

For over a quarter of a century, **Dr. Robert J. Price (Extension Specialist with UC Cooperative Extension and California Sea Grant)** has been an internationally recognized leader in transferring seafood technology and safety information between academia, government and the seafood industry. His contributions in the field have made a **significant impact in: 1) improving the processing and quality of seafood, and 2) helping industry and regulators/inspectors implement the FDA's 1995 Seafood HACCP regulation—the first such regulated HACCP program in the food industry.**

Bob established UC Cooperative Extension's first successful seafood technology program and investigated several major projects dealing with seafood safety and processing. In contrast to the meat and poultry industry, there are over 300 species (i.e., in tuna alone, there are 16 different species sold – e.g., ahi, yellowtail, albacore, bluefin, etc.) of seafood commercially marketed in the U.S. Each species has its own unique quality, processing, and safety aspects which contribute to innumerable research and technology transfer opportunities. Samples of over 46 of Bob's extension activities involving research and technology transfer to industry during his career include:

*Value Added Underutilized Species* (researched blue shark, skate, octopus, grenadier, and Pacific whiting); *Improving Processing and Handling of Commercial Species* (researched tuna, mussels, crayfish, squid, Pacific shrimp, ridgeback shrimp, abalone, salmon, sturgeon, sea urchin roe, spider crab, jack mackerel, tuna, Dover sole, hagfish and rockfish); *Histamine Formation in Albacore Tuna* (researched histamine forming bacteria, factors involved in histamine formation, developing handling procedures to prevent histamine formation); *"Species Identification," "Seafood Quality," and "Seafood Decomposition" Workshops* (conducted several hands-on workshops for industry to improve the quality, safety, handling, identification, distribution, and marketing of seafoods).

Since 1990 Bob has been involved with HACCP training and development of information and training resources at the national level. Cooperators have included government (FDA, NMFS, USDA, and the CA Dept. of Health Services), industry (the National Fisheries Institute, the National Food Processors Association, and the CA Fisheries and Seafood Institute), and academia (Cooperative Extension and Sea Grant Specialists from OR, AK, NC, VA, FL, WI, LA, NY):

*HACCP Applications in Retail Food Operations* (retail meat, poultry, seafood and delicatessen operations) – an extension publication was distributed to 50 Land Grant universities, industry members, industry associations, and regulatory agencies requested over 7,000 copies, it was incorporated into training programs by Deli University (California industry training center) and the Calgary Health Services Dept., the International Dairy, Deli and Bakery Assn. distributed 3,000 copies to their members, and the Supermarket Foodservice Journal reproduced portions of the publication in their December '92 issue. Michael Espy, Secretary of Agriculture, cited the publication ('93) as an example of an excellent product from a highly successful USDA funded project.

Serves as a steering committee member of the National Seafood HACCP Alliance for education and training which consists of state and federal regulatory, extension and industry association members. This HACCP education program in cooperation with the Association of Food and Drug Officials has certified over 14,000 industry and regulatory participants since 1996. Bob's key contributions include authoring the chapter on "Seafood Hazards" for the training curriculum, and serving as creator, lead editor, and contributing author to the Alliance's "Compendium of Fish and Fishery Products Processes, Hazards and Controls" (<http://seafood.ucdavis.edu/haccp/compendium/compend.htm>). This is the first comprehensive technological resource for the seafood industry and regulators to use as a free Internet tool in developing and regulating seafood HACCP plans. **Bob's compendium represents a significant and vital contribution to the field of seafood technology for industry and regulatory utilization.**

Bob effectively uses the Internet as a key extension communication tool to globally facilitate technology transfer between academia, government and industry in an efficient and cost-saving manner:

In 1994 he created the Seafood HACCP mailing list ([seafood@ucdavis.edu](mailto:seafood@ucdavis.edu)) and a gopher site on the Internet. This nine year old mailing list successfully hosts a forum for the international exchange

of seafood technology information which includes HACCP hazards, their control, implementation, and training. The list has approximately 53 countries represented with approximately 850 subscribers representing industry, academia and government personnel. The gopher site contained seafood information on: processing technology, regulations and guidelines, information sources, and upcoming meetings.

In 1995 Bob created the Seafood Network Information Center (*SeafoodNIC*) (<http://seafood.ucdavis.edu/>) which has become a word-class site for seafood technology and safety information. Over 1000 agencies, societies/associations, and universities worldwide (including Land Grant universities, IFT, NMFS, EPA, USDA, FDA, CDC, Canadian Food Inspection Agency, Institute of Food Science and Technology [UK], and the Southeast Asian Fisheries Development Center). *SeafoodNIC* receives about 6,300 hits a month.

In 1999 the web site and listserv Dr. Michael Morrissey, editor of the Journal of Aquatic Food Product Technology wrote (in issue 8[1]:65-67) that "It's an excellent forum for transferring information to the industry...The UC Davis Seafood Information Center dispels one's doubts about how useful (and fast) good information can be. Sign up for the Listserv and put your thoughts online and discuss practical information or the latest science data with seafood people around the world."

While achieving recognition as an academician who is an effective source of technology information for the food industry and related government entities, he has not neglected other professional responsibilities. He has repeatedly served as program chair and session organizer for numerous annually sponsored regional and national technical programs (Western Food Industry Conference; Pacific Fisheries Technologists; IFT Seafood Technology Division Symposia, IFT short courses).

His continuing education volunteerism and leadership with IFT spans nearly a quarter of a century. He was chair-elect/chair/past-chair of the IFT Short Course Committee during 1978-81. During that time he also chaired the Management of Quality Short course Planning Committee and program. During 1987-93 he played a major role with the IFT Continuing Education Committee (CEC). He served on the planning committee of five different continuing education programs and was chair of the employment transitions workshop ('89) and chair of the highly successful "Ingredient Technology Short Course" which resulted in two satellite [a repeated offering] courses. During '89-'90 he was vice-chair of the CEC. During '90-'93 he simultaneously was: 1) on the IFT Executive Committee's *Ad hoc* Committee on Expanding Continuing Education Program, 2) chaired the IFT Professional Development Program Steering Committee, and 3) chaired CEC ('90-'92; past-chaired '92-'93). Under Bob's leadership he made two broad technology transfer impacts which would benefit food professionals in government, academia and industry for years to come. During his final year on the CEC committee, course offerings had *dramatically* shifted from planning and sponsoring one course a year to branching out to multiple [five] course offerings to the IFT membership (plus two courses with 2 satellites...including an international satellite course in England) in '93. As chair of the IFT Professional Development Program Steering Committee, Bob met with IFT executives and key committees to develop the Continuing Education Program model which was later approved by the IFT Executive Committee in '92. In consultation with the Steering Committee Bob designed a model that comprehensively defined the CEC's role. Bob was the *coordinator and editor of the model*, a 35+-page document that served as an outstanding tool and road map to successfully assist IFT with the inception of its Continuing Education Program. According to Dean Duxbury, IFT Director of Professional Development, "Bob's foresight and planning was key to the current strength of IFT's Continuing Education Program." During '00-'02 Bob was the committee liaison from the IFT Information Systems committee to the CEC. Currently as an IFT Executive Committee member he is a liaison from EXCOM to CEC until '05.

In summary, Robert Price was an outstanding extension specialist, professional food scientist and IFT volunteer in transferring technology.

[Note: Robert J. Price was the 2003 Harold Macy Award recipient. The award, sponsored by the Minnesota IFT Section, annually recognizes an outstanding example of food technology transfer or cooperation between scientists in academic, government, and private industry.]