

Prospectus for Membership

The Texas A&M University Vegetable & Fruit Improvement Center promotes expedient, sustained improvement of vegetable and fruit crops and breeding systems to support the production, processing, and seed industries. Administered through the Department of Horticultural Sciences, the Center has a director, a faculty of vegetable and fruit research scientists within the Texas Agricultural Experiment Station and an advisory committee that includes department heads, research scientists and industry representatives. Industries interested in vegetable and fruit improvement participate in an advisory role and gain early access to new technologies and plant materials by becoming members of the Center.

Corporate members utilizing research results from Center projects receive preferential consideration for producing and marketing seed in accordance with the policies of the Texas Agricultural Experiment Station. Members may also sponsor additional research through separate contract agreements with individual scientists, established study leaves and receive technical guidance from Center faculty. Technical staff are also available to advise members on specific issues and help determine potential applications.

A research review of the Center is held annually, with a summary of research results made available to participating members.

Overview and Mission

Vegetable and fruit crops are a major source of food necessary for good health and nutrition. Produce-related industries provide jobs to thousands of people employed by growers, shippers, processors, seed companies, chemical companies, packers and others. The farm value of vegetables in Texas is over \$500 million with an economic impact of over \$1.25 billion.

The produce industry faces many problems: low yields, disease or insect damaged products, demand for less reliance on chemicals, salt accumulation in the soil and reduced supplies of irrigation water. A concerted research effort is necessary to solve these problems or the ability to increase sales and compete in the marketplace will be seriously jeopardized.

The goal of the Vegetable & Fruit Improvement Center (Center) is to provide solutions, through the development of new technologies and plant materials, for producing quality vegetable and fruit products in an efficient, economical system. The Center enables science and industry to promote research that solves existing problems while also offering the opportunity to explore new ideas, such as designing true health foods. The potential for vegetable and fruit improvement through genetic manipulation is greatly enhanced by bringing together plant breeders, plant protection specialists, biotechnologists, food technologists and even medical researchers to work as teams. The total scope of the Center's work includes improvement in genetics, production efficiency, handling, processing, marketing and related areas that allow the Texas fruit and vegetable industry to remain competitive in the national and international marketplace.

The Center Concept

The Texas A&M University System (TAMU) has one of the best research faculties in the plant sciences and some of the finest facilities worldwide promoting an institutional commitment to technical, economic development. Vegetable and fruit research programs on the main campus at College Station are linked with six regional Agricultural Research and Extension Centers (AREC) that provide a diverse research capability and respond to a wide variation of environmental conditions across the state. Outstanding individual research projects, internal joint projects and cooperative projects with the vegetable and fruit industry are currently conducted within this network. The Center enhances these efforts and promotes a team approach to research by working with other institutions and the private industry sector.

The Center provides a structure for focused research on high priority objectives through university cooperation with industry that includes sharing research costs. The Center's ability to create external visibility enhanced coordination among participating scientists and stimulates improved multi-disciplinary, multi-agency research programs.

The concept of the Center is achieved by utilizing combined scientific knowledge in solving major problems that limit vegetable fruit production and marketing.

Identified problems are placed in priority order with input from an advisory committee. Teams of scientists are assembled to address the problems with a focus on plant breeding and variety improvement. When resources are limiting, the corporate affiliate members may assist in developing a financial plan to support the efforts.

Role of The University System

The TAMU Agricultural Program includes the College of Agriculture and Live Sciences (COALS), the Texas Agricultural Experiment Station (TAES) and the Texas Agricultural Extension Service (TAEX). Faculty are affiliated with departments on campus in College Station and at the regional AREC's.

The Center, consisting of an interdisciplinary faculty and cooperating industries, creates a new organizational structure that brings together expertise from several units to ensure continued improvement of vegetable products. Decreased funding from state and federal sources and narrow profit margins on sales within the industry have made the linkage between public sponsored vegetable and fruit improvement programs and private industry imperative. The trend toward protecting intellectual property, including plant varieties, further necessitates a closer relationship between plant breeders and private industries that are involved in the distribution of that property.

Objectives

The goal of the Center is to strengthen vegetable and fruit research by creating partnerships between science and industry, therefore improving the quality of vegetable products through combined resources. The objectives are to:

- Maintain momentum in current base programs in vegetable and fruit research.
- Identify major needs of the produce industry and form interdisciplinary teams to solve problems through research emphasizing genetic improvements in vegetable and fruit nutrition, human health benefits, flavor, and resistance to biological and environmental stress.
- Promote the visibility of existing research programs and develop new programs with the produce industry.
- Develop new technology in vegetable and fruit research programs
- Implement new strategies for funding research projects.
- Provide authoritative and credible technical information to consumer and producer clientele groups through the TAEX and other dissemination systems.
- Enrich graduate education by offering students the opportunity to interact with interdisciplinary research teams and to work cooperatively with the produce industry.

Implementation and Strategies

The Center is an administrative component of the Department of Horticultural Sciences. Faculty involved in Center projects are members of the Center. Center programs are jointly planned and coordinated by the Center director and an advisory committee consisting of participating department heads, research scientists and members from corporate affiliates in the vegetable and fruit industry. The Center is located in the Centeq Research Plaza in the TAMU Research Park. Office and laboratory space is available for industry members to occupy and conduct cooperative research.

The responsibilities of the Center director include all aspects of program development and management. The director works with department heads and resident AREC directors so the Center can help leverage and expand existing programs, develop strategic plans, coordinate research proposals and manage funds derived from Center activities. Involvement of all Center participants is carefully nurtured. The Center director works in a matrix management fashion with other research management to optimize planning and resources that advance vegetable and fruit research.

Participating faculty retain their department and off-campus center affiliations. They associate with the Center by mutually agreed upon criteria, such as commitment to Center objectives, potential to network with others, participate in joint projects and assist corporate members. As research needs change, additional faculty from TAMU, medical centers, other universities, federal programs and industry may participate in the Center.

A potential expansion in the number of participating scientists comes with the construction and staffing of the Center for Crop Biotechnology (CCB) that is primarily involved with biotechnology research at TAMU. The CCB provides plant growth facilities and specialized equipment to stimulate collaboration among researchers in genetic engineering, molecular biology and other disciplines. Research conducted at the CCB focuses on the genetic enhancement of crops important to Texas and the U.S.

The growth of the Center is determined by the ability of the participating scientists to obtain funding. The Center provides visibility with an expanded pool of research expertise enabling scientists to compete more effectively for industry grants, federal grants and new state initiatives. The development of external cooperative industry relationships and their leadership on the advisory committee are critical in obtaining additional funding.

The role and accomplishments of the Center are reviewed during an initial three-year review and thereafter at five-year intervals. The general institutional guidelines for Institutes and Center within the TAMU Agriculture program are followed.

Industry Participation

The success of the Center depends on the quality of the participating scientists, graduate students, technical support and research facilities. Texas A&M University is fortunate to have well-trained scientists and excellent facilities. There are, however, limited funds available for graduate students, technical support, labor maintenance and the continuous need for upgrading laboratory equipment. Three cost-sharing opportunities provide resources for funding Center programs: an endowment fund, membership (university/industry consortium) and grants/contracts.

Endowment Fund

Several individuals and companies are creating a permanent endowment fund to provide a base for long-term commitment to research in the Center. The goal is to endow \$3 million into a fund providing a continuous source of funding for graduate assistantships, postdoctoral fellowships and other high priority needs.

Membership

Businesses, organizations and individuals may join into cooperative research with the Center by becoming members. Annual membership fees are based on the role and size of the potential member. The membership will be free of any indirect costs and provides for one individual from each member organization to participate in the advisory committee. Memberships to seed companies provide access for evaluating breeding lines or experimental varieties/hybrids and to provide licensing opportunities for utilization of developments. This benefit starts at the beginning of their membership and continues as long as their membership is in good standing. Members who become license holders of developments will pay royalties according to established TAES policy.

Members receive credit against royalties for their membership dues in the amount of \$10,000 per year once their royalties reach \$10,000 per year. An example is as follows: Company A reaches sales or uses a variety that creates royalties of \$20,000. Company A pays \$10,000 membership to the Center and \$10,000 in royalties to TAES.

Membership status is available to all companies who wish to utilize new vegetable improvement through partnerships developed between the Center and their organizations. Other companies providing goods or services to the produce industry may join the Center to support research directed to the overall growth of the produce industry. Membership fees are based on company sales. Each industry membership is covered by a memorandum of agreement with the TAES.

With today's fast-paced science, researchers often find it advantageous to work temporarily in laboratories where new, innovative techniques can be learned. Member companies are invited to place their researchers in Center laboratories (with institutional consent and mutual agreement on support).^{*} These visiting scientists follow established policies, with provisions to explore new technologies, evaluate materials and other activities that would benefit the Center and the participating member. This type of collaboration will facilitate more rapid technology transfer with mutual sharing of research findings while providing an excellent interaction between companies, students and faculty.

^{*} All costs and expenses associated with the employee's visit, but not limited to salary, housing, travel, subsistence and insurance are the responsibility of the member. All visitors are subjected to the University's established policies for visiting scientists. Visitors from non-member companies, whether foreign or domestic, are not permitted to work in the program. Nevertheless, employees of non-member companies who are students enrolled at the University are entitled to participate in the program at the sole discretion of the principal investigator.

Grants and Contracts

Members may sponsor specific research with scientists within or separate from the Center structure. All grant or contract agreements are made between companies, associations or individuals and the scientists. These agreements are administered through the TAES including indirect cost requirements. Memoranda of agreement are prepared prior to the start of each project, outlining the expectations of all parties and considerations of proprietary rights.

Member companies or the TAES may sometimes find it necessary to exchange confidential information. Either party may request confidential consideration through disclosure agreements. All information subject to confidentiality is made in writing and clearly identified as 'confidential' in advance. Terms and provisions for confidential treatment are negotiated, based on case-by-case needs. The TAES is subject to the same obligations as corporate members.

Membership Fee Structure

Seed companies	\$10,000/yr with credit against royalties once they reach \$10,000/yr.
Processing companies	\$5,000/yr. if sales exceed \$500 million/yr. \$1,000/yr. if sales over \$100 million but less than \$500 million/yr. \$500/yr. if sales less than \$100 million/yr.
Producers, shipper	\$1,000/yr. if sales exceed \$100 million/yr. \$500/yr. if sales less than \$100 million/yr.
Seed brokers, retailers	\$1,000/yr. if sales exceed \$100 million/yr. \$500/yr. if sales less than \$100 million/yr.
Brokers, retailers	\$1,000/yr. if sales exceed \$100 million/yr. \$500/yr. if sales less than \$100 million/yr.
Affiliated companies	\$1,000/yr. if sales exceed \$100 million/yr. \$500/yr. if sales less than \$100 million/yr.
Material and service companies	\$250/yr.
Friend of the Center (individual)	\$100/yr.

Vegetables associations consisting of 25 or more members may become members for \$25,000/yr. The Association would be allowed one advisory committee membership.

Additional Information

Corporations, private firms and individuals are encouraged to join the Center. Through partnerships, TAMU develops new technologies to better serve the growth of the private sector and the economic well being of Texas.

For additional information, contact:

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