Soybean Processing Industry Awards Grants

Research into the soybean plant's nitrogen utilization, mutations to provide genetic variability, and alteration of growth characteristics, to achieve greater soybean yields, are underscored in new university grants announced by the National Soybean Crop Improvement Council.

Seven landgrant universities, of 21 that submitted proposals, were awarded $33,000 for soybean research projects over the next three years, according to Robert W. Judd, managing director of NSCIC, research arm of the National Soybean Processors Association that is funding the programs. These 1972 grants are an extension of the $75,000 research monies underwritten during the past 5 years.

"The industry is concerned," said Judd, "that simply encouraging farmers to plant more acres in soybeans is not the total answer to reaching an anticipated annual need of 1,750,000 bushels of U.S. soybeans by 1980.

"Current demand is calling for 1,375,000 bushels against 1971's actual production of 1,225,000 bushels, which we are hard pressed to meet. The picture is further aggravated by nearly depleted carryover stocks."

The realistic way to boost bean output to meet worldwide demands for meal, protein and oil, Judd continued, is to mount a three-pronged offensive: more acreage, better growing and management techniques, and greater harvesting efficiency—"and that's what our research grants are all about."

Looking at the national average crop yield increases for the period 1950–70, Judd explained, soybeans are at the bottom of a list of 12 principal commodities, with a per-acre yield increase of only 24% during those 20 years.

Peanuts headed the list with a 128% increase. Corn showed a 91% increase, wheat 88% and barley 57%.

"Higher soybean yields," according to Judd, "are vital to an ever-increasing proportion of the world's population. People in many countries depend on us to supply soybeans and soya products. We think the key to many of our production deficiencies is in research, and this is why the processing industry welcomes the opportunity to work hand-in-hand with our scientists through research grants."

Five of the current awards are in the amount of $5000 each for 3 year projects, and two for $4000 for 2 year project terms. The participating universities are Arkansas, Georgia, Illinois, Iowa, Minnesota, North Carolina and Tennessee.

Judd summarized the projects as follows:

University of Arkansas, Fayetteville: Title—Growth regulating chemical evaluations for increasing soybean production indeterminant soybean varieties ($5000, 3 years). Description—The objective is to select chemicals for growth control that will increase pod set and seed size. Several new growth-regulating chemicals will be evaluated in field test plots. Measurements of physiological processes will be made to find significant influences on increasing photosynthetic efficiency resulting in increased seed yield. Potentially useful growth-regulating chemicals will be measured to determine their effects on uptake and utilization of water and plant nutrients and their effect on specific photosynthates and metabolites. Project leader—Charles A. Stutte, Department of Agronomy.

University of Georgia, Athens: Title—Effect of mycorrhiza on yield, nodulation and nitrogen fixation of soybeans ($5000, 3 years). Description—Little is known about soil microbial interactions with soybeans. The effect of microorganisms in the area around the plant roots has been studied and one, Endogone, has given an increase in yield when the soybean plants were inoculated with this fungus. The fungus growth can function as root hairs in absorbing water and inorganic nutrients. The objectives of this study are to determine the relationship of soybean mycorrhiza to growth and seed yield, nitrogen fixation, infection and nodulation by Rhizobium (nodulating bacteria), and nutrient uptake. Project leader—Joel Giddens, Department of Agronomy.

University of Illinois, Urbana: Title—Genetic variation in the capacity and duration of nitrate uptake and assimilation of soybeans ($5000, 3 years). Description—Relatively little attention has been given to the role of

New Fungicide and Nematicide Data Available

Fungicide and Nematicide Tests, Results of 1971 is now available. This report is issued annually by The American Phytopathological Society Committee on New Fungicide and Nematicide Data. Volume 27 contains the results of 326 experiments from 30 states of the U.S., Chile, China, Germany, India, Israel, Libya, Mexico, New Zealand, Canada, Spain and the United Kingdom. It also includes an index of all fungicides and nematicides reported, a description of the materials available for testing in 1972, a discussion of suggested procedures for evaluation of experimental nematicides in field applications, and a list of ca. 500 chemicals now under trial or in general use.

The book is available for $3.00 per copy when payment accompanies the order, or $2.50 per copy for 100 or more copies mailed to one address. Reports for 1970 are available at $3.00 per copy. Copies of the reports for 1960 through 1966 plus a few older copies are available at $1.00 per copy plus the usual charge of 25¢ per copy if billing is required. Make remittances payable to the American Phytopathological Society and send orders to K.D. Hickey, Virginia Polytechnic Institute and State University, Fruit Research Laboratory, Winchester, Virginia 22601.