

Library Collection Development Policy

Food Science and Human Nutrition

I. General Purpose

The Department of Food Science and Human Nutrition is a large and diverse department administered jointly by two Colleges, Agriculture and Family and Consumer Sciences. Members of the faculty often have appointments in more than one department. Major emphases are in the areas of nutrition, food science and food microbiology. The general direction for the collection is to support undergraduate education while strengthening support for graduate and faculty research through cooperative relationships between the Library and the Department. Every effort will be made to keep the holdings up-to-date and cutting-edge. In the future, the collection will be adapted as curricula evolve and the relationships of research to the market place evolve with current program strength.

II. History

- 1877 First in U.S. experimental kitchen opened for teaching domestic economy
- 1904 Curriculum revisions in *Domestic Economy* establish a strong science basis for food courses
- 1908 Course "Food and Dietetics" established
- 1916 Course "Experimental Problems in Foods" established
- 1918 Research begins in food and nutrition
- 1928 Ph.D. in nutrition established
- 1929 Curriculum in Dietetics, Food and Nutrition and Chemistry offered
- 1937 Blue cheese process developed
- 1940 PhD in foods established
- 1958 Undergrad major in "Food technology" established
- 1969 Department of Dairy Food Industry becomes Food Technology
- 1970 "Current issues in Nutrition" holds its first conference
- 1984 Food Crops Processing Research Center established
- 1988 Utilization Center for Agricultural Products (UCAP) established
- 1990 Departments of Food & Nutrition and Food Technology merge to become Food Science and Human Nutrition
- 1993 Center for Designing Foods to Improve Nutrition opened
- 1996 First "Iowa Food Industry Day" held
- 1997 Dietetics internship accredited by the ADA
- 2000 ISU/FSHN work with industry to develop foods for space travel for NASA

III. Iowa State University Program

The Colleges of Agriculture and Family and Consumer Sciences jointly administer the Department of Food Science and Human Nutrition. The department is composed of 38 faculty members, 40 staff members, 66 graduate students and 270 undergraduate students. FSHN is a broad based academic program dedicated to teaching, research and community outreach. It is the mission of the department to provide current and objective information about food science and nutrition to students, general population, government leaders, manufacturers and distributors.

The FSHN faculty is active in the areas of teaching, research and extension. Faculty members have received national and international recognition for their teaching and research. The undergraduate program offers 3 curricula, which include dietetics, food science, and nutritional science. Iowa State University is ranked by the Gourman Report

as number two in the nation for its undergraduate program in nutrition, and number three in the nation for its undergraduate program in food sciences. Three options are available for the Food Science curriculum: food science and technology, food science and industry, and consumer food science. The department also offers degree programs for the Master of Science and Doctor of Philosophy with majors in food science and technology and in nutrition.

Research Centers

There are three research centers directly associated with the FSHN research activities -- the **Center for Designing Foods to Improve Nutrition (CDFIN)**, the **Center for Research on Dietary Botanical Supplements**, and the **Center for Crops Utilization Research (CCUR)**. These centers are available for outside contracts with industry and institutions.

CDFIN is located within the College of Family and Consumer Sciences and is under the operational control of the Department of Food Science and Human Nutrition. The mission of CDFIN is to promote nutritional assurance and health maintenance through a more integrated understanding of the factors involved in food selection and consumption and nutrient utilization in coordination with food production, processing and distribution. The success of such a mission is dependent upon the identification and design of new foods to meet the needs of the consumer. Currently there are 12 major research projects, involving more than 40 interdisciplinary faculty, funded by the CDFIN. The primary source of funding for CDFIN is an ongoing USDA grant.

The **Center for Research on Dietary Botanical Supplements** at Iowa State University (ISU) and the University of Iowa (UI) links two traditionally strong complementary institutions and focuses their effort on important research on botanical supplements. This multidisciplinary Center includes scientists from the fields of horticulture, botany, biochemistry, molecular biology, toxicology, chemistry, medicinal pharmacology, nutrition, epidemiology, clinical medicine, and statistics. The Center has chosen to study *Echinacea* and *Hypericum* because they are two of the herbs most commonly used by consumers in the United States. There is substantial evidence for potential health benefits, both genera are readily grown in Iowa, and our affiliated North Central Regional Plant Introduction Station maintains the nation's germplasm repository for *Echinacea*, conserving all known species in the genus.

CCUR is operationally located within the College of Agriculture but is controlled by Utilization Center for Agricultural Products (UCAP). It is funded through federal and state funds independent of FSHN. More than 90% of its research efforts are carried out by FSHN faculty either directly or in collaboration with other departments. The mission of CCUR is to expand utilization of mid-western crops as new food and non-food products. These two center have made it possible for faculty to obtain the support and collaboration of many industries, including Amana, American Meat Protein Corporation, Cargill, Hon Furniture, Iowa Soybean Promotion Board, Iowa Corn Promotion Board, Maytag, National Pork Board, Nichii, The Quaker Oats Company, Pioneer Hi-Bred, Story Construction, and many others.

Faculty research areas

Faculty research interests are wide-ranging. In the public interest the department conducts research in food science, nutrition and related areas, using available resources to study topics of significance to these disciplines, as they contribute to the health and well being of the state, the nation and the world. Strength is shown in areas including: Biosynthesis of starch, metabolism, nutrition education, dietetics, food processing, genetic engineering, lipid oxidation, nutrient retention in processed foods, plant molecular biology, meat and poultry irradiation, meat processing and flavor chemistry. Current research is being carried out in some of the following areas:

Food Chemistry – examines the chemical and biochemical reactions of food constituents.

Food Engineering – examines the energy requirements, the equipment and the processes involved in converting raw materials into food products.

Microbiology – examines the microorganisms that might cause food poisoning or spoilage of food.

Product Development – application of all areas of food science to develop new food products or improve existing ones.

Sensory Evaluation -- examines the instrumental and human evaluation of the taste, odor, texture and color of foods.

Industrial Microbiology – discover new organisms or methods of converting waste materials into valued products.

Product/Process Development -- the application of all areas of food science to developing value-added food products and processes.

Materials Characterization and Utilization – examines the functional properties of materials and their applications to foods.

Process Engineering - equipment, operations and designing of processes involved in transforming raw materials into value added products.

Community Nutrition – factors determining the nutritional status of the human population groups.

Nutritional Metabolism – biochemical pathways of nutrient utilization.

Nutrient Bioavailability – finding out the extent to which food components are absorbed.

Modification of Food Composition – genetic selection, genetic engineering or post harvest processes to allow food commodities to compete more successfully in the marketplace.

Nutritional Evaluation – measure the quality of human diets and the types of nutrients and their effects.

Toxicology – absorption, metabolism and excretion of toxic constituents, the protective effects of certain food constituents and the effects of processing oxidants.

IV. Subject Boundaries

Merging of two departments from two colleges has necessitated allowing the boundaries of the collection in these areas to become extremely broad. Much collaboration between the various subject bibliographers is necessary because of the overlap between disciplines in food science and agriculture and microbiology. Requests from faculty and students receive first consideration when selecting items for purchase. General priorities include the research areas mentioned above. Some areas of shared responsibility with agriculture, animal science, medicine and microbiology as developed in conjunction with other bibliographers. This fund will cover food science and technology as well as human nutrition and foods.

V. General Collection Guidelines

The FCS/Food Science and Technology Bibliographer selects materials in consultation with the FSHN Department liaison, the FSHN Department Head, the business librarian and other library science specialists. Priority is given to faculty and student requests. Standing orders exist with approval vendors for major research materials published in the US. Generally textbooks are not purchased; however, exceptions will be considered upon request. Dissertations and theses from other institutions are purchased only as special requests. Materials draw heavily on related science areas such as microbiology, medicine, agriculture and chemistry.

A. Linguistics

Materials collected will mainly be in the English language, but items core to the collection will be considered in all languages with recommendations from members of the faculty.

B. Geographical Areas

Scope of the collection will be worldwide with emphasis on U.S. books and serials. Materials will address food science and nutrition with a global perspective.

C. Types of Materials Collected

Materials collected will include books, journals, documents and other materials such as microforms, electronic sources and videos as appropriate. Major electronic databases related to FSHN research include *CAB, Food Science and Technology Abstracts, AGRICOLA, ERIC, Medline, and AOAC Methods*. Shared databases include *Marcive, Science Citation Index, SciFinder SCHOLAR, and OCLC*. Major specialized areas for print materials are nutrition, metabolism, and association publications.

D. Formats of Materials Collected

Major areas for serials – association publications, major nutrition and food science research journals. Current policy for adding serials is that of “cancel to add” meaning there is no new money for serials and changes in department direction will result in the loss of serials to match the cost of the new request(s). Federal documents are integral to the department’s research specifically CFR and Federal Register. Federal documents will be received as part of the federal depository program. The FSHN bibliographer works with the government documents librarian to develop the documents profile in these areas. FAO publications are profiled as standing orders from the United Nations. Many major government materials are now accessible on the WWW in addition to or instead of the print format. Electronic materials are collected as available in a cost-effective manner and whenever possible access is via the ISU campus network.

VI. Specific Collection Guidelines

The Library will maintain a strong reference presence. The Library Bibliographer for the College of FSC will be available to assist researchers in accessing materials need for their research. Research materials include directories, handbooks, methods, indexes,

abstracts, legal materials, etc. in the most appropriate format and within the budget. It is the responsibility of the Food Science and Human Nutrition Department and its Department Head, curriculum committee and library liaison to communicate forthcoming changes in curriculum and areas of emphasis to the FCS/FSHN Bibliographer so that changes in this policy can keep pace with the ever changing research demands of the department faculty members and students.

VII. Detailed Subject Areas

ISU is a premier institution for the food processing industry offering research and technical service as well as student interns and faculty consultants. Materials will reflect both the research nature of the disciplines covered and the business and industry related materials to link this research to the market companies.

VIII. Other Resources Available

In addition to the myriad of print and electronic resources available through the ISU Library, there are also numerous web/internet resources available for students and researchers in this department including the following:

- ◆ American Association of Family and Consumer Sciences - <http://www.aafcs.org/>
- ◆ American Dietetic Association - <http://www.eatright.org/index.html>
- ◆ FDA Center for Food Safety & Applied Nutrition - <http://vm.cfsan.fda.gov/index.html>
- ◆ National Association of GCRC Bionutritionists - <http://gcrc.swmed.edu/nagb/>
- ◆ Tufts University Nutrition Navigator - <http://navigator.tufts.edu/>
- ◆ FDA Center for Food Safety and Applied Nutrition - <http://vm.cfsan.fda.gov>
- ◆ Center for Science in the Public Interest - <http://www.cspinet.org/>
- ◆ Food and Nutrition Information Center - <http://www.nalusda.gov/fnic/>
- ◆ NutriBase Professional Nutrition Software - <http://www.nutribase.com/>
- ◆ CNN - Health: Diet & Fitness - <http://www.cnn.com/HEALTH/diet.fitness/>
- ◆ Nutrition Analysis Tool - <http://www.ag.uiuc.edu/~food-lab/nat/>
- ◆ Nutrient Data Laboratory - <http://www.nal.usda.gov/fnic/foodcomp/>
- ◆ American Egg Board - <http://www.aeb.org/>
- ◆ Institute of Food Technologists - <http://www.ift.org/>
- ◆ National Cattlemen's Beef Association - <http://www.beef.org/>
- ◆ National Pork Producers Council - <http://www.nppc.org/>

IX. Cross-references to Collection Policies

- ✓ ISU Library General Collection Development Policy
- ✓ ISU Reference Collection Development Policy
- ✓ ISU Library Special Collections Department Collection Development Policy
- ✓ ISU Library Gift Policy
- ✓ ISU Library Electronic Materials Collection Development Policy
- ✓ ISU Library Approval Plans
- ✓ State, Federal, and International Document Profiles
- ✓ Library Bill of Rights
- ✓ International Exchange Agreements, if any exist
- ✓ FCS and FSHN Strategic Plans and Curriculum Plans

X. Creation Date
September 2000

XI. Revision History
12/30/06

XII. LC Class(es), if applicable

GN407	Cultural Traits – food and food production
GT2855-2950	Manners and customs – food
HD9000.7-.9	Food laws and legislation
QH521	Food biology
QP141...	Nutrition
QR115-129	Microbial ecology of foods
RA601-602	Food and food supply
RA771, RA784, RA975.5	Public health
RC143	Food poisoning
RC455	Nutrition and mental health
RC596	Food allergies
RC620-632	Nutritional diseases
RJ390-399	Nutritional diseases of children
RM214-259	Diet and vitamin therapy
S541-543	Experiment stations
TP493.5	Freezing of food
TS195-198	Food packaging
TX341-641	Nutrition and food research
TX599-612	Food inspection
TX645-840	Cookery

XIII. Bibliographer name
Diana D. Shonrock

12/30/06 FSHNcollectionpolicy.doc Diana D. Shonrock