The subcommittee on "research priorities" has mailed 2 questionnaires to seed companies and asked for replies by mid-September. When completed, the results will be presented to ARS and AES officials. (Note: Questionnaire replies have been received and are being summarized. Hopefully this information can be disseminated by late May 1984.) This PRAC Committee has recommended to the ASTA Board of Directors the following resolution that was passed by the Board at the June 1983 meeting in San Francisco:

"The American Seed Trade Association (ASTA) strongly supports the need to strengthen funding for agricultural research in the USDA Agricultural Research Service and in State Agricultural Experiment Stations. These activities are essential for maintaining adequate future supplies of food and fiber to meet domestic and export needs.

"ASTA supports the concept of long-range research program plans and six-year implementation plans by the Agricultural Research Service. These plans provide a basis for interaction with industry, commodity and user groups to identify and establish high-priority research needs and provide a basis for the allocation of resources to those needs. The American Seed Trade Association is committed to participating actively in this process.

"We concur with the need to broaden and preserve the national germplasm resources of plants through the acquisition, evaluation, maintenance and distribution of plant germplasm in the National Plant Germplasm System. We further support expanding research in those fundamental areas of biotechnology, developing new and more efficient methods of modifying plant germplasm and developing new knowledge of basic plant growth, differentiation and reproductive processes.

"We think it imperative that ARS allocate a substantial portion of its resources to long-range, fundamental basic research to solve problems that cannot be solved with today's scientific knowledge base. We believe that this commitment must be balanced with an ongoing major commitment to those basic studies of germplasm enhancement, cytology, plant pathology and related disciplines, which have historically provided the scientific disciplines on which our applied plant breeding is primarily dependent."

In closing, let me emphasize that it is essential to maintain the dialogue between the public and private sector. We need each other just as much today as we did 50 to 100 years ago. Continuation of this dialogue through our respective associations is our mutual responsibility. Existing organizations through which this dialogue will be pursued are the Public Research Advisory Committee (PRAC). This ASTA appointed committee works with the ARS andAES as well as legislators on behalf of the ASTA membership and the ASTA/ESCOP Liaison Committee, an ASTA-appointed committee which works directly with the Experiment Station Committee on Policy (ESCOR) and related groups.

Literature Cited
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Alternative Methods of Funding Vegetable Research

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Many vegetable research scientists in public service need additional funds above those provided by normal budgeting within their agencies to maintain productive programs. In some instances, programs receive little more than the salary for the scientist. Fortunately, my vegetable breeding projects are well funded at Texas A&M compared to many other university programs. Yet the needs of the Texas vegetable industry are significant since the state is experiencing rapid growth in vegetable production. As a result, our research programs must be broad in scope, efficient, and productive to meet these needs. Therefore, additional funding has been needed to develop and maintain these large research projects. Alternative methods for funding research were investigated and pursued and resulted in excellent success, as over $700 thousand dollars have been obtained from outside sources during the past 10 years.

This paper has been prepared to share the author's ideas and experience with other research scientists on obtaining additional funding needed for their projects. It should be especially helpful to young scientists who are beginning to build new programs. The following is based on 5 guidelines which are key points in obtaining research gifts or grants. The author's thoughts on plant variety protection also will be discussed.

Learn the industry needs

It is very important to know the needs of the industry before approaching industry organizations to discuss funding for a research project. Grants provided by industry generally are specific in nature, and results are expected to solve the problem for which funding was generated. For example, if the research is on onions, it is important to learn everything possible about the crop and the industry needs before making a proposal for funding. If you are a plant breeder, familiarize yourself with growing, harvesting, handling, and shipping as well as the genetics of the crop before meeting to discuss the research funding. The industry people are professionals in growing and handling the crop and they can detect your knowledge of their crop rather quickly. The same rule applies if cultural work, physiological studies, marketing, or other research areas are proposed.

Get acquainted with industry people

It is equally important to get acquainted with, and become known by, the people you intend to serve. Visit their operations at all levels. Learn their names and responsibilities. Be sure they know your name and what you can contribute to their operation. It is much easier to work with acquaintances than strangers.

Establish research goals, research budgets and bring industry and administration together

Once you feel confident that you know the needs for your commodity and have become acquainted with the industry, it is time to establish goals, budget needs, and to bring leaders of the industry and your administration together. An excellent way to get them together is at a field day in your research plots. Such an introduction will focus their attention on your work and will provide them the opportunity to see the problem you wish to solve. The question always comes up on how much money it will take to do the research, so an introduction to the budget also is accomplished. A meeting should then be set up with the industry leaders to discuss in detail objectives and budget needs. During these meetings, the industry generally decides how to collect or raise money and determine how much and for how long they will continue funding. Be sure to
prepare well-planned objectives and budgets for their consideration. They must be realistic, yet sufficient to accomplish the objectives. Being successful on this project will greatly determine if this funding will be the first of many or the last received from your industry.

Provide leadership

Once funding is received, the researcher becomes the project leader in the eyes of the group who awarded the money. The project leader is responsible for success or failure. Results and progress are many times viewed differently by industry than from university administrators. In most instances, industry expects positive results quickly. This expectation must be understood, but care should be taken not to over commit on quick results. Therefore, it is important to be an efficient manager of time and money to be productive. Leadership must be displayed to co-workers at all levels. In many ways, it is a pressure situation no different than that of being a coach.

Produce results

Once industry funding is accepted, the researcher must accept the responsibility of producing results. Even if success is not always achieved, project leaders are obligated to put forth their best effort. If that effort is shown and failure results, the funding group will accept failure. However, I have seen many scientists make proposals, accept funding, and not put a good effort into the research. The message must be made clear that unless results are produced, industry funding in support of a program will be terminated.

The above 5 rules have been the author’s guidelines for obtaining industry support. They have worked well and should work for any researcher. There are, however, alternative methods of funding.

Alternative methods for funding research

Gifts. Funding of a research program can be from other forms than money. A substantial portion of the author’s support, in addition to the dollars mentioned previously, has been in the form of equipment, land use, and labor. The use of trucks, forklifts, planters, and land, including all cultural management and labor to help harvest, amount to thousands of dollars in a program. Direct gifts of money to help purchase equipment or to pay for rentals is an excellent source of funding and, in many instances, preferred as it eliminates the need for grant proposals and reports. Care must be taken to follow policy procedures of your university or agency before accepting any form of gift.

Grants. Grants are the primary method for obtaining additional support for research programs. They may be in the form of equipment loans or dollars. They may be short-term, such as 6 months to 2 years, or long-term covering several years. One grant obtained by the author was written for 10 years. It has been funded 11 years and prospects are excellent for continued renewal. Another grant was written for one year with an option for renewal. Notice has just been received for the 16th consecutive renewal. These examples are mentioned because each is developed to provide funding for specific objectives. Also, the grantors differ in the type of commitments they want to make to scientists. Generally, the 1st grants will be short-term and as a performance record is established, long-term support is obtained. Most gifts come from industry groups. However, grants can be obtained from many sources including industry, government, or private organizations. They may be generated from direct collections or from marketing orders. It is important that researchers become aware of collection systems in their state before making grant proposals. Be fair and honest in budget requests but do not commit your research time to an insufficient budget.

Plant variety protection. Plant variety protection is a new source of funds for public plant breeders. There are mixed feelings among commercial seed companies and public supported research agencies concerning the release of vegetable varieties under plant variety protection. If release and distribution of such varieties is handled in a fair manner, both commercial seed companies and public plant breeders will benefit. The breeder will receive research support in the form of royalties, and the seed companies will profit from the sale of the new variety. Recently, 4 new onion varieties were released under plant variety protection. Six major seed companies are participating, which indicates that our method of handling the release is an acceptable system.

Most public scientists need additional funding to maintain productive research programs. Alternative methods of obtaining that funding vary with the type of research and the location of the scientist. If the research is basic, the funding generally must come from government or private grant sources. If the research is more practical, the same principles discussed in this presentation must be adhered to if continued funding is expected for a research program.

Public and Private Plant Breeding of Horticultural Food Crops in Western Europe

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The well-being of plant breeding (1, 11, 14), and hence of agricultural and horticultural productivity, depends upon planned efforts to make the maximum use of resources. This is as true for the individual plant breeder as it is for those political planners who control the relationship between public and private sector breeders, especially in relation to the respective roles of public and private plant breeders. The policies and experiences in different countries are helpful in pointing the way to a format that will be beneficial for all. I propose to describe the organization of public breeding programs for vegetables and fruit (but not ornamentals) in western Europe. Inevitably, most references will be made to the current situation in the United Kingdom, and to other countries where there is a strong and thriving plant breeding industry, indicating the relationship between public and private sectors in such countries.

Organization of government-sponsored plant breeding research

In the Netherlands, where there are a number of highly successful private breeding companies with large domestic and export markets, the activities of government research institutes are strongly influenced by grower, breeder, and academic members of institute boards and by advisory committees for different groups of horticultural crops. The coordination board of the National Board of Agricultural Research makes decisions at an official level, but there are also close personal relationships among private and public breeders which play a part in shaping priorities at government institutes.

Public breeding of fruit and vegetable crops is concentrated at the Institute for Horticultural Plant Breeding (IVT), Wageningen. There are a number of very large private breeding companies specializing in vegetable crops, but hardly any private breeding is done on fruit. IVT policy is to stimulate private plant breeding and to act as a bridge between private breeding and the research program in the Dept. of Plant Breeding (IVP) at the Agricultural Univ., Wageningen.