

CHRISTOPHER R. DAUBERT

NC State University

Food, Biochemical & Engineered Systems
System Co-Chair

Department of Food, Bioprocessing & Nutrition Sciences
Professor & Department Head
Food Rheology Laboratory Director

Department of Biological & Agricultural Engineering
Associate Faculty Member

Biotechnology Program
Associate Faculty Member



PROFESSIONAL SUMMARY

Dedicated administrator of the land-grant philosophy who excels in mission advancement, personnel development, and program coordination • Compassionate and participatory leadership style • Devoted leader with organizational skills for effective and efficient project planning and management • Fiscally responsible and tactical • Flexible and hardworking • Inspiring commitment to students and stakeholders • Meticulous and detail-oriented • Engaging interpersonal and communication skills • Sensibly progressive while fostering strategic partnerships • Fundraising expertise with an entrepreneurial focus to grow public-private-partnerships • Commitment to diversity of ideas and cultures to address grand societal challenges

EDUCATION

NC State University

Post-Doctoral Research Associate (1996 - 1997) - Department of Food Science

Michigan State University

Ph.D., Agricultural Engineering (1996) - College of Agriculture and Natural Resources and College of Engineering & Food Science (1996) - College of Agriculture and Natural Resources

The Pennsylvania State University

B.S., Agricultural Engineering (1991) - College of Agricultural Sciences and College of Engineering

ACADEMIC EXPERIENCE

NC State University

Professor of Food Science, Engineering: July 2007 – present
Associate Professor of Food Science, Engineering: July 2002 - June 2007
Assistant Professor of Food Science, Engineering: July 1997 - June 2002

ADMINISTRATIVE EXPERIENCE

Office of Research, Innovation & Economic Development

Vice-Chancellor Research Fellow: October 2016 - present

In cooperation with the NC State University (NC State) Office of Research, Innovation & Economic Development (Vice-Chancellor Alan Rebar) and the Office of Technology Commercialization & New Ventures, I am leading a study to create knowledge of entrepreneurial culture at peer and aspirational universities. Through this gap analysis, we will define a roadmap for entrepreneurial endeavors that need investment and resources to position NC State at the forefront of economic development practice among land-grant institutions.

Food, Biochemical & Engineered Systems

Co-Chair: January 2016 - present

The NC State College of Agriculture and Life Sciences (CALs) completed an efficiency identification study in 2015. An outcome of the study restructured CALs by merging 6 of 16 departments, adjusting the college to 13 departments. The remaining departments were segmented into 4 systems, with each system being co-chaired by an associate dean and a department head. I was selected the inaugural co-chair of Food, Biochemical & Engineered Systems that encompasses three Departments: Food, Bioprocessing & Nutrition Sciences, Biological & Agricultural Engineering, and Molecular & Structural Biochemistry. Initial responsibilities for the new system have focused to manage new faculty position requests, establish a culture of cooperation among system units, and create a seminar program to promote the shared interests across the departments and centers of the new system.

Department of Food, Bioprocessing & Nutrition Sciences

Department Head: July 2010 - present

The NC State Department of Food Science was created in July 1961 within CALs. Now named the Department of Food, Bioprocessing and Nutrition Sciences (FBNS), the department has 30 faculty (19 tenure-track, 3 phased retirement, 6 USDA, and 2 non tenure-track), 56 staff, and more than 500 enrolled students. The department head is responsible to the dean of CALs (Dr. Richard Linton) and coordinates delegated responsibilities through the directors of the North Carolina Agricultural Research Service (Dr. Steve Lommel), of CALs Academic Programs (Dr. John Dole, interim), and of the North Carolina Cooperative Extension Service (Dr. Richard Bonanno). Within the department, the administrative structure includes 7 faculty. The associate department head and research leader (Dr. KP Sandeep) assists the head in various administrative functions with a focus on advancing the research capabilities and opportunities for the department. The departmental Extension leader (Dr. David Green) coordinates administrative functions and activities related to Extension programs. Academically, the undergraduate teaching coordinators for the food science, bioprocessing science, and nutrition science undergraduate B.S. degree programs are Dr. Keith Harris, Dr. John Sheppard, and Dr. Natalie Cooke, respectively. Dr. Clint Stevenson is the inaugural coordinator of distance education programs. And, Dr. Jonathan Allen is the director of graduate programs, responsible for coordinating administrative matters associated with the M.S., Ph.D., non-thesis, and professional science programs. Department committees are assigned by the head and perform many important functions associated with administration. The department is housed in Schaub Hall, which was originally completed and occupied in 1968 and later renovated in 2005. A segment of the building dedicated to the Howling Cow creamery, part of the dairy enterprise system. This operation is a self-supporting enterprise with a director (Mr. Gary Cartwright) responsible to the FBNS department head. The department is home to the Southeast Dairy Foods Research Center, the Center for Advanced Processing and Packaging Studies, and two USDA-ARS research units. Also, FBNS contains the Entrepreneur Initiative for Food program, dedicated to assisting and serving the food manufacturing sector of North Carolina. Additional FBNS faculty and staff are housed at the Plants for Human Health Institute on the NC Research Campus in Kannapolis, NC and the Center for Marine Science and Technology in Morehead City, NC. Having developed the FBNS strategic plan for 2013-2018, the department identified 4 core platforms for programmatic excellence:

- I. Food Safety & Foodborne Disease Prevention
- II. Food Manufacturing & Entrepreneurship
- III. Instructional Excellence & Innovation
- IV. Foods for Health & Well Being

The scientists and educators of FBNS embrace an integrated approach of the land-grant philosophy to address local and global challenges of food security, safety and nutrition through innovative teaching, scientific discovery, and outreach to help provide an abundant food supply that is safe, affordable, healthy, and enjoyable for citizens of North Carolina, the United States, and the world.

The North Carolina Food Processing & Manufacturing Initiative: July 2014 - present

In response to a request from community leaders, state legislators, and the FBNS strategic plan (II., above), I continue leading an initiative that has unequivocally affirmed the feasibility of transforming North Carolina into a regional food processing destination. North Carolina has a rich history in agricultural production and forestry, and the state economy has been linked to the conversion of biomass resources into value-added products, like furniture and textiles. However, the recent decline of these manufacturing industries has created an underutilized capacity in North Carolina, particularly in rural communities. With legislated funding and in partnership with the NC Department of Agriculture and Consumer Services, the initial phase of the project commissioned Battelle's Technology Partnership Practice to assess feasibility to catalyze the development of value-added food manufacturing businesses in North Carolina. The resulting study proposed four recommendations, including: (1) the creation of a new food products and processing innovation center on the NC State campus; (2) a statewide network of assistance programs and operations for aspiring food business entrepreneurs; (3) a concerted effort with state and local community leaders to create incentive packages for attracting new business; and (4) regulatory training and outreach programs for the food processing and manufacturing sector. Once these recommendations are achieved, the total direct and indirect impact of the North Carolina food value chain may contribute 38,000 new jobs and an increase in associated economic output of \$10.3 billion.

In his 2015 State of North Carolina address, Governor Patrick McCrory quoted results from the Food Processing & Manufacturing Initiative:

*"We must not forget that small business is the largest job-creating sector of our economy. We must also remember that agriculture is North Carolina's biggest industry...contributing more than \$78 billion a year to our economy. We must continue to look for new ways to help our farmers who are facing increased competition from around the world and here at home. One area that continues to be a challenge to our growers is **the shortage of food processing facilities in North Carolina**. Our farmers have to send their products to other states, which substantially increases their costs. So working with Agriculture Commissioner Steve Troxler, we will name a task force of farmers, business leaders and venture capitalists to assess the need and develop a strategy for attracting more food processing plants across the state."*

Governor Patrick McCrory
February 4, 2015

To promote the initiative, I have been engaged by rural communities and economic development organizations across North Carolina.

Invited Speaking Engagements

- US-70 Corridor Commission, Morehead City, NC: August 18, 2016
- NC Division of Water Resources, Raleigh, NC: March 22, 2016
- Ag Summit, Hillsborough, NC: February 29, 2016
- Southeast Vegetable Expo, Myrtle Beach, SC: December 1, 2015
- Economic Development Hot Topic Forum, Wayne County Chamber of Commerce, NC: August 19, 2015
- Cape Fear Farm Credit, Raleigh, NC: July 14, 2015
- City of Ayden, NC Economic Development Group, Ayden, NC: July 8, 2015
- NC Food Manufacturing Task Force Kickoff Meeting, Raleigh, NC: June 18, 2015
- Northeast NC Economic Development Partnership, Williamston, NC: June 17, 2015
- NC Economic Developers Association Conference, Atlantic Beach, NC: June 10, 2015
- Vance County Community Resource Fair, Henderson, NC: March 19, 2015
- NC Biotechnology Center, Durham, NC: February 11, 2015
- NC Cooperative Extension Service Eastern Districts, Lenoir, NC: January 16, 2015
- NC Cooperative Extension Service Central Districts, Greensboro, NC: January 15, 2015
- NC Cooperative Extension Service Western District, Fletcher, NC: January 12, 2015

Bioprocessing Science (BBS) Undergraduate Teaching Coordinator: January 2007 - July 2010

The life science industries are the second largest segment of the NC economy, *second only to agriculture*. In recognition of this fact, I led faculty from FBNS and the campus community to create the first Bioprocessing Science degree program in the country. Through this effort, the Bioprocessing Science degree program (BBS) was launched in 2007 to prepare scientists for the rapidly developing bio-based industries of North Carolina and the world. Students completing the BBS degree possess a working knowledge of cGMP principles and validation procedures. In this program, students experience designing and running a process, especially fermentation, cell culture, and downstream processing for biomolecule production. With the added skills to analyze and integrate biomanufacturing unit operations and processing equipment, BBS graduates are instantly prepared for careers in the applied biotechnology sector.

Food Rheology Laboratory (FRL) Director: June 1996 - present

Located in Room 207 Schaub Hall, the NC State Food Rheology Laboratory (FRL) is an integral part of FBNS, providing expertise for the measurement and analysis of flow and deformation of food, pharmaceutical, and packaging materials. The information generated is used for process design, product development, and evaluation of processing effects on product quality and textural characteristics. Specifically, the research objective of the laboratory is the explanation of the physical chemistry, molecular-level interactions, and functionality of a biosystem through understanding of rheological and tribological behavior. To oversee the daily function and services of the facility, I supervised 4 staff members to manage the FRL since becoming director:

- Mr. Julian Tkachuk, M.S. 1996 - 1998
- Dr. Van-Den Truong, Ph.D. 1998 - 2003
- Ms. Sharon Ramsey, B.S. 2004 - 2009
- Mr. Chris Pernell, M.S. 2010 - present

Biomanufacturing Training and Education CenterAssociate Director Academic Programs: November 2004 - July 2007

The Golden LEAF Biomanufacturing Training and Education Center (BTEC) is the internationally acclaimed center on the NC State Centennial campus devoted to workforce development that prepares scientists and engineers for careers in biomanufacturing. Funded in 2003 with a \$39M grant from North Carolina's Golden LEAF Foundation, the BTEC facility is the largest training center in the US, an 82,500 sq-ft, simulated-cGMP plant unit capable of manufacturing biopharmaceutical products and packaging them in a sterile environment. An interdisciplinary team of life science and engineering faculty work alongside experienced industrial staff to deliver a cadre of educational and training programs that produces a worker ready for job performance, day one. Being involved in this mega project from the outset, I experienced routine interactions with legislators and politicians, industrial lobbying groups, community college partners, and university administration. I participated in all aspects of the BTEC campaign, from concept to design and construction to curriculum development. It was my pleasure to serve as the first associate director of BTEC, providing leadership to developing and launching the original academic programs.

ADMINISTRATIVE LEADERSHIP**Food, Biochemical & Engineered Systems**Co-Chair

- Managing new faculty position requests
- Establishing a culture of cooperation among system units
- Creating a seminar series to promote shared interests

Department of Food, Bioprocessing and Nutrition SciencesDepartment Head

- Leading a high profile department of 30 faculty, 63 staff, and >510 students with \$3M appropriated budgets
- Grown gifts and endowments to FBNS by >\$5M, receiving the largest gifts in FBNS history
- Managed budget reductions in each FY11 - 17, identifying >\$750,000 in budget cuts and reversions
- Initiated an FBNS cost-share plan that preserved all staff positions in the department (2011)
- Created an innovative departmental equipment grants program for enhancing FBNS research capabilities (2011 - 2014)
- Developed and currently executing the FBNS strategic plan for 2013 - 2018
- Travelled to Washington D.C. to advocate for increased USDA support for key food and agricultural programs (2011)
- Returned >\$100K/year to FBNS faculty
- Renovated every classroom in FBNS with latest instructional delivery technologies (2011 - 2012)
- Designed and implemented an online reporting tool for faculty activity reporting and impact statements
- Served on the CALS steering committee for strategic planning development (2013)
- Appoint faculty and staff to important FBNS committees
- Serving as the ranking and senior member of the NC State intellectual property committee
- Opened a new industrial training room in FBNS Schaub Hall (2013)
- Hired 7 new faculty members
- Negotiated successfully with CALS administration for the retention of key faculty members
- Overseeing the NC State Dairy Enterprise System and The Dairy Farm Research and Teaching field unit

- Conceived the 50th anniversary celebration of FBNS (2011)
- Reassigned FBNS staff to align with new CALS business center structure (2011)
- Hired firm to overhaul FBNS web presence and launch a marketing and brand campaign for the department
- Established FBNS guidelines for appointment-based faculty expectations (2013)
- Addressed NC legislators to procure \$250K for the North Carolina Food Processing & Manufacturing Initiative (2014)
- Constructed new FBNS boardroom (2014)
- Hosting monthly forums to promote dialogue among FBNS faculty
- Communicating monthly administrative bullets and briefings to the FBNS community
- Present state-of-the-department address during annual FBNS Novemberfest celebrations
- Created detailed listing of NC food and ag-based manufacturers (2013, 2015)
- Established strategic WOLPACK assistance teams (SWAT) to help the NC food manufacturing community
- Tapped by Commissioner Steve Troxler to develop and implement an assistance program for NC dairy farmers
- Conceived the inaugural *Regional Celebration of Food Manufacturing & Science* (2014)
- Serving Governor's task force to facilitate outcomes of the Food Processing & Manufacturing Initiative (2015 - 2016)

Bioprocessing Science (BBS) Undergraduate Teaching Coordinator

- Designed a unique B.S. degree curriculum to prepare scientists for careers in the bio-based industries
- Managed course action paperwork through the FBNS, CALS and NC State courses and curriculum committees
- Authored request to UNC General Administration to establish the new B.S. program
- Served as the first BBS undergraduate teaching coordinator
- Advised more than 40 students/year in the initial cohorts of the BBS program
- Developed and appointed the first BBS advisory board

Food Rheology Laboratory (FRL) Director

- Equipped the facility with state-of-the-art rheological capabilities
- Established a receipts-based account enabling routine calibration and service of all equipment
- Providing rheological service to the research efforts of the entire campus community and industrial partners

Biomanufacturing Training and Education Center

Associate Director Academic Programs

- Served as the first associate director of BTEC
- Assisted in the development, design, and construction of the BTEC facility
- Coordinated a faculty team from the College of Engineering and College of Agriculture and Life Sciences
- Created a minor in biomanufacturing to complement existing B.S. degree programs (BBS and others)
- Hired faculty and key personnel to develop and offer new curriculum
- Hired a firm (Capstrat) to develop a marketing and branding campaign for the organization

PROFESSIONAL EXPERIENCE

Administrative Service

- World Food Policy Consortium. Duke University. CALS designee: 2016
- The Ohio State University Department of Food Science and Technology. External reviewer (chair): 2016

Professional Development Programs (Attended)

- FSLI: Food Science Leadership Institute. CALS designee: 2013 - 2015
- Lead²¹: Leadership for the 21st Century: 2005 - 2006
- IFT Leadership Conference. Chicago, IL: August 16-18, 2002
- Polymer Science Workshop. NC State: May 18-19, 2000
- Using Dreamweaver to Create Your Form Interface. NC State: March 22, 2000
- Advanced HTML Using Dreamweaver. NC State: March 3, 2000
- Introduction to Desktop Video. NC State: November 10, 1999
- Publishing Your WEBpages. NC State: October 26, 1999
- Intermediate HTML Using Dreamweaver. NC State: October 12, 1999
- Elements of Good Web Design. NC State: October 7, 1999
- Introduction to HTML Using Dreamweaver. NC State: September 28, 1999
- Third International Symposium on Confectionery Science. (1.0 CEU) Penn State University: November 14-16, 1999

- Advisers and Students: Partners for Success in a New Millennium. NC State: August 12, 1999
- Introduction to FIDAP. North Carolina Supercomputing Center: June 17, 1998
- Effective Teaching: A Workshop. NC State: August 12-14, 1997

Licensed Professional Registration

Engineer-in-training, State of Pennsylvania: 1991

Hershey Foods Corporation - Research & Development, Hershey, PA

Co-op engineer: summer 1990; fall 1989; spring 1989

- Specified processing equipment selection and supervised installations
 - Researched and optimized new processes
 - Managed project start-ups
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PROFESSIONAL SERVICE

Editorial Boards

- Journal of Food Process Engineering: 2003 - present
- Journal of Texture Studies editor-in-chief: 2010 - 2014
- Annual Reviews of Food Science & Technology: 2009 - 2014
- Journal of Texture Studies editor: 2007 - 2010
- Journal of Texture Studies: 2006 - 2014

Sigma Xi (NC State Chapter)

- Past-president: 2011
- President: 2010
- President-elect: 2009

Phi Tau Sigma (National)

- Member-at-large (elected): 2012 - 2015
- Chapters subcommittee chair: 2012 - 2013

Phi Tau Sigma (NC State Chapter)

- President: 2003
- Vice-president: 2002
- Secretary: 2001
- Councilor: 2000

Institute of Food Technologists

- Board of directors, candidate: 2016
- Code of professional conduct adhoc committee: 2016
- Emerging leaders mentoring panel: 2016
- Academics adhoc co-chair: 2014 - 2015
- AMSPAP advisory panel: 2014
- Dogwood section: 1997 - present; member-at-large (elected) 2013 - 2017
- Award jury: 2007 - 2009
- Professional member: 2003 - present
- Food Engineering Division (FED) newsletter associate editor: 2002
- FED past-chair: 2004 - 2005
- FED chair: 2003 - 2004
- FED chair-elect: 2002 - 2003
- FED secretary: 2001 - 2002
- FED graduate paper competition committee: 2002
- FED scholarship selection committee: 1996 - 1997
- Ozark section scholarship selection committee: 1997

- Conference of Food Engineering (CoFE) planning committee: 1998 - 1999
- CoFE food rheology technical session chair: 1999; 2001; 2003
- Food rheology symposium co-chair: 2000; 2001
- NC State student branch advisor: 1997 - 1999 (national chapter of the year, 1999); 2002 - 2004

NC-1023 (formerly NC-136) Regional Project

- Chair: 2003 - 2004
- Chair-elect: 2002 - 2003
- Secretary: 2001 - 2002
- Annual meeting host and organizer: 2000
- Project rewrite committee: 1999
- Station representative: 1999 - 2001

The Society of Rheology Penn State University Alumni Association Michigan State University Alumni Association

NC STATE SERVICE

University

- Safety committee chair: 2016 - 2017
- Intellectual property committee, senior ranking member: 2001 - present
- Lifelong faculty involvement: 2013 - present
- University stores: 2013 - 2016
- BTEC advisory board: 2012 - present
- Patent policies and procedures rewrite committee chair: 2010
- Dean of CALS search and nomination committee: 2004
- BTEC building committee: 2004 - 2005
- Grievance panel: 1997 - 2000
- D.H. Hill library task force: 2001

College

- Assistant Dean for business operations search committee: 2016
- Budget principles rewrite committee: 2015 - 2016
- Safety committee: 2014 - 2016; chair 2015 - 2016
- Graduate student professional development workshop: 2014 - 2016; chair 2015 - present
- Fresh produce food safety task force: co-chair 2015 - 2016; past chair 2016 - present
- Strategic planning steering committee: 2013
- Faculty scholars selection committee chair: 2012
- Research committee: 2008 - 2010
- Diversity management team: 2002 - 2003

Department

- Honors and awards committee: 2010 - present
- Bioprocessing science advisory board: 2009 - 2014
- Bioprocessing science faculty position search chair: 2005 - 2006
- Bioprocessing science organization committee: 2003 - 2005
- Name change task force chair: 2003
- Outreach committee: 1996 - 1998
- Library committee: 1997-98; chair 1999 - 2001
- Qualifying exam committee: 1997 - 2000; 2012
- Open house committee: 1997 - 1998; chair 1998
- Undergraduate committee: 1997 - 1999; 2005 - 2010; chair 2009
- Social and recreation committee: 1998 - 1999; 2010 - present
- Undergraduate scholarships: 1998 - 2000; 2008 - 2010

- Graduate student host committee faculty liaison: 1998 - 2000
- Graduate committee: 1999 - 2000
- Faculty retreat committee: 1999 - 2000
- Assessment committee: 1999 - 2004; chair 2006 - 2007

OUTREACH

NC State University

- Conceived the inaugural *Regional Celebration of Food Manufacturing & Science*, a joint meeting of academics representing VaTech, Clemson, and NC State Universities. Kannapolis, NC. October 22-23, 2014
- Organizing committee. Engineering Conferences International. *Biological and Pharmaceutical Complex Fluids II: Novel Trends in Characterizing Interactions, Microstructure and Rheology*. Durham, NC. August 10-14, 2014
- NC State Women's Club. Presented *An FBNS Overview*. Raleigh, NC. September 20, 2012
- Chaired session at Food Oral Processing International Conference. University of Leeds. July 5-7, 2010
- Penn State University, Department of Food Science. Presented *Bioprocessing Science: A New BS Degree Program*. University Park, PA. May 1, 2008
- Provided a bioprocessing science mock lecture to CALS student recruits. March 31, 2008 & April 18, 2008
- CALS Graduate Student Professional Development program. Presented *Pearls of Wisdom for Young Faculty Members*. Chapel Hill, NC. October 17, 2007
- Provided a bioprocessing science mock lecture to CALS student recruits. April 13, 2007
- CALS Graduate Student Professional Development program. Presented *Pearls of Wisdom for Young Faculty Members*. Chapel Hill, NC. October 13, 2006
- CALS Graduate Student Professional Development program. Presented *Pearls of Wisdom for Young Faculty Members*. Chapel Hill, NC. October 7, 2005
- Delivered a live web interview at www.foodviscosity.com. September 20, 2005
- TRI-State dairy convention. Presented *Aspects of Dairy Research Program*. Greensboro, NC. March 29, 2003
- Worked FS departmental booth Open House: 2001 - 2002
- Maryland-Virginia Dairy Producers: Presented *Aspects of Dairy Research Program*. Raleigh, NC. August 9, 2001
- Represented department at Parks Scholar Program breakfast: February 17, 2001
- Presented course WEB Sites at NC State University IT Expo: September 20, 2000
- Instructed rheology session for the NC State University Polymer Center outreach program: July 20, 2000
- Worked FS departmental booth at CALS Tailgate and Open House: 1999 - 2000
- Organized CALS Tailgate and Open House for FS department: 1997 - 1998
- Addressed Fredericksburg Elementary School, Fredericksburg, PA: May 6, 1997
- Addressed Northern Lebanon High School, Fredericksburg, PA: May 6, 1997
- Participated with Suppliers EXPO '97 Carolina-Virginia IFT: May 13, 1997
- Conducted rheology lecture for Food Quality & Safety Symposium: 1996 - 2000

Workshops Delivered

- *Principles of Rheology*. IFT Pre-Meeting. Chicago, IL. July, 2013
- *Principles of Rheology*. VISTAKON (Johnson & Johnson). Jacksonville, FL. September 12-14, 2012
- *Principles of Rheology*. PepsiCo. Plano, TX. May 18-20, 2011
- *Principles of Rheology*. VISTAKON (Johnson & Johnson). Jacksonville, FL. November 7-8, 2005
- *Principles of Rheology*. Hershey Foods Corporation. Hershey, PA. May 14-15, 2003
- *Rheological Aspects of Cheese Texture*. In: *Cheese Flavor and Texture: Sensory and Instrumental Analysis*. NC State. August 6-8, 2003
- *Rheological Aspects of Cheese Texture*. In: *Cheese Flavor and Texture: Sensory and Instrumental Analysis*. NC State. August 7-9, 2002
- *Principles of Rheology*. Schreiber Foods Incorporated. Branson, MO. May 20, 2002
- *Rheological Analysis of Foods - Fundamental Concepts and Practical Applications*. 5th International Hydrocolloids Conference. Raleigh, NC. September 10, 2000
- *Rheological Analysis of Foods: Theory and Practice III*. NC State. May 31- June 2, 2000
- *Rheological Analysis of Foods: Theory and Practice II*. NC State. May 19-21, 1999
- *Rheological Analysis of Foods: Theory and Practice*. NC State. May 20-22, 1998
- *Principles of Rheology*. Hewlett-Packard, Corvallis, OR. July 13-14, 1998
- *Principles of Rheology*. VISTAKON (Johnson & Johnson). Jacksonville, FL. June 29-30, 1999

HONORS

- Fellow. Institute of Food Technologists: 2015
 - Outstanding Engineering Alumnus. The Pennsylvania State University, University Park, PA: 2015
 - Biosystems Engineering Distinguished Alumni Award. The Michigan State University, East Lansing, MI: 2015
 - Journal of Texture Studies. Certificate of Merit – Top 10 Downloaded Articles: 2012
 - Gertrude Cox Award nominee: 2010
 - IFT R&D Award nominee: 2008 - 2010
 - Invited Speaker. ACS Annual Meeting. Washington, D.C.: 2009
 - Plenary Lecturer. Conference of Food Engineering/AIChE. San Francisco, CA: 2003
 - Outstanding Instructor Award. NC State Food Science Club: 1998; 2004
 - Outstanding Instructor Award. CALS: 2005
 - Outstanding Instructor Award. NC State University: 2005
 - Academy of Outstanding Teachers. NC State University: 2005
 - Best Paper Award. AOCS Phospholipid Division: 2000
 - Sigma Xi Outstanding Young Researcher. NC State University: 2005
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ACADEMICS

Instructor of Record

FS/BBS 290: Careers in Food and Bioprocessing Science

- Fall 2011. 37 students
- Fall 2010. 32 students
- Fall 2009. 31 students

FS 591.601: Food Rheology – Distance Education

- Fall 2009. 17 students
- Fall 2010. 8 students

FS/BBS 416: Quality Control in Food and Bioprocessing Science

- Spring 2012. 22 students
- Spring 2011. 18 students
- Spring 2010. 17 students

FS 421/591C: Food Preservation

- Fall 2008. 15 students / 5 graduate students

FS 475: Food Science Capstone Course

- Spring 2004. 12 students
- Spring 2003. 10 students
- Spring 2002. 7 students
- Spring 2001. 18 students
- Spring 2000. 20 students

FS / BAE 785: Food Rheology (Graduate)

- Fall 2016. 5 graduate students
- Fall 2014. 7 graduate students
- Fall 2012. 5 graduate students
- Fall 2010. 9 graduate students
- Fall 2008. 9 graduate students
- Fall 2006. 10 graduate students
- Fall 2004. 7 graduate students
- Fall 2002. 13 graduate students
- Fall 2000. 12 graduate students
- Fall 1998. 20 graduate students
- Spring 1997. 4 graduate students

Tables 2.1 - 2.4 share student evaluations collected since 2008.

Table 2.1 Student Evaluations FS / BAE 785 Food Rheology (mean / 5.0 scale)

Question	2008 (n=9)	2010 (n=5)	2012 (n=4)	2014 (n=5)	2016 (n=5)
Overall, the instructor was an effective teacher	4.3	4.4	5.0	4.6	5.0
Overall, this course was excellent	4.3	4.6	5.0	4.6	5.0

Table 2.2 Student Evaluations FS 591 DE Food Rheology (mean / 5.0 scale)

Question	2008 (n=17)	2010 (n=2)
Overall, the instructor was an effective teacher	4.9	5.0
Overall, this course was excellent	4.9	5.0
Overall, the instructor created an effective distance learning environment	4.9	5.0

Table 2.3 Student Evaluations FS/BBS 416 Quality Control (mean / 5.0 scale)

Question	2010 (n=10)	2011 (n=5)	2012 (n=11)
Overall, the instructor was an effective teacher	3.1	4.0	4.5
Overall, this course was excellent	2.9	4.0	4.2

Table 2.4 Student Evaluations FS/BBS 290 Careers in FS/BBS (mean / 5.0 scale)

Question	2009 (n=11)	2010 (n=17)	2011 (n=10)	2012 (n=10)
Overall, the instructor was an effective teacher	4.5	4.7	3.8	3.8
Overall, this course was excellent	4.2	4.6	4.4	4.4

Student Mentoring

Undergraduate Research

- Zenia Adiwijaya. FBNS Summer Scholar. 2016
- Jacques Overdiep. 2014 - 2015
- Emma Barber. FBNS Summer Scholar. 2012
- Eric Hinson. 2007 - 2008
- Jay Shin. 2007 - 2008
- Tristan Berry. 2002 - 2004
- Caitlin S. Boon. 2000 - 2001
- Sherri R. Baxter. 1999 - 2000

M.S. Graduate Research (Advisor)

- Kelsey Kanyuck. In Progress. *Beverage Weighting Agents*
- Meghan Keck. 2015. *A Comprehensive Model of Lozenge Decay: Rheology and Tribology*
- Mary Burke. 2011. *A Dried Dairy Product for Delivery of Probiotic Cultures*
- Matthew Yurjec. 2009. *A Rheological Analysis of Shear on a Model Emulsion System*
- Kristin Price. 2007. *Microstructure and Functionality of Processed Cheese: The Role of Milkfat*
- Grace Cramp. 2007. *Modification and Molecular Interactions of a Soy Protein Isolate.*
- John Lillard. 2007. *Expanding the Utility of a Modified Whey Protein Ingredient via Carbohydrate Conjugation*
- Melissa M. Funke. 2005. *Rheological Characterization of a Wound Healing Accelerant*
- Deepti Tanjore. 2005. *Viscoelastic Property Determination: A New Application for Brookfield Viscometers*
- Jon D. Firebaugh. 2004. *Rheological Characterization and Applications for a Derivatized Whey Ingredient*
- Noel Pollen. 2002. *A Texture Profile Analysis Procedure for Fluid Foods*
- Thomas A. Glenn III. 2002. *Influence of Creaming Variables on the Functionality of Processed Cheese*
- Michelle Leach. 2002. *Use of Microwave Technology in Processed Cheese Production*
- Amelia Steiner. 2001. *Formulation Effects on Caramel Rheology*
- Andriana Vais, 2000. *Characterization of Strain Effects on Particulates During Aseptic Processing*
- Addie D. Anderson. 2000. *Rheological Characterization of Dairy Ingredients Exposed to Aseptic Processing Conditions*
- Leslie Lowe. 2000. *Characterization of Large Strain Viscoelastic Behavior of Fine Stranded Whey Protein Isolate Gels*

Ph.D. Graduate Research (Advisor)

- Helen (Melito) Joyner. 2012. *Large Amplitude Oscillatory Shear Behavior of Food Systems*
 - Yifat Yaniv. 2009. *Rheological Characterization of Alginate Microbead Gels and Suspensions*
 - Prashant Mudgal. 2009. *Aggregation Mechanisms of a Whey Protein Model System at Low pH*
 - Junhua Zhang. 2004. *Mechanisms Responsible for Non-Linear and Fracture Properties of Gel-Based Foods*
 - Lisa Papageorge. 2005. *Sensory Texture and Fundamental Rheology of Agar and Agarose Gels*
 - Jeffrey J. Resch. 2004. *Processing Modification of Whey Protein Concentrate into a pH and Thermal Stable Thickening Agent*
 - Qixin Zhong. 2003. *The Impact of Cooling Rates on the Microstructure of Processed Cheese**
 - Heather M. Hudson. 2001. *Alternatives to Starch Thickeners for the Improved Nutrition of the Swallowing Impaired*
- * NC State Department of Chemical and Biomolecular Engineering and Food Science, joint

M.S. Graduate Research (Committee Member)

- Yiwen Thor. 2015
- Lisa Rosenberg. 2013
- Quin Patton. 2013
- Helen Melito. 2009
- Neal Rogers. 2008
- Julie Grabowski. 2005
- Jessica Powell. 2004
- Lacey McKlem. 2002
- Jennifer Brown. 2002
- Amanda Dees. 2002
- Robyn Reynolds. 2001 *
- Paige Jordan Luck. 2000
- Kim Baker. 1999
- Myke Rich. 1999
- Christopher W. Pernel. 1999
- Shu-Li Wang. 1999

* Michigan State University Department of Food Science

Ph.D. Graduate Research (Committee Member)

- George Stoforos. In Progress
- Caroline Campbell. In Progress
- Tyler Wagoner. In Progress
- Nihat Yavuz. 2016
- Yvette Thibault. 2014
- Hicran Koc. 2012
- Wenjie Liu. 2011

- Kelsey Ryan. 2011
 - Esra Cakir. 2011
 - Qin Yang. 2008
 - Bradley Wright. 2007
 - Shaun Tanner. 2007 *
 - Christopher Kloxin. 2006 *
 - Jack Davis. 2005
 - Ahmed Eissa. 2005 *
 - Dany Doucet. 2004
 - Samiul Amin. 2002 *
 - Howard Jerome Walls. 2002 *
 - Bongkosh “Jeab” Vardhanabhuti. 1999
- * NC State Department of Chemical and Biomolecular Engineering

Visting Scholars and Post-Doctoral Researchers

- Dr. Helen (Melito) Joyner. 2012 - 2013
- Dr. Junhua Zhang. 2005
- Dr. Pichan Prabhasankar, Central Food Technological Research Institute. 2004 - 2005
- Dr. Noriyuki Igura, Kyushu University, Japan. 1999 - 2000

RESEARCH

Seminars (32 total)

1. Melito H.S., Daubert, C.R. and E.A. Foegeding. 2012. Creep and nonlinear viscoelastic behavior of whey protein isolate/kappa carrageenan gels. Abstract 310-02. IFT Annual Meeting. Las Vegas, NV. June 26-28.
2. Foegeding, E.A., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C. and F. van de Velde. 2010. Advances and challenges in understanding textural properties of soft solid foods. Food Oral Processing Conference. University of Leeds, England. July 5-7.
3. Koc, H., Cakir, E., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C., Osborne, J. and E.A. Foegeding. 2010. Multidimensional approach in texture assessment: oral processing, sensory perception and rheological characteristics of model foods with different levels of hardness and deformability. Food Oral Processing Conference. University of Leeds, England. July 5-7.
4. Cakir, E., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C. and E.A. Foegeding. 2010. Sensory perception and oral processing of mixed gels as a function of microstructure. Food Oral Processing Conference. University of Leeds, England. July 5-7.
5. Yurgec, M. and C.R. Daubert. 2009. Quantifying shear effects on a model emulsion system. Abstract 084-06. IFT Annual Meeting. Anaheim, CA. June 8.
6. Cakir, E., Koc, H., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C. and E.A. Foegeding. 2009. Evaluation of food texture using oral processing. IFT Annual Meeting. Anaheim, CA. June 7.
7. Mudgal, P., Daubert, C.R. and E.A. Foegeding. 2009. Cold-set thickening mechanism of β -lactoglobulin at low pH: concentration and kinetic effects. Session 15. Conference of Food Engineering. Columbus, OH. April 5-8.
8. Clare, D.A. and C.R. Daubert. 2008. Transglutaminase polymerization of a modified whey protein ingredient. ADSA Joint Annual Meeting. Indianapolis, Indiana. July 7-11.
9. Cramp, G.L., Kwanyuen, P. and C.R. Daubert. 2007. Molecular interactions of a modified soy protein isolate. AOCS Annual Meeting. Quebec City, Quebec. May 13-16.
10. Price, K., Daubert, C.R. and R.W. Hartel. 2007. The influence of cooling schedules on the shear rheology of processed cheese. Presentation 030-03. IFT Annual Meeting. Chicago, IL. July 28-31.
11. Asghar, A., Anjum, F.M., Allen, J.C., Daubert, C.R. and S.R. Ramsey. 2007. Effect of whey protein concentrates as functional ingredients on physical and thermal dynamic rheological properties of wheat flour dough. Presentation 183-03. IFT Annual Meeting. Chicago, IL. July 28-31.
12. Clare, D.A., Lillard, S.J., Ramsey, S.R., Amato, P.M. and C.R. Daubert. 2007. Calcium effects on the functionality of a modified whey protein ingredient. Presentation 207-03. IFT Annual Meeting. Chicago, IL. July 28-31.
13. Prabhasankar, P., Daubert, C.R. and D.A. Clare. 2005. A modified whey protein, low carbohydrate food ingredient. Abstract 28734. IFT Annual Meeting. New Orleans, LA. July 15-20.
14. Resch, J.J., Daubert, C.R. and E.A. Foegeding. 2004. Processing parameter effects on the functional properties of modified whey protein ingredients. Abstract 64-5. IFT Annual Meeting. Las Vegas, NV. July 12-16.

15. Peretti, S.W., Bernardinelli, P., Bullard, L.G., Dannels, D.P., Kmiec, D., Anson, C. and C.R. Daubert. 2004. Assessment of Teaming, Writing, and Speaking Instruction in Chemical Engineering Courses. Session 2131. ASEE National Meeting. Salt Lake City, Utah. June 20-23.
16. Dannels, D. P., Berardinelli, P., Anson, C., Bullard, L.G., Daubert, C.R., Kleid, N., Kmiec, D. and S.W. Peretti. 2003. Instruction and Assessment of Multidisciplinary Teaming Skills in Senior Design. ASEE National Meeting, Nashville, TN: June 22-25.
17. Resch, J.J. and C.R. Daubert. 2003. Acidulant effects on the rheological properties of whey protein gels. 3rd International Symposium on Food Rheology and Structure. Zurich, Switzerland. February 9-13.
18. Zhong, Q. and C.R. Daubert. 2003. Mathematical modeling of rennet casein gelation kinetics at different cooling rates. 3rd International Symposium on Food Rheology and Structure. Zurich, Switzerland. February 9-13.
19. Foegeding, E.A. and C.R. Daubert. 2002. Probing beyond the linear viscoelastic region of protein gels. 6th International Hydrocolloids Conference. Canada. July 15-19.
20. Resch, J.J. and C.R. Daubert. 2001. Rheological and physical properties of derivatized whey protein concentrate powders. CoFE. Reno, NV. November 4-9.
21. Resch, J.J. and C.R. Daubert. 2001. Rheological and physicochemical properties of derivatized whey protein concentrate powders. 2nd Annual NC STATE Polymer Workshop. Raleigh, NC. May 10.
22. Hudson, H.M. and C.R. Daubert. 2001. Electrokinetic and electroviscous properties in derivatized whey protein isolate colloidal suspensions of defined sizes. Abstract 68-9. IFT Annual Meeting. New Orleans, LA. June 23-27.
23. Hudson, H.M., Daubert, C.R. and E.A. Foegeding. 2000. Rheological and physical properties of derivatized whey protein isolate solutions. Abstract 5153. ADSA Annual Meeting. Baltimore, MD. July 24-28.
24. Hudson, H.M., Daubert, C.R. and E.A. Foegeding. 2000. Physical and functional property comparison between derivatized whey protein powders and pregelatinized starch. Abstract 50-2. IFT Annual Meeting. Dallas, TX. June 10-14.
25. Anderson, A.D., Daubert, C.R. and B.E. Farkas. 1999. Rheological characterization of dairy-based systems stabilized with carrageenan. Abstract 52E. Conference of Food Engineering. Dallas, TX. October 31 - November 5.
26. Vais, A.E., Sandeep, K.P. and C.R. Daubert. 1999. Mechanical and thermal effects on particulate integrity during aseptic processing. Abstract 66G. Conference of Food Engineering. Dallas, TX. October 31 - November 5.
27. Hudson, H.M., Daubert, C.R. and R.H. Mills. 1998. Development of a protein-based thickener for the elderly dysphagic. Abstract 1074. ASHA National Convention. San Antonio, TX. November 19-22.
28. Mills, R.H., Daubert, C.R., Stewman, D., Hudson, H.M. and V. Zachary. 1998. Serum-based indicators of nutrition and hydration in dysphagia. Abstract 1068. ASHA National Convention. San Antonio, TX. November 19-22.
29. Truong, V.D. and C.R. Daubert. 1998. Modeling deformation curves of viscoelastic solid foods measured with the vane method. Abstract 8-8. IFT Annual Meeting. Atlanta, GA. June 20-24.
30. Pernell, C.W., Daubert, C.R. and E.A. Foegeding. 1997. Determination of yield stress in protein foams using vane rheometry. Paper 61g. Conference of Food Engineering. Los Angeles, CA. November 18-21.
31. Daubert, C.R. and S.A. Khan. 1997. Temperature and compositional effects on the rheology of food foams. Abstract 69C. Conference of Food Engineering. Los Angeles, CA. November 18-21.
32. Mills, R.H., Brown, A., Daubert, C.R., Casper, M., Church, C. and A. Tobochnik. 1997. Establishing standards for thickened liquids in the dysphagia diet. Abstract 437. ASHA National Convention. Boston, MA. November 19-23.

Invited Research Talks (35 total)

1. Daubert, C.R., Keck, M.E. and C.W. Pernell. 2015. Lozenge dissolution during oral processing. US:NZ Science Workshop - Oral Processing and the Design of Foods for Consumers. Raleigh, NC. October 13-15.
2. Daubert, C.R., Melito, H.S. and C.W. Pernell. 2013. Effects of particle size on the rheological and tribological properties of acid milk gels. Abstract 238-03. IFT Annual Meeting. Chicago, IL. July 13-16.
3. Daubert, C.R. 2013. The fundamentals of textural design: the importance & means to drive product liking through considered textural design. IFT Pre-meeting Shortcourse. Chicago, IL. July 13.
4. Daubert, C.R., Mudgal, P. and E.A. Foegeding. 2009. Cold-set thickening mechanism of β -lactoglobulin at low pH: concentration and kinetic effects. ACS Annual Meeting. Washington D.C. August 16-20.
5. Daubert, C.R. 2005. A new application for Brookfield viscometers: viscoelastic property determination. Brookfield Engineering. Middleboro, MA. September 9.
6. Daubert, C.R. 2005. Influencing ingredient functionality through manipulation of protein self-assembling. The Hershey Company. Hershey, PA. May 25.
7. Daubert, C.R. 2005. Inquiry-guided learning in a food science capstone course. Abstract 95-5. IFT Annual Meeting. New Orleans, LA. July 16-20.
8. Daubert, C.R. 2004. Influencing ingredient functionality through manipulation of protein self-assembling. National Starch and Chemical Company. Bridgewater, NJ. November 9.
9. Zhong, Q. and C.R. Daubert. 2004. Rheology and microstructure of a model rennet casein system. Abstract 109-3. IFT Annual Meeting. Las Vegas, NV. July 12-16.

10. Daubert, C.R. 2003. Influencing ingredient functionality through manipulation of protein self-assembling. Cornell University Department of Food Science. Ithaca, NY. November 11.
11. Daubert, C.R. 2003. Influencing ingredient functionality through manipulation of protein self-assembling. NC State Department of Food Science. Raleigh, NC. November 10.
12. Daubert, C.R. 2003. Plenary Lecture: Influencing ingredient functionality through manipulation of protein self-assembling. Conference of Food Engineering. AIChE Annual Meeting. San Francisco, CA. November 16-21.
13. Zhong, Q. and C.R. Daubert. 2003. Physicochemical effects on the rheology and microstructure of self-assembled rennet casein systems. Conference of Food Engineering. AIChE Annual Meeting. San Francisco, CA. November 16-21.
14. Daubert, C.R. 2003. Instantly thickening whey protein ingredients. IFT Annual Meeting. Chicago, IL. July 12-16.
15. Daubert, C.R. 2003. A multidisciplinary approach to inquiry-based education. International Union of Food Science and Technology. Chicago, IL. July 17.
16. Daubert, C.R. 2002. A new whey protein ingredient & process cheese research at NC State. Land O'Lakes. Arden Hills, MN. May 14.
17. Daubert, C.R. 2001. Rheological methods for assessment of food freshness and shelf-life stability. Symposium for Freshness and Shelf-Life Stability. ACS National Meeting. Chicago, IL. August 26-30.
18. Daubert, C.R. 2000. Milk chocolate: our favorite smart material. Seminars in Material Science and Engineering at NC State. Raleigh, NC. October 20.
19. Daubert, C.R. 2000. A whey protein ingredient for treatment of the elderly dysphagic. 5th International Hydrocolloids Conference. Raleigh, NC. September 10-15.
20. Daubert, C.R. 2000. History and recent applications of the vane method. Abstract 70-7. IFT Annual Meeting. Dallas, TX. June 10-14.
21. Daubert, C.R. 2000. The vane method: A standard procedure for yield stress determination. Abstract 2-2. IFT Annual Meeting. Dallas, TX. June 10-14.
22. Daubert, C.R. 2000. Milk chocolate: our favorite smart material. NC State University Polymer Science Brown Bag Seminar Series. Raleigh, NC. May 17.
23. Daubert, C.R. 1999. Electrorheology: a new technology for the confectionery industry. Third International Symposium on Confectionery Science. Pennsylvania Manufacturers and Confectioners Association (An International Association of Confectioners). University Park, PA. November 14-16.
24. Daubert, C.R. 1999. Fundamental rheology for chemists. Symposium for Dairy Products Rheology: The Chemist's Perspective. ADSA Joint Annual Meeting. Memphis, TN. June 20-23.
25. Daubert, C.R. 1998. Electrorheology of milk chocolate. Nestle Foods Technical Center. Milford, CT. February 10.
26. Daubert, C.R. 1998. Rheology of food foams. NC State Department of Biological and Agricultural Engineering. Raleigh, NC. January 30.
27. Mills, R.H., Daubert, C.R., Stewman, D.Y. and C.K. Church. 1997. Revisiting a critical issue: viscosity control in videofluoroscopic swallowing evaluations. Abstract 719. ASHA National Convention. Boston, MA. November 19-23.
28. Daubert, C.R. 1997. Electrorheological fluid foods. Symposium for New Techniques in the Analysis of Foods. ACS Annual Meeting. Las Vegas, NV. September 7-11.
29. Daubert, C.R. 1997. Electrorheology of fluid foods. NC State Department of Food Science. Raleigh, NC. January 20.
30. Daubert, C.R. 1996. Electrorheology of fluid foods. Oklahoma State University Agricultural Engineering Department. Stillwater, OK. October 24.
31. Daubert, C.R. 1996. Temperature, shear, and electric field effects on the rheology of milk chocolate. Hershey Foods Technical Center. Hershey, PA. October.
32. Daubert, C.R. 1996. Electrorheology of fluid foods. Kellogg Company Science and Technology Center. Battle Creek, MI. April.
33. Daubert, C.R. 1996. Electrorheological behavior of milk chocolate. Eastern Regional Research Center of USDA. Wyndmoor, PA. January.
34. Daubert, C.R. 1995. Electrorheological behavior of fluid foods. Texas A&M University Agricultural Engineering Department. College Station, TX. September.
35. Daubert, C.R. 1994. Electrorheological behavior of milk chocolate. Hershey Foods Technical Center. Hershey, PA. August.

Poster Presentations (70 total)

1. Kanyuck, K., Pernell, C. and C.R. Daubert. 2016. Weighting agent impact on volatility and solubility of citrus flavors for applications in beverage emulsions. Journey through Science Day at The New York Academy of Sciences. New York, NY. Nov. 14.
2. Wagoner, T., Essick, G., Drake, M.A., Daubert, C.R. and E.A. Foegeding. 2016. Sensory adhesiveness of caramels explained using surface energy and rheology. Food Oral Processing Conference. Lausanne, Switzerland. July 3-6.

3. Keck, M., Pernell, C.W. and C.R. Daubert. 2015. Tribological and thermodynamic analysis of lozenge decay during oral processing. Abstract 031-152. IFT Annual Meeting. Chicago, IL. July 12-15.
4. Melito, H.S., Daubert, C.R. and C.W. Pernell. 2013. Relationships among rheological, tribological, and sensory characteristics of commercial dairy products. Abstract 257-03. IFT Annual Meeting. Chicago, IL. July 13-16.
5. Melito, H.S., Daubert, C.R. and E.A. Foegeding. 2012. Creep and nonlinear viscoelastic behavior of whey protein isolate/kappa-carrageenan gels. Abstract 273-01. IFT Annual Meeting. Las Vegas, NV. June 26-28.
6. Melito, H.S., Daubert, C.R. and E.A. Foegeding. 2012. Creep and large-amplitude oscillatory shear behavior of whey protein isolate/kappa-carrageenan gels. International Symposium on Food Rheology and Structure. Zurich, Switzerland, April 10-13.
7. Melito, H.S. and C.R. Daubert. 2011. Nonlinear rheology of viscous and elastic materials. IFT Annual Meeting. New Orleans, LA. June 11-14.
8. Koc, H., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C. and E.A. Foegeding. 2012. Sensory texture of emulsion filled polysaccharide gels explained by mechanical properties and microrheology. Abstract 162-01. IFT Annual Meeting. Las Vegas, NV. June 26-28.
9. Burke, M.C., Daubert, C.R. and T.R. Klaenhammer. 2011. A yogurt-type dairy matrix for efficient delivery of probiotic cultures. Presentation 051-03. IFT Annual Meeting. New Orleans, LA. June 12.
10. Koc, H., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C., Osborne, J. and E. A. Foegeding. 2011. Texture assessment of model foods with different levels of hardness and deformability via oral processing, sensory perception, and mechanical properties. Presentation 241-09. IFT Annual Meeting, New Orleans, LA. June 14.
11. Harris, G.K., Steffe, J.F. and C.R. Daubert. 2010. Positive effects of converting face-to-face food science courses to a distance education format. Presentation 222-10. IFT Annual Meeting. Chicago, IL. July 20.
12. Mudgal, P., Daubert, C.R. and E.A. Foegeding. 2010. Disulfide interactions and hydrolysis effects on β -lactoglobulin aggregation at low pH. Presentation 184-11. IFT Annual Meeting. Chicago, IL. July 19.
13. Cakir, E., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C. and E.A. Foegeding. 2010. Rheology, texture and microstructure of whey protein / k-carrageenan mixed gels at different ionic strengths. Presentation 082-02. IFT Annual Meeting. Chicago, IL. July 18.
14. Cakir, E., Koc, H., Daubert, C.R., Drake, M.A., Essick, G., Vinyard, C. and E.A. Foegeding. 2009. Evaluation of food texture using oral processing. Presentation 158-02. IFT Annual Meeting. Anaheim, CA. June 8.
15. Yaniv, Y.R., Daubert C.R. and W.R. Hanselmann. 2009. Production and analysis of alginate microgel beads. Abstract 77. CoFE. Columbus, OH. April 5-8.
16. Mudgal, P., Daubert, C.R. and E.A. Foegeding. 2008. Cold-gelation mechanism of beta lactoglobulin at low pH: concentration and ionic strength effects. Presentation 051-05. IFT Annual Meeting. New Orleans, LA. June 28-July 1.
17. Yaniv, Y.R., Daubert, C.R. and W.R. Hanselmann. 2008. Production and analysis of alginate microgel beads. Presentation 132-16. IFT Annual Meeting. New Orleans, LA. June 28-July 1.
18. Asghar, A., Anjum, F.M., Allen, J.C., Daubert, C.R. and S.R. Ramsey. 2008. Effect of modified whey protein concentrates on instrumental texture profile analysis of frozen dough. Presentation 137-07. IFT Annual Meeting. New Orleans, LA. June 28-July 1.
19. Hinson, E., Ramsey, S.R. and C.R. Daubert. 2008. Rheological properties of commercial peanut butters: formulation effects during production. Presentation 175-13. IFT Annual Meeting. New Orleans, LA. June 28-July 1.
20. Ergun, R., Price, K., Hartel, R.W., Daubert, C.R. and O. Velev. 2007. Attributes of milk crystallinity at slow cooling rates. May, 2007. AOCS Annual Meeting. Quebec City, Quebec. May 13-16.
21. Mudgal, P., Daubert, C.R. and E.A. Foegeding. 2007. Gelation of β -lactoglobulin at low pH: concentration effects. ADSA Joint Annual Meeting. San Antonio, TX. July 8-12.
22. Cramp, G.L., Clare, D.A., Kwanyuen, P. and C.R. Daubert. 2007. The formation and functionality of soy protein-dextran and soy protein-mannose conjugates. Presentation 007-09. IFT Annual Meeting. Chicago, IL. July 28-31.
23. Lillard, S.J., Clare, D.A. and C.R. Daubert. 2007. Expanding the utility of a modified whey protein ingredient via carbohydrate conjugation. Presentation 055-22. IFT Annual Meeting. Chicago, IL. July 28-31.
24. Ramsey, S.R. and C.R. Daubert. 2007. A standard approach to assess rheological equipment and operator performance: An NC 1023 subcommittee report. Presentation 096-15. IFT Annual Meeting. Chicago, IL. July 28-31.
25. Price, K., Daubert, C.R., Hartel, R. and O. Velev. 2007. Cooling rate effects on the rheology of bulk milk fat. Presentation 096-24. IFT Annual Meeting. Chicago, IL. July 28-31.
26. Clare, D.A., Lillard, J., Ramsey, S.R., Amato, P.M. and C.R. Daubert. 2007. Enhanced functionality of a modified whey protein ingredient upon the addition of calcium. Dairy Ingredients Symposium/International Spray Dried Milk Conference. San Francisco, CA. February 26-28.
27. Grabowski, J., Daubert, C.R. and V. Truong. 2006. Nutritional and rheological characterization of spray-dried sweet potato powder. Abstract 39G-19. IFT Annual Meeting. Orlando, FL. June 24-28.
28. Zhang, J., Daubert, C.R. and E.A. Foegeding. 2005. Fracture properties of alginate gels. Abstract 36D-27. IFT Annual Meeting. New Orleans, LA. July 16-20.

29. Tanjore, D. and C.R. Daubert. 2005. A new application for Brookfield viscometers: viscoelastic property determination. Abstract 36D-25. IFT Annual Meeting. New Orleans, LA. July 16-20.
30. Barrangou, L.M., Daubert, C.R. and E.A. Foegeding. 2004. Rheological characterization of agarose gels. 7th International Hydrocolloids Conference. Melbourne, Australia. August 29-September 1.
31. Barrangou, L.M., Drake, M.A., Daubert, C.R. and E.A. Foegeding. 2004. Sensory texture related to rheological profiles of agarose gels. 7th International Hydrocolloids Conference. Melbourne, Australia. August 29-September 1.
32. Firebaugh, J.D. and C.R. Daubert. 2004. Foaming and emulsification properties of derivatized whey powders. Abstract 17B-10. IFT Annual Meeting. Las Vegas, NV. July 12-16.
33. Zhang, J., Daubert, C.R. and E.A. Foegeding. 2004. Influence of additives on the mechanical properties of alginate gels. Abstract 99C-6. IFT Annual Meeting. Las Vegas, NV. July 12-16.
34. Childs, J.L., Foegeding, E.A. and C.R. Daubert. 2004. Factors regulating shreddability of processed cheese. Abstract 17A-15. IFT Annual Meeting. Las Vegas, NV. July 12-16.
35. Zhang, J., Daubert, C.R. and E.A. Foegeding. 2003. Characterization of polyacrylamide gels as elastic models for food gels. AICHE Annual Meeting. San Francisco, CA. November 16-21.
36. Firebaugh, J.D. and C.R. Daubert. 2003. Ingredient interactions with derivatized whey protein ingredients. ADSA Joint Annual Meeting. Phoenix, AZ. June 22-26.
37. Peretti, S.W., Bullard, L.G., Heil, M. and C.R. Daubert. 2002. Multidisciplinary senior design course: an exercise in futility? AICHE Annual Meeting, Indianapolis, IN. November 3-8.
38. Zhong, Q. and C.R. Daubert. 2002. A fractal analysis of casein model gels subjected to different cooling rates. IFT Annual Meeting. Anaheim, CA. June 15-19.
39. Pollen, N.R., Daubert, C.R. and M.A. Drake. 2002. A texture profile analysis for fluid foods. Abstract #12463. IFT Annual Meeting. Anaheim, CA. June 15-19.
40. Resch, J.J. and C.R. Daubert. 2002. Rheological characterization and comparison of derivatized whey protein concentrate ingredients. ADSA Joint Annual Meeting. Quebec, Canada. July 21-25.
41. Glenn, T.A., Daubert, C.R. and B.E. Farkas. 2001. The influence of creaming variables on process cheese functionality. CoFE. Reno, NV. November 4-9.
42. Leach, M.R., Farkas, B.E. and C.R. Daubert. 2001. Rheological, thermal, and dielectric properties of processed cheese required for continuous microwave processing. CoFE. Reno, NV. November 4-9.
43. Pollen, N.R. and C.R. Daubert. 2001. Texture profiling of skim milk and carrageenan solutions. Abstract 1589. ADSA Joint Annual Meeting. Indianapolis, IN. July 24-28.
44. Truong, V.D. and C.R. Daubert. 2001. Rheological and textural properties of alginate-starch mixed gels: effects of starch type and concentration. AACC Annual Meeting. Charlotte, NC. October 14-18.
45. Glenn, T.A. and C.R. Daubert. 2001. Modification of a pilot scale mixing device for average shear rate approximation. Abstract 15D-6. IFT Annual Meeting. New Orleans, LA. June 23-27.
46. Resch, J.J. and C.R. Daubert. 2001. Particle size effects on the physical and rheological properties of derivatized whey protein concentrate powders. Abstract 15C-13. IFT Annual Meeting. New Orleans, LA. June 23-27.
47. Boon, C.S. and C.R. Daubert. 2001. Comparison of foaming properties of whey protein isolate, derivatized whey protein isolate, and egg white protein. Poster 12. 10th Annual Undergraduate Research Symposium. Raleigh, NC: April 19.
48. Resch, J.J., Daubert, C.R. and H.M. Hudson. 2000. Rheological properties of derivatized whey protein concentrate powders. Poster 39. 5th International Hydrocolloids Conference. Raleigh, NC. September 11-15.
49. Hudson, H.M., Daubert, C.R., Foegeding, E.A. and R.H. Mills. 2000. A whey protein ingredient for dysphagia management. Poster 37. 5th International Hydrocolloids Conference. Raleigh, NC. September 11-15.
50. Luck, P.J., Lanier, T.C., Daubert, C.R., Wilson, R.F. and P. Kwanyuen. 2000. Viscoelastic behavior of soy isolate pastes during heating and cooling. Poster 45. 5th International Hydrocolloids Conference. Raleigh, NC. September 11-15.
51. Resch, J.J., Daubert, C.R. and H.M. Hudson. 2000. Rheological properties of derivatized whey protein concentrate powders. Abstract 65B-4. IFT Annual Meeting. Dallas, TX. June 10-14.
52. Truong, V.D., Daubert, C.R., Drake, M.A. and S.R. Baxter. 2000. Textural characterization of cheddar cheeses using the vane method: correlation with other instrumental and sensory measurements. Abstract 78C-3. IFT Annual Meeting. Dallas, TX. June 10-14.
53. Vais, A.E., Sandeep, K.P. and C.R. Daubert. 2000. Textural change in particulates due to mechanical and thermal effects in aseptic processing. Abstract 65B-36. IFT Annual Meeting. Dallas, TX. June 10-14.
54. Hudson, H.M., Daubert, C.R. and E.A. Foegeding. 2000. Rheological and physical properties of derivatized whey protein isolate solutions. Abstract 5153. ADSA Joint Annual Meeting. Baltimore, MD. July 24-28.
55. Anderson, A.D., C.R. Daubert and B.E. Farkas. 1999. Rheological characterization of skim milk and carrageenan solutions at thermal processing temperatures. Abstract 22C-4. IFT Annual Meeting, Chicago, IL. July 24-28.
56. Lowe L.R., Foegeding, E.A. and C.R. Daubert. 1999. Large strain viscoelasticity of whey protein isolate gels. Abstract 22C-9. IFT Annual Meeting. Chicago, IL. July 24-28.
57. Vais, A.E., Sandeep, K.P. and C.R. Daubert. 1999. Use of rheological tests to assess damage to particulates in aseptic processing. Abstract 22C-15. IFT Annual Meeting. Chicago, IL. July 24-28.

58. Vais, A.E., Palazoglu, T.K., Sandeep, K.P. and C.R. Daubert. 1999. Rheological characterization of carboxymethyl cellulose under aseptic processing conditions. Abstract 22C-13. IFT Annual Meeting. Chicago, IL. July 24-28.
59. Truong, V.D. and C.R. Daubert. 1999. Comparative study of the vane method, torsion, and compression in determining stress and strain of viscoelastic food gels. Abstract 22C-10. IFT Annual Meeting. Chicago, IL. July 24-28.
60. Hudson, H.M., Daubert, C.R. and R.H. Mills. 1999. A protein-based thickener for the elderly dysphagic. Abstract 65E-4. IFT Annual Meeting. Chicago, IL. July 24-28.
61. Keener, K.M., Daubert, C.R. and T.A. Glenn. 1999. Development and evaluation of a hand vane device for rapid quality measurement during food processing. Abstract 22C-1. IFT Annual Meeting. Chicago, IL. July 24-28.
62. Smith-Hammond, C., Scharver, C., Hoenig, R., Evanko, L., Heard, M.A., Daubert, C.R., Curtis, D.J. and C.W. Bales. 1998. Viscosity recommendations for real life liquids across medical diagnostic groups. Abstract 1175. ASHA National Convention. San Antonio, TX. November 19-22.
63. Sandeep, K.P., Puri, V.M., and C.R. Daubert. 1998. Quality considerations during aseptic processing of liquid and particulate foods. Institute for Thermal Processing Specialists Annual Meeting. Washington, D.C. Nov. 17-19.
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Peer-reviewed Publications (81 total)

1. Campbell, C.L., Daubert, C.R., Drake, M.A. and E.A. Foegeding. 2016. An iso-protein model food system for evaluating food texture effects. *J Texture Stud.* 47: 377-391.
2. Joyner (Melito), H.S., Pernell, C.W. and C.R. Daubert. 2014. Impact of oil-in-water emulsion composition and preparation method on emulsion physical properties and friction behaviors. *Tribol. Lett.* 56: 143-160.
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4. Joyner (Melito) H.S., Pernell, C.W. and C.R. Daubert. 2014. Beyond surface selection: the impact of different methodologies on tribological measurements. *J Food Eng.* 134: 45-58.
5. Joyner (Melito), H.S., Pernell, C.W. and C.R. Daubert. 2014. Impact of parameter settings on normal force and gap height during tribological measurements. *J Food Eng.* 137: 51-63.
6. Melito, H.S., Daubert, C.R. and E.A. Foegeding. 2013. Relationships between nonlinear viscoelastic behavior and rheological, sensory, and oral processing behavior of commercial cheeses. *J Texture Stud.* 44(4): 253-288.
7. Melito, H.S., Daubert, C.R. and E.A. Foegeding. 2013. Relating large-amplitude oscillatory shear and food behavior: correlation of nonlinear viscoelastic, rheological, sensory, and oral processing behavior of whey protein isolate/k-carrageenan gels. *J Food Process Eng.* 36(4): 521-534.
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13. Melito H.S and C.R. Daubert. 2011. Rheological innovations for characterizing food material properties. *Annual Rev of Food Science and Tech.* 2:153-179.
14. Tanjore, D. and C.R. Daubert. 2011. A vane-in-cup approach to measure viscoelastic properties from torque-time response of a viscometer. *Applied Rheology.* 21:6
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43. Barrangou, L.M., Drake, M.A., Daubert, C.R. and E.A. Foegeding. 2006. Textural properties of agarose gels. II. Relationships between fracture properties, small-strain rheology, and sensory texture. *Food Hydrocolloids*. 20: 196-203.
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47. Zhang, J., Daubert, C.R. and E.A. Foegeding. 2005. Characterization of polyacrylamide gels as an elastic model for food gels. *Rheologica Acta*. 44: 622-630.
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51. Zhong, Q., Daubert, C.R. and O. Velev. 2004. Cooling effects on a model rennet casein gel system: part I. Rheological characterization. *Langmuir*. 20: 7399-7405.
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54. Resch, J.J., Daubert, C.R. and E.A. Foegeding. 2004. A comparison of drying operations on the rheological properties of whey protein thickening ingredients. *Inter J of Food Science and Tech*. 39: 1-9.
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Publications (8 total)

1. Foegeding, E.A. and C.R. Daubert. 2008. Sensory texture based on rheological properties: Applications in model foods and cheese. *Annual Transactions The Nordic Rheology Society.* 16: 3-10.
2. Daubert, C.R. and T. Helm. 2004. Industrial Partnering: An SDFRC success story. *SDFRC Newsletter.* (13): 1,4.
3. Daubert, C.R. 2001. NC136 holds annual meeting. *Food Engineering Division of IFT Newsletter.*
4. Steiner, A., Coronel, P. and V. Simmons. 2001. A food quality application using dynamic shear rheometry: application note. *American Laboratory.* 33(23): 12,14.
5. Resch, J.J. and C.R. Daubert. 2000. A recap of the shortcourse "Rheological Analysis of Foods: Theory and Practice." *Applied Rheology.* 10(3): 146-147.
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7. Brown, A., Mills, R.H., Daubert, C.R. and M.L. Casper. 1998. Establishing labels and standards for thickened liquids in the dysphagic diet. *The Consultant Dietitian.* 23(2): 1,3-4.
8. Farkas, B.E. and C.R. Daubert. 1998. Perspectives from NC State food engineers: graduate student expectations. *Food Engineering Division of IFT Newsletter.* 21(3): 4-5.

Book

1. Steffe, J.F. and C.R. Daubert (2006) *Bioprocessing Pipelines: Rheology and Analysis.* Freeman Press, E. Lansing, MI.

Book and Proceedings Chapters (15 total)

1. Joyner, H.M and C.R. Daubert. (2016) *Principles of Food Rheology.* In: *Introduction to the Chemical Analysis of Foods* 5th Ed. S. Suzanne Nielsen, editor. Jones and Bartlett Publisher, Inc. Boston, MA. (Peer-reviewed).
2. Daubert, C.R., Pernell, C. and A.C. Cohen. (2015) *Introduction to Texture, Consistency, and Rheology in Insect Diets.* In: *Insect Diets Science and Technology* 2nd Ed. A.C. Cohen, editor. CRC Press. New York, NY.
3. Daubert, C.R. and B.E. Farkas. (2010) *Principles of Food Rheology Lab.* In: *Food Analysis Laboratory Manual* 2nd Ed. S. Suzanne Nielsen, editor. Jones and Bartlett Publisher, Inc. Boston, MA.
4. Daubert, C.R. and E.A Foegeding. (2010) *Principles of Food Rheology.* In: *Introduction to the Chemical Analysis of Foods* 4th Ed. S. Suzanne Nielsen, editor. Jones and Bartlett Publisher, Inc. Boston, MA. (Peer-reviewed).
5. Daubert, C.R. (2010) *Reynolds Number Considerations for Food Processing Applications.* In: *Encyclopedia of Agricultural and Food Engineering* 2nd Ed. D.R. Heldman and C.I. Moraru, editors. (Peer-reviewed).
6. Zhong, Q. and C.R. Daubert. (2007) *Food Rheology.* In *Food Machinery Handbook.* M. Kutz, editor. William Andrew Publishing. Norwich, NY.
7. Turner, L. and C.R. Daubert (2004) *Inquiry-guided Learning in a Food Science Capstone Course.* In: *Teaching and Learning through Inquiry: A Guidebook for Institutions and Instructors.* V. Lee, editor. Stylus Publishing. Sterling, VA.

8. Zhong, Q and C.R. Daubert (2003) Mathematical modeling of rennet casein gelation kinetics at different cooling rates. In: Proceedings of the 3rd International Symposium on Food Rheology and Structure. P. Fischer, I. Martii and E.J. Windhab, editors. Zurich, Switzerland. February 7-13, 2003.
9. Daubert, C.R. and B.E. Farkas. (2003) Principles of Food Rheology Lab Manual. In: Food Analysis Laboratory Manual. S. Suzanne Nielsen, editor. Jones and Bartlett Publisher, Inc. Boston, MA.
10. Daubert, C.R. and E.A. Foegeding. (2003) Principles of Food Rheology. In: Introduction to the Chemical Analysis of Foods 3rd Ed., S. Suzanne Nielsen, editor. Jones and Bartlett Publisher, Inc. Boston, MA. (Peer-reviewed).
11. Daubert, C.R. (2003) Reynolds Number. In: Encyclopedia of Agricultural, Food, and Biological Engineering. D.R. Heldman, editor. (Peer-reviewed). Marcel Dekker, Inc. New York, NY.
12. Truong, V.D. and C.R. Daubert. (2002) Rheological Methods for Assessment of Food Freshness and Stability. Chapter 19 in: Freshness and Shelf Life of Foods, H. Weenen and K. Cadwallader, editors.
13. Daubert, C.R. (2000) Electrorheology: A New Technology for the Confectionery Industry. In: Confectionery Science II: Proceedings of an International Symposium, G.R. Ziegler, editor. University Park, PA. November 14-16, 1999.
14. Daubert, C.R. and J.F. Steffe. (1999) Dimensional Analysis of the Electrorheological Behavior of Milk Chocolate. In: New Techniques in the Analysis of Foods, M.H. Tunick, S.A. Palumbo, and P.M. Fratamico, editors. Plenum Publishing Corporation. New York, NY.
15. Daubert, C.R. and E.A. Foegeding. (1998) Principles of Food Rheology. In: Introduction to the Chemical Analysis of Foods 2nd Ed., S. Suzanne Nielsen, editor. Jones and Bartlett Publisher, Inc. Boston, MA. (Peer-reviewed).

Patents

1. Resch, J.R. and C.R. Daubert. "Process for Producing Cold-Gelling Hydrocolloids." US Patent 6987182. Issued 1/17/06.
2. Hudson, H.M., C.R. Daubert, and E.A. Foegeding. "Multistep Process to Derivatize Whey Protein into a Thermal and pH Stable Thickening Agent." US Patent 6261624. Issued 7/17/01.

EXTERNAL FUNDING

North Carolina Agricultural Experiment Station

1. Daubert, C.R. 10/1/14 - 9/30/19. Holistic Evaluation of Physical Energy Transmission as a Model for Simulated Sensory Experience During Oral Processing.
2. Daubert, C.R. 10/1/09 - 9/30/14. A Rheological Approach to Assessing Shear Effects on Biological Fluids.
3. Daubert, C.R. 10/1/03 - 9/30/09. Processing Effects on the Mechanical Properties and Microstructure of Food Systems.
4. Daubert, C.R. 10/1/98 - 9/30/03. Rheological Analyses to Investigate Microstructure in the Functionality of Food Systems.
5. Daubert, C.R. 7/1/97 - 9/30/98. Rheological Properties of Food and Biological Systems.

Grants Funded (>\$4.5M)

1. Daubert, C.R. 2015. Eastman Chemical Company. \$230,000.
2. Joyner, H.M. and C.R. Daubert. 2014. USDA-AFRI. \$394,000.
3. Foegeding, E.A., Drake, M.A., Daubert, C.R., Essick, G., and C. Vinyard. 2013. USDA-AFRI. \$499,704.
4. Daubert, C.R. 2011. DRI. \$100,000.
5. Foegeding, E.A., Drake, M.A. and C.R. Daubert. 2010. Kraft/NC State SDFRC Enhancement project. \$228,100.
6. Foegeding, E.A. and C.R. Daubert. 2007. USDA-NRI. \$398,039.
7. Daubert, C.R. and E.A. Foegeding (subcontractors). 2006. DMI. \$201,000 (\$50,000).
8. Daubert, C.R. 2006. DMI. \$198,940.
9. Daubert, C.R., Clare, D.A., Pichan, P., Kwanyuen, P. and G.L. Catignani. 2005. USDA-NRI. \$348,000.
10. Daubert, C.R. 2004. National Starch and Chemical Company. \$157,074.
11. Daubert, C.R., Hartel, R.W and O.D. Velez. 2004. DMI. \$218,617.
12. Daubert, C.R. 2003. Encelle, Inc., Greenville, NC. \$64,082.
13. Daubert, C.R. 2003. Brookfield Engineering Laboratories, Inc., Middleboro, MA. \$64,285.
14. Truong, V.D., Simunovic, J. and C.R. Daubert. 2003. NC Agricultural Foundation. \$42,626.
15. Daubert, C.R. 2001. DMI. \$88,674.
16. Foegeding, E.A. and C.R. Daubert. 2001. USDA-NRI. \$170,000.
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18. Daubert, C.R., Keener K.M. and W.R. Aimutis. 1999. DMI. \$154,803.
19. Daubert, C.R. and E.A. Foegeding. 1999. DMI. \$90,178.

20. Sandeep, K.P., Cartwright, G., Daubert, C.R. and B.E. Farkas. 1999. CALS Overhead Equipment Grant. \$6,400.
21. Daubert, C.R, B.E. Farkas, and W.R. Aimutis. 1998. DMI. \$118,484.
22. Foegeding, E.A. and C.R. Daubert. 1998. PMCA. \$50,000.
23. Sandeep, K.P., Cartwright, G., Daubert, C.R. and B.E. Farkas. 1998. CALS Overhead Equipment Grants. \$7,000.
24. Daubert, C.R. and V.D. Truong. 1998. Kraft Foods. \$7,500.
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