gave an invitational paper at IFT meeting in Calif.; his advisee, Kuan-Hua Chen won the 2. John Ordal Award for the most outstanding food micro. paper at IFT. S.J. Schwartz gave an invited seminar at Proctor & Gamble in Cincinnati. B.M. Sheldon chaired a session at the Poul. Sci. meeting at U. of Guelph; received two grants from S.E. Poultry and Egg Assoc., one to study "Efficiency of ozone disinfection in poultry hatcheries" and one to study "Effects of ozone on poultry processing waste and potential for recycling. R.E. Swailsgood has a post-doctor from Ireland, R.J. Fitzgerald, who received his Ph.D. in Biochem. from U. of Cork. K.R. Searzal gave an invitational paper to the Campbell Inst., for Research and Technology. F.R. Tarver Jr. gave an invitational paper at the XVII World Poultry Congress and Exhibition in Helsinki, Finland in Aug. J.J. Fears was presented an "Outstanding Extension Award" in Sept.; served as chairman of 29th Annual Atlantic Fisheries Tech. Conf. in Wilmington. C.T. Young received a grant from the N.C. Peanut Growers Assoc. to evaluate potential and recent releases of N.C. peanuts through instrumental analysis and flavor panels in order to define flavor quality and select those having desirable flavor characteristics.

Changes in Dept. Personnel

Duane K. Larick joined the faculty on Nov. 1 as Asst. Prof. His specialization is the Meat Science area, and his responsibilities are in research and teaching. He received his B.S. and M.S. in Animal Science from Ohio St. U. and his Ph.D. in Food Science and Nutrition from U. of Missouri. Duane is married and the father of two children.

Duane K. Larick

The new Dairy Plant Manager is John J. Miles who came on-board in Aug. He received his B.S. from Rutgers Univ. and M.S. from U. of Minn. Before coming to "State", he worked in R & D for the Thos. Lipton Co. Shirley H. Davis with Ext. and Ag Inst. responsibilities, resigned Dec. 31, to become a full-time mother and homemaker. D.R. Lineback's new Asst. is Cindy H. Bryant who replaced Patricia M. Langdon, who resigned in July to accept a position with I.B.M.