



SHARING UNITED STATES TECHNOLOGY TO AID IN THE IMPROVEMENT OF NUTRITION  
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***Progress Report***  
**Fiscal Year 1994**

SUSTAIN advances the quality, safety and nutritional value of food in developing countries through the voluntary efforts of the U.S. food industry and support provided by the Agency for International Development (USAID).

This publication was made possible through support provided by the Office of Health and Nutrition, Bureau for Global Programs, Field Support and Research, U.S. Agency for International Development, under the terms of the Food Technology and Enterprise Project, Project No. 936-5120, Grant No. DAN-5120-A-00-1066-00. The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of the U.S. Agency for International Development.

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SUSTAIN  
Progress Report for Fiscal Year 1994  
(October 1, 1993 - September 30, 1994)

## INTRODUCTION

The marketplace for sourcing and supplying foods and food ingredients is internationalizing rapidly. Increasingly complex food safety and quality requirements face all market participants, especially in developing countries. Food contamination and malnutrition remain widespread problems, causing substantial losses in all developing economies. SUSTAIN helps address these problems by strengthening small businesses involved in processing, preserving, and fortifying foods. By improving the capability of these businesses, SUSTAIN helps prevent foodborne diseases, enhances health and nutrition in developing countries, and achieves economic development goals.

Many benefits can accrue to developing countries through improvements in food processing and preservation. These technologies can help meet food and nutritional requirements and reduce post-harvest losses. Strengthening food businesses helps reduce poverty by enhancing job and economic growth in poor urban and rural communities. And through the transfer of efficient technologies and management practices, processing waste and by-products can be properly handled to promote environmental protection.

SUSTAIN leverages significant U.S. and developing country resources when delivering technical assistance and training programs. In fiscal year 1994, each \$1 in USAID funds was matched by private sector in-kind and cash contributions valued at \$1.75. Volunteers donate their time and expertise to conduct technical assistance and training, solve technical problems on-site, and remain available by phone after they have returned home. They often develop special instruction and laboratory manuals and other teaching materials, including slides and overheads, for their workshops. Volunteers also help answer technical requests received through the mail and contribute articles and expertise to the *SUSTAIN Notes* newsletter. Industry executives, who serve as volunteers on the SUSTAIN Steering Committee, contribute significant time and expertise to program development and strategic planning. Travel and lodging expenses are also contributed by members of the Steering Committee when they travel to Washington for steering committee and work group meetings, to work individually with SUSTAIN staff on specific projects, and to participate in meetings with USAID and other government officials. Local partner organizations in developing countries also contribute substantial time and resources to organizing workshops, arranging one-on-one technical assistance, and handling local logistics.

SUSTAIN conducts its activities in collaboration with and at the request of USAID missions, local organizations, and other international agencies in host countries. Through repeat visits of volunteers on particular projects, SUSTAIN is able to provide continuity and on-going problem-solving expertise. This assistance is provided to food businesses, nutrition institutions, food and agriculture organizations, cooperatives, non-governmental organizations, and research institutions in developing countries.

### **Food Safety & Quality Assurance Program**

One of the focus areas for SUSTAIN assistance is food safety and quality assurance. To help small businesses in developing countries meet requirements for food safety and quality assurance, SUSTAIN volunteers have conducted workshops on subjects including sanitation, hygiene, Hazard Analysis Critical Control Points (HACCP), and Good Manufacturing Practices (GMP). Microbiological contamination of food caused by improper post-harvest handling and processing is not only the leading cause of food-borne illnesses, but also a barrier for small businesses trying to compete in what has become an international food market.

condensed

In Central America, SUSTAIN volunteers organized a "train the trainers" program to develop a core group of instructors among food plant quality control managers who could later train plant workers. Planning for additional training in food safety and quality assurance is currently underway by SUSTAIN volunteers and local partners. SUSTAIN's work with these organizations has earned it recognition as a provider of high-caliber volunteer experts. This reputation enables local groups in Central America to charge a small registration fee to help defray the local costs of technical assistance and training.

## **FY94 ACTIVITIES - MISSIONS COMPLETED**

During 1994, restructuring USAID and redefining priorities for U.S. foreign assistance were focal points for the Agency. SUSTAIN emerged with a strengthened base of support. The Office of Nutrition, which sponsored SUSTAIN, became part of a newly-organized Office of Population, Health, and Nutrition. In correspondence with members of Congress, USAID Administrator Brian Atwood reiterated his "continued commitment to SUSTAIN...based on our recognition of the importance of this program to both our health and economic growth goals."

Further recognition for SUSTAIN came from members of Congress and the White House Office of Domestic Policy, which described SUSTAIN as "a tremendous resource" and urged the Agency to continue "strong support."

SUSTAIN complements USAID's sustainable development goals:

Health and Nutrition - Malnutrition alone and in combination with foodborne diseases grossly impairs the quality of life. Many foodborne diseases, especially diarrheal diseases, initiate and intensify malnutrition by adversely affecting the body's ability to digest, absorb, and utilize the already inadequate diet. In addition, malnutrition seriously impairs the body's resistance to infection. In children, it retards mental and physical development. In adults, it reduces productivity. SUSTAIN helps prevent foodborne diseases, micronutrient deficiencies, and spoilage of scarce food resources by elevating the capacity of small businesses in developing countries to process and preserve foods safely, nutritiously, and cost effectively.

Economic growth - Technical assistance to small and medium sized entrepreneurs promotes opportunities for jobs, training, and sustainable economic growth. SUSTAIN helps food processors add value to their products by elevating quality and consistency, which are fundamental requirements for indigenous businesses to thrive in increasingly competitive, market-based economies. As global trade barriers diminish, the quality of indigenous products must rise to meet competition from imports.

Environment - SUSTAIN provides access to technologies that promote environmental quality in areas including the utilization of agro-industrial by-products and waste, alternatives to the use of agro-chemicals, and laboratory technologies to monitor and detect pesticide residues and other contaminants on food.

Volunteers who contributed to SUSTAIN's overseas missions in FY94 include executives and specialists (active and retired) from the following U.S. food companies and universities: AgriSystems International, Autumn Harp, Bay State Milling Co., Ben & Jerry's Homemade, Inc., Campbell Soup Co., The Coca Cola Co., General Foods Corp., General Mills Inc. Gorton Group, Gerber Products Company, H. J. Heinz Co., Hershey Foods Corp., Hunt-Wesson, Inc., Land O'Lakes, Inc., McCormick & Co., Inc., Nabisco Biscuit Co., North Dakota State University, Prairie Farms Dairy, The Procter & Gamble Co., Purdue University, Silliker Laboratories Group, Inc., Technical Assessment Systems, Inc., and Wakefern Food Corp.

SUSTAIN completed the following activities during FY94:

Location/Dates	Mission/Workshop Topic	SUSTAIN Volunteer(s)
Cameroon October '93	<b>Agricultural Research, Development, &amp; Extension</b>  <u>Request:</u> Identify options for restructuring agriculture research and extension institutions to better address problems and needs of small food businesses  <u>SUSTAIN action:</u> Identify specific actions that USAID/Yaounde's agricultural programs could support in the R&D areas of crop processing and marketing by small agribusinesses and cooperatives; suggest establishing a resource base and a pilot plant for demonstration and training in food technology; organized roundtables for discussion. This was conducted in collaboration with USAID/Yaounde.  <u>Benefit:</u> This will help reorient R&D programs to address specific problems of local producers, thereby helping improve production, food quality, and nutrition and enhancing opportunities for economic growth. The roundtables were the first time that many of the industry and government representatives had met to discuss these issues.  <u>Follow-up:</u> Following the SUSTAIN team's recommendations, the Institute of Agronomic Research established a Postharvest Technology Training and Demonstration Center to train farmers in technologies that will reduce postharvest losses, increase farmer incomes, and promote the development of a food crop-based agribusiness.  Arnold Denton traveled to New York to advise a visiting Cameroonian food entrepreneur who had participated in one of the round tables conducted as part of the SUSTAIN team's visit. In addition, SUSTAIN provided technical information and materials to respond to follow-up requests for information and assistance from some of the businesses visited by the volunteers.	<b>Arnold Denton, Ph.D.</b> <b>Bruce Hamaker, Ph.D.</b>
Guatemala October '93	<b>Food Safety/Quality Control/GMP II</b>  <u>Request:</u> Assist local groups in design, delivery and evaluation of workshop on sanitation, good manufacturing practices and quality control  <u>SUSTAIN action:</u> Help prepare, supervise, and evaluate the first offering of the course by the trainers to whom SUSTAIN volunteers had trained in August 1993. It was conducted in conjunction with the Institute of Nutrition of Central America and Panama (INCAP) and the Guatemalan Institute of Food Technologists (AGTA).  <u>Benefit:</u> This "training of trainers" workshop developed a human resource, from academia and industry, capable of training food plant workers in good manufacturing practices, sanitation, and hygiene. The improvement of the safety	<b>James Chambers, Ph.D.</b> <b>Jay Marks, Ph.D.</b> <b>Patricia Rayas-Duarte, Ph.D.</b>

and quality of locally processed foods has a direct impact on the improvement of nutrition, reduction of food-borne illnesses, and helping businesses expand their markets.

Follow-up: This course was part of a series of planned technical training programs to be offered jointly by INCAP, AGTA, and SUSTAIN to food and allied industries in Central America. It has been requested by other Central American countries, i.e. Belize and Honduras.

James Chambers continues to provide guidance on training programs on food safety and quality control; he continues to provide technical information and advice to businesses in Guatemala.

**South Pacific** **Organic Production & Marketing**  
November '93

**Thomas Harding**

Request: USAID/Regional Development Office/South Pacific requested advice on cropping systems, organic product development, organic certification requirements, and marketing. This was a follow-up request from a SUSTAIN assignment Thomas Harding undertook in the Philippines in May 1993.

SUSTAIN action: Inspect cropping systems and advise on commercial opportunities for organic product development; advise on organic certification requirements and procedures; present seminars on the development and marketing of organic crops from the area. It was conducted in conjunction with USAID/Regional Development Office/South Pacific.

Benefit: Organic production reduces reliance on agri-chemicals and promotes environmental quality; it reduces the improper use of pesticides, which poses a threat to the health of applicators and consumers; it offers small producers a potential niche market to expand sales.

Follow-up: Harding continues to work with local groups to secure markets and sales for organic produce from the South Pacific, both from the U.S. and during subsequent trips to Tonga and Fiji. He helped producers develop an OCIA-certified organic vanilla from Fiji; other organic crops from Tonga and Fiji are being developed. He assisted in establishing an Organic Producers Association and the mechanism for certification for the region. He feels the region has excellent potential and he will continue to assist in its development and product access in the international market.

**Guatemala** **Sensory Evaluation II (Difference & Acceptance Tests)**  
November '93

**Brenda Bravatty**

Request: Laboratory techniques and statistics to evaluate consumer acceptance and preference of food products. This follows up on the basic workshop in sensory evaluation theory that Brenda Bravatty gave in March 1993. It was conducted in conjunction with INCAP and AGTA.

SUSTAIN action: Give workshop on the application of specific sensory techniques. It was conducted in conjunction with INCAP and AGTA.

Benefit: Sensory evaluation is an important tool in the processes of product development and quality control, providing a means to understand consumer tastes and preferences; this helps the development of small food processing businesses.

Follow-up: A third workshop was planned and delivered.

Uganda  
November '93

**Quality Control, Quality Assurance, & Marketing**

**John Nelson, Ph.D.  
John Troller, Ph.D.**

Request: Principles of marketing food products, good manufacturing practices, quality assurance programs. This follows up on the assessment and planning mission that John Nelson conducted in March/April 1993.

SUSTAIN action: Deliver workshop on basic quality control and marketing; introduce producers to the concept and implementation of quality assurance; organize roundtables where producers discussed among themselves for the first time their quality problems and possible solutions; teach producers how to develop marketing strategies for their products and how to target consumers; provide one-on-one technical assistance to address needs identified in March/April 1993. It was conducted in conjunction with the Uganda Manufacturers Association (UMA).

Benefit: Producers learned the methods to research what consumers want and to improve food safety and quality control; this will result in safer and more nutritious foods for local consumers and will help producers compete in local, regional, and international markets. The economic incentive of increasing consumer need is spurring local producers to address health and nutrition problems in the food supply.

Follow-up: Nelson and Troller have been responding to technical questions of and sending technical information to workshop participants.

El Salvador  
December '93

**Organic Coffee Processing & Quality Control I**

**George Lutz**

Request: Roasting, grinding, packaging, quality control for organic coffee

SUSTAIN action: Provide one-on-one technical assistance in the roasting, grinding, and quality testing of coffee and with design of a plant to produce organic roasted coffee. It was conducted in conjunction with the Cooperative League of the U.S. (CLUSA).

Benefit: Producing a value-added product promotes opportunities for employment, training, and sustainable economic growth of local market-based economies; organic production meets a consumer need and reduces reliance on agri-chemicals and promotes environmental quality; it reduces the improper use of pesticides, which poses a threat to the health of applicators and consumers.

Follow-up: A return trip for further consulting and training took place. George Lutz remains available to provide technical support via phone and fax.

**Burkina Faso Potato Storage & Handling II**  
January '94

**Roy Shaw**

Request: Advise on design and construction of potato storage facility. This follows up on USAID's request for an assessment of and recommendations on potato storage practices that was conducted by Roy Shaw in September 1993.

SUSTAIN action: Provide assistance in the construction of the storage facility; organize the storage of potatoes for up to six months after harvest to evaluate the feasibility of preservation in solar powered refrigerated stores; organize the storage of potatoes for greater than six months after harvest to evaluate the feasibility of preservation by solar dehydration. This mission was conducted in conjunction with USAID/Ouagadougou and local groups, including cooperatives.

Benefit: Reducing post-harvest losses increases the local supply of nutritious foods and provides a means to raise farmers' incomes.

Follow-up: SUSTAIN, Shaw, and USAID/Ouagadougou are outlining a future workplan that would build in previous work by training potato cooperative representatives and producers in managing potato storage and solar dehydration of potatoes. It is hoped that these trained representatives will use the extension approach to spread the technology to other countries of the Sahel. SUSTAIN, with Shaw's assistance, has submitted proposals to obtain foundation support, since the USAID Mission will close in June 1995.

**Guatemala Bakery Technologies & Quality Control I**  
February '94

**Theresa Volpe, Ph.D.**

Request: Assist bakeries that produce a nutritionally fortified biscuit used in the Guatemalan government-sponsored school feeding program to improve the processing and quality of the biscuits.

SUSTAIN action: Deliver workshop to demonstrate the functional properties of bakery ingredients and their effect on the finished products; biscuit processing; quality control; preventive equipment maintenance. This was conducted in conjunction with INCAP and AGTA.

Benefit: Learning about ingredient functionality will enable bakers to reduce the variability, better maintain the quality, and ensure the nutrient content of the enriched biscuit developed by INCAP.

Follow-up: A second workshop is planned for March 1995. On behalf of Nabisco, Theresa Volpe donated textbooks to INCAP.

Volpe, in conjunction with the International Eye Foundation and CeSSIAM (Center for Studies of Sensory Impairment, Aging, and Metabolism), also conducted a follow-up visit to Mahler, a Guatemalan food processor and distributor. She met with the management to discuss the status of research on consumer acceptance of vitamin-A rich sweet potato cereal. This cereal could serve as an important source of vitamin A, especially for children who suffer from vitamin A deficiencies. Mahler is very interested in manufacturing and distributing the product. The samples of packaging materials used for the cereal were tested for their moisture

and gas barrier properties. Proper packaging materials reduce vitamin A oxidation and maximize vitamin A retention. The results of the tests will be shared with Mahler during Volpe's planned trip to Guatemala in March 1995.

**Guatemala**  
April '94

**Sensory Evaluation III (Descriptive Analysis & Panel Training) Brenda Bravatty**

Request: Laboratory techniques and statistics to evaluate consumer acceptance and preference of food products. This follows up on the workshops in sensory evaluation theory and application that Brenda Bravatty gave in March and November 1993.

SUSTAIN action: Give workshop on the application of specific sensory techniques. It was conducted in conjunction with INCAP and AGTA.

Benefit: Sensory evaluation is an important tool in the processes of product development and quality control, providing a means to understand consumer tastes and preferences; this helps the development of small food processing businesses.

**Guatemala**  
April '94

**Guatemalan Association of Food Technologists Congress**

**Anthony Adams**  
**Christine Chaisson, Ph.D.**  
**Damien Gabis, Ph.D.**  
**Mary Wagner, Ph.D.**

Request: Provide speakers on global food market trends, pesticide residues, export regulations, Hazard Analysis Critical Control Points (HACCP), and total quality management

SUSTAIN action: Furnish four speakers who addressed the above topics and provided one-on-one technical assistance

Benefit: Dissemination of this information to food businesses in Central America aids in training of industry personnel, improving the safety and quality of the food supply, and promotes economic growth.

Follow-up: SUSTAIN received requests for and delivered workshops on HACCP and marketing. Christine Chaisson continues to assist the Guatemalan Snow Pea Association by providing information and technical advice. She provides the Guatemalan Embassy with technical information so they will have a better understanding of the issues involved in meeting U.S. food safety and health standards.

**Indonesia**  
July '94

**Flour Milling & Plant Set-up**

**Antonio Scippa**

Request: Conduct assessment of setting up a flour mill to manufacture high-protein, low-ash bread flour for the local market

SUSTAIN action: The volunteer visited possible sites for the mill, visited local bakeries to determine the market for the flour, recommended equipment, and recommended quality control measures for the flour.

Benefit: The milling operation will help provide nutritious baked products and enhance opportunities for local employment and economic growth.

Follow-up: Local groups are following Antonio Scippa's recommendations and moving forward with securing land, financing, and licensing; developing construction plans; and contacting suppliers.

Guatemala  
July '94

**Fruit & Vegetable Processing**

**Pedro Sole, Ph.D.**

Request: Preservation techniques for fruits and vegetables

SUSTAIN action: Provide hands-on training in preserving fruits and vegetables to plant managers, supervisors, and technicians; workshop included review of processing techniques, canning regulations, quality control, and laboratory exercises; provide one-on-one technical assistance. This was conducted in conjunction with INCAP and AGTA.

Benefit: Help processors improve the efficiency of their canning operations, increase preservation of surplus produce, and understand the requirements to ensure a safe food supply and to compete in local, regional, and international markets.

Follow-up: This workshop was requested by other Central American countries. Pedro Sole is planning to give this workshop in Honduras in May 1995.

Honduras  
July '94

**Food Safety/Quality Control/GMP**

**James Chambers, Ph.D.**

**Nancy Grabarczyk**

**Midge Chambers**

Request: Good manufacturing practices, basic plant sanitation, and quality control; this follows up on the food safety/quality control/GMP workshops given in Guatemala in 1993 and 1994.

SUSTAIN action: Assisted in delivery of workshop on food safety and quality control, which was planned by those trained in earlier SUSTAIN workshops; trainees also gave technical presentations. This was conducted in conjunction with INCAP, AGTA, and the Northern Honduran Chamber of Commerce (Intercham).

Benefits: The workshop provided Central American instructors with practical experience in teaching. It also trained technical managers in food safety, quality, and sanitation. The instructors will be available to provide on-going assistance to workers in their plants and other small food businesses.

Follow-up: James Chambers researched and sent technical information to several companies visited after workshop.

This course is part of a series of planned technical training programs to be offered jointly by INCAP, AGTA, and SUSTAIN to food businesses in Central America.

Guatemala  
August '94

**Marketing**

**Anthony Adams**

**Paul Mulcahy**

Request: Fundamentals of marketing, including consumer trend analysis, why products fail, packaging, pricing, advertising, and promotion on a small budget

**SUSTAIN action:** Deliver basic marketing workshop to teach the fundamentals of marketing food products, including packaging, pricing, advertising, promotion, and public relations. This was conducted in conjunction with INCAP and AGTA. It follows up on INCAP and AGTA's request for a marketing workshop after hearing volunteer Tony Adams' presentation at the April 1994 AGTA Congress.

**Benefit:** Knowledge of consumer research and trend analysis is fundamental to product development and the success of any new business. Low-budget marketing strategies will help businesses inform consumers about available food products and promote their products, which will stimulate economic growth.

**Follow-up:** This course has been requested in several other Central American countries. It is also being planned for spring 1995 in Russia.

**Zambia**  
September '94

**Agro-Enterprise Development**

**Don Lindemann**  
**John Nelson, Ph.D.**  
**Bruce Gaylord**

**Request:** Preservation, packaging, marketing strategies, international quality specifications, small business development, value-added products in conjunction with a workshop coordinated with USAID/Africa Bureau and USDA/ICD

**SUSTAIN action:** Provided three speakers who delivered presentations on essential oils, flavors, spices, natural ingredients, marketing, quality control, and packaging; they also gave one-on-one technical assistance.

**Benefit:** The workshop provided training in business skills, food technologies, and market development; it provided a forum to analyze and develop market strategies for four commodity subsectors. After the workshop, volunteer Bruce Gaylord provided one-on-one technical assistance to North Western Bee Products, a company revitalizing the traditional activity of beekeeping into a commercially viable business that provides income to small-scale producers in remote areas of Zambia.

**Follow-up:** Participants formed a Herbs, Spices, & Essential Oils Association which will enable interaction and exchange of information; attended a regional workshop in Zimbabwe; introduced new commercial crops; worked with the Department of Forestry to identify medicinal plants; and organized a regional farmers exchange program. There is an effort to set up future training courses in business development coordinated through USAID/Africa Bureau. Volunteer Don Lindemann, per a request from Ngwerere Farming Enterprises, identified used equipment available for sale designed to form, fill, and seal plastic bags and bottles of various sizes. This information and a catalog of used equipment were sent to address Ngwerere's future machinery needs and to share with other businesses in the area.

**Uganda**  
September '94

**Technical Needs Analysis & Program Development**

**John Nelson, Ph.D.**

On his way back to the U.S. from the Zambia workshop, John Nelson stopped in Uganda to meet with USAID and UMA to discuss future needs for SUSTAIN

assistance. He also visited several small businesses that he had provided with one-on-one technical assistance during previous visits.

Follow-up: Nelson donated technical journals and books to small food businesses and Makerere University. He sent additional technical information to the small businesses and is seeking sources of small equipment that they could use.

**El Salvador Organic Coffee Processing & Packaging II**  
September '94

**George Lutz**

Request: Roasting, grinding, packaging, equipment installation, quality control, distribution for organic coffee

SUSTAIN action: Provided technical assistance in the product design, processing, and packaging of organic coffee for sale in the local market. This follows up on the assistance George Lutz gave in December 1993. It was conducted in conjunction with the Cooperative League of the U.S.

Benefit: Producing a value-added roasted product promotes opportunities for employment, training, and sustainable growth of local economies. It also assures UCRAPROBEX of a reliable market for all of its organic coffee.

Follow-up: Lutz remains available via phone and fax to provide further technical assistance. A visit to conduct a third phase is planned for May 1995.

## **FY94 - OTHER SUSTAIN ACTIVITIES**

### Public Recognition

**Award** - Hernan Delgado, Ph.D., Director of INCAP, presented SUSTAIN with a plaque honoring its contribution to the development of food technology, advancement of nutrition, and strengthening of the food industry in Central America.

### **Professional and Industry Publications -**

*365 Ways to be involved: A Retired American's Guide to Community Participation* is a publication of the American Association for International Aging. It is a resource guide on how older Americans can be involved in their communities or volunteer for service. SUSTAIN submitted an entry for its 1995 calendar and is featured on the page for December 20, 1995.

An article on Tony Adams and Paul Mulcahy's marketing workshop in Guatemala was featured in the October 17 issue of *Advertising Age*.

An article on James and Midge Chambers and Nancy Grabarczyk's participation in the July food safety and quality control workshop in Honduras was featured in the November issue of *Food Technology*.

An article featuring Theresa Volpe's work with SUSTAIN was submitted to *Cereal Foods World*.

An article on Theresa Volpe's work with SUSTAIN was published in the July/August issue of *Nabisco Foods Group Today*, the in-house Nabisco publication.

An article on John Nelson's work with SUSTAIN was featured in *McCormick People*, McCormick & Company's in-house publication.

Articles on Bruce Gaylord's participation in the Agro-Enterprise Development workshop in Zambia were featured in two Vermont newspapers.

### Volunteer Resources and Activities

**Volunteers** - SUSTAIN continues to attract new volunteers from the U.S. food processing sector, with the total now at 181.

**Volunteer donations** - On behalf of Nabisco, Theresa Volpe arranged to have 10 technical books donated to INCAP for its library. Don Lindemann of Land O'Lakes donated a textbook and approximately 30 magazines on packaging to the participants in the Agro-Industrial Marketing Workshop in Zambia. John Nelson donated three books and magazines to food companies and Makerere University in Uganda. McCormick & Company, Inc. and The Procter & Gamble Company donated time and expertise to test coffee from Uganda.

**Steering Committee** - Steering Committee meetings were held in September 1993 and January, June, and September 1994. Members also formed work groups and participated in four meetings to concentrate on the following subject areas: effective training methodologies; funding diversification; strategic planning. In addition to contributing time and expertise, industry executives who serve on the Committee also contribute travel and lodging expenses to attend SUSTAIN meetings in Washington, DC.

**IFT Annual Meeting & Food Expo** - SUSTAIN hosted a meeting and reception at the Institute of Food Technologists Annual Meeting in June 1994 in Atlanta. Costs for the reception were contributed by McCormick & Company, Inc., Nabisco Biscuit Company, Technical Assessment Systems, Inc., and Cooperative Business International. The event provided an opportunity for SUSTAIN volunteers, overseas participants, and persons interested in SUSTAIN to meet, gain technical information and knowledge, and learn about SUSTAIN activities.

**Database management** - SUSTAIN staff continued to refine the database and streamline reporting. The database accesses volunteers by areas of expertise so staff can locate appropriate volunteers quickly and tracks inquiries and responses to *SUSTAIN Notes* recipients.

### Information Dissemination

**SUSTAIN Notes** - *SUSTAIN Notes* reaches a technical audience of more than 1800 in developing countries. In FY 1994, *SUSTAIN Notes* featured "A Primer on Cooking Extruders" by SUSTAIN volunteer Robert C. Miller, "The Food Industry's Role in Water Supply Management," and "Pollution Prevention Partnering: ICAITI and Packerland Packing." *SUSTAIN Notes* generates numerous requests for additional copies and further information. We have added a "Summary of SUSTAIN Activities" section, which has proven to be popular for readers who seek to learn about upcoming activities.

**Written requests for technical information** - SUSTAIN researched and provided answers to 34 requests on 31 subjects from 26 countries. The inquiries included requests for technical materials and references and technical questions on subjects including meat handling, soybean processing, dairy products, coffee processing, peanut products, fortification technologies, bakery equipment, food safety, weaning foods, potato processing, tomato processing, HACCP, sensory evaluation, cocoa products, and egg processing.

**Technical information via telecommunications** - SUSTAIN identified experts and then arranged conference calls among volunteer experts and several requesting organizations to discuss and receive advice on technical issues and challenges. Examples include assistance on product development and marketing of taro chip products in Sao Tome, salt fortification in Guatemala, and sugar fortification in Honduras.

*SUSTAIN thanks its volunteers and overseas  
partners for contributions that helped make 1994*

*a success.*

Following are comments that illustrate the impact of the work of SUSTAIN's volunteers and overseas partners:

"The practical, implementable nature of the team's recommendations should encourage follow-up by the government and foster greater coordination of donor activities in this subject area, which is of importance to Cameroon's and the region's food security and economic development." *John McMahon, U.S. Agency for International Development in Cameroon*

"I speak for the Mission as well as the other organizations that you visited during your stay when I say that it has been our great fortune in having you provide ideas and suggestions on how potato storage could be improved in this country." *Rudi Vigil, U.S. Agency for International Development in Burkina Faso*

From USAID/Regional Development Office/South Pacific: "We regard Tom Harding's visit as an outstanding success." *Andrew MacGregor, U.S. Agency for International Development, Regional Development Office in the South Pacific*

"Your experience and willingness to help our new outreach program in becoming a reality has been a key factor for its future success." *Hernan Delgado, Ph.D., Director of the Institute of Nutrition of Central America and Panama*

"Your interventions during the workshop provided participants and organizers insight into organizational technical steps necessary for small firms to succeed in national, regional, and international markets." *Jerry Brown, U.S. Agency for International Development, Africa Bureau*

"USAID/Peru has used the services of SUSTAIN volunteers in the past...On all occasions the quality of the services rendered was outstanding." *Harry E. Wing, U.S. Agency for International Development, Peru*

"Your vast experience and greatly detailed technical knowledge in all areas of the flour milling industry are key elements to the eventual success of our planned venture." *Alwin Arifin, PT Danitama in Indonesia*

"Your experience in the U.S. private sector, together with your analytic skill and genuine interest in people, combined to make you one of the best experts we've ever had to visit this Mission. I believe your very complete and thoughtful report cut to the heart of the matter in terms of what is needed in Nepal to develop hygienic food standards for potential food processing and export companies." *Kelly Kammerer, U.S. Agency for International Development in Nepal*

"SUSTAIN is a tremendous resource... Improving food preservation strengthens local economics while building markets long-term for U.S. farmers." Berry urged Administrator Atwood to "continue the agency's strong support for programs such as SUSTAIN," noting that they are "a cost effective way to solve real problems affecting daily lives of people and businesses in the developing world." *Marion Berry, Office of Domestic Policy, The White House*

*Sharing U.S. Technology to Aid in the Improvement of Nutrition (SUSTAIN)* provides access to U.S. business and scientific expertise to improve the quality, safety, and availability of food in developing countries. Technical assistance, training, and needs assessments are conducted by executives and technical specialists from U.S. food companies, universities, and professional associations who donate their time and expertise.

Many benefits can accrue to developing countries through improvements in food processing and preservation. These technologies can help meet food and nutritional requirements and reduce post-harvest losses. Improved processing can reduce food-borne illness, malnutrition, and micronutrient deficiencies that are devastating to children and other vulnerable populations. Strengthening food businesses helps reduce poverty by providing a means for enhancing job and economic growth in poor urban and rural communities. And the transfer of efficient technologies and management practices in waste handling, utilization, and reduction promotes environmental protection.

By sharing expertise and elevating technological capacity, SUSTAIN volunteers help overcome the causes of malnutrition and poverty. Areas of assistance include: food processing, preservation, and product development; food safety and quality assurance; fortification; post-harvest storage and packaging; business management and marketing; and waste handling.

#### How SUSTAIN Works

SUSTAIN conducts its activities in collaboration with host-country organizations, the U.S. Agency for International Development (USAID), and other international agencies. SUSTAIN receives financial support from USAID's Office of Health & Nutrition and the U.S. Department of Agriculture and cash and in-kind contributions from corporations and individuals. SUSTAIN receives advice from a Steering Committee made up of private sector representatives and is managed under a cooperative agreement with the National Cooperative Business Association (NCBA, known overseas as CLUSA).

SUSTAIN receives requests for assistance from individual food companies, research institutions, and business organizations in developing countries. Depending upon the nature of the request, SUSTAIN volunteers may be sent to conduct needs assessments, one-on-one technical assistance, or workshops. Overseas projects are typically one to three weeks in duration. Through repeat visits of volunteers on particular projects, SUSTAIN is able to provide continuity and on-going problem-solving expertise. SUSTAIN is also able to address many problems through correspondence by providing information that exists either in technical literature or in the "memory" of a company.

SUSTAIN typically funds international travel costs and USAID missions or host organizations provide in-country costs. As travel funds are limited, SUSTAIN reviews requests on a first-come, first-served basis. Supplemental funds can also be added to the SUSTAIN cooperative agreement to support additional project activities. SUSTAIN does not fund product or equipment acquisitions.

SUSTAIN publishes a quarterly newsletter (*SUSTAIN Notes*) on food technology issues. It is provided gratis to over 2000 recipients in more than 50 countries.