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Debunking Myths

The persistence of myths about agricultural research continues to hamper obtaining necessary support needed to sustain it. Three which have surfaced again are: (1) agricultural research is not basic research—a view tenaciously held among federal science officials outside USDA and by some of our colleagues in universities and colleges, (2) agricultural research at UC is conducted largely for the benefit of large businesses associated with agriculture, and (3) California's agricultural research has little or no relevance to the needs of less developed countries where food production is far below what is required.

With regard to the first issue, I would remind those who hold the mythological view that agricultural research cannot be regarded as basic that studies on photosynthesis, nitrogen fixation, genetic restructuring, nature of pathogenicity, and the biochemical basis for nutrient utilization in plants, animals and humans are examples of research whose findings often are of a fundamental nature and are valuable contributions to an increased understanding of the nature of all living things.

The argument about whether such agricultural research is basic or applied is academic and in my judgment irrelevant. The importance of this issue, however, is not to be minimized. The Executive Branch of our federal government has clearly indicated the need to increase support for basic research, which I applaud. What I don't applaud is the exclusion of all agricultural research from the federal definition of basic research.

Closer to home, I was dismayed recently to read that a respected member of California's State Legislature proclaimed publicly that agricultural research of the University of California needed to be reoriented to benefit both California and Third World countries. The statement indicates little understanding of how new knowledge about the growth and health of plants and animals is generated, dispersed, and applied.

On a recent visit to North Africa, India, and the Philippines, I observed firsthand magnificent achievements being made to improve production of major grain and legume crops, on which Third World countries largely depend, through breeding and management of cultural methods. These programs were not only utilizing the information that flows from the University of California and similar scientific laboratories in the more developed nations, but many of the personnel

from California were personally involved in programs and short courses in those countries.

The nature of pest and disease control, the manipulation of water for optimum effectiveness, the genetic structuring of crops and animals, the study of soils, the study of nutritional requirements for humans and domestic animals, the understanding of world food and agricultural commerce are all applicable and essential to California's agriculture, to this nation's agriculture, and to those nations whose agriculture is still in a less advanced state than our own. Interpreting that information for varying situations is what is needed most. Neither size nor degree of sophistication alters the fundamental truth of the science underlying growth and reproduction of plants and animals.

The unkindest cut of all in the legislator's comments was that the University had come to the rescue of a candy manufacturer who wished to market a smaller candy bar, for the same price as the larger one, and wanted a smaller almond so that the nut would not look disproportionately large relative to the reduced size of the candy bar. The suggestion displays an utter lack of understanding of breeding methods for plants, and especially tree crops, as well as a lack of understanding that information which the University has developed is available to any one who can use it. It takes years, even entire careers of researchers, to breed new fruit and nut varieties suitable for different conditions. To suggest that the University deliberately set out years ago to rescue a candy firm today does us a serious disservice, particularly when it is stated publicly by a respected member of the legislature. It not only condemns our foresightedness in developing varieties to meet unforeseen future needs, but also discredits dedicated scientists whose professional lives are devoted to increasing the body of knowledge concerning the growth and reproduction of plants and animals of importance to humankind.

Debunking myths is not easy, especially when they are perpetuated by responsible persons. That they continue to exist, however, is a blemish on our record of achieving broad understanding of the usefulness and importance of agricultural research for all people. All who can do so effectively need to increase their efforts to remove this blemish, not in self interest but in the interest of bettering the lives of people everywhere.