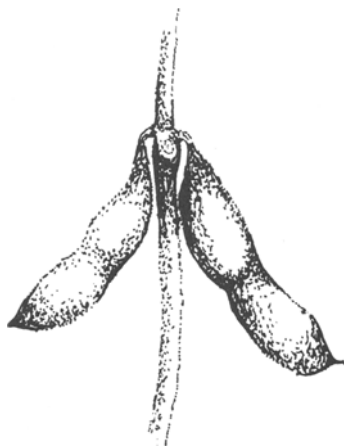


Soybean research in Illinois described



Approximately 400 persons attended a special program, "Close-Up on Illinois Soybean Research—Production, Marketing, Utilization," held in late June at the University of Illinois, Urbana-Champaign.

The program reviewed research programs by the Illinois Agricultural Experiment Station, the Agricultural Research Service, the Cooperative Extension Service, and the University of Illinois' College of Agriculture.

Plant breeders, agronomists, agricultural engineers, marketing specialists, and others outlined current research interests and projects. AOCs member William H. Tallent, director of the USDA's Northern Regional Research Center in Peoria, described the center's work on soy utilization.

R.W. Howell, head of the U of I department of agronomy, said breeding and genetic researchers can breed for resistance to disease or pests, for specific growing conditions, and for ultimate use. He cited disease-resistant varieties previously developed and current efforts to produce varieties resistant to new races of soybean cyst nematode, and newly released semi-dwarf varieties for areas where plant lodging is a problem. In recent years, about 84% of Illinois' soybean acreage was planted in varieties developed from the same nine original strains, R.L. Bernard said.

Current research, Howell said, is aimed at possibly developing a variety that will yield soybean oil that is much lower in linolenic acid, free of trypsin inhibitor factors (plants with lower than normal trypsin inhibitor have been developed), and, in a project he termed "futuristic," hybrid soybeans.

Agronomy professor F.W. Slife told of monitoring insect population and disease development as a prelude to breeding hardier soybean plants. Field trials are being done this year, he said, on a rust resistant variety. Leaf rust has been a problem in the Far East and has been found in Puerto Rico, but it has not yet invaded the major soybean growing areas. Added emphasis is being put on ways to control perennial weeds, Slife said.

W.R. Nave of ARS, USDA, described agricultural engineering research ranging from determining erosion under various tillage practices for soybeans to development of new cutter bars on combines to reduce harvest losses.

Tallent described soybean oil research aimed at eliminating off taste and odor, and research on interesterification as an alternate to hydrogenation for improving functional qualities.

In research on soy protein, Tallent told the group effort continues on flavor, functionality, and flatus. In addition, NRRC is investigating full fat soy food products, he said.

T.A. Hieronymous, agricultural economist, said development of soy protein foods that people would eat would mean a drop in value for soybeans since conversion of raw soybeans directly to protein is more efficient than turning them into meat by feeding soy meal to animals. The U of I

has begun development of a projection of what the state's agriculture will be like 10 years from now, based on the success of a similar project done a decade ago to predict conditions now.

Copies of "National Soybean Research Needs" as evaluated by the National Soybean Research Coordinating Committee were distributed at the meeting. In the section on utilization, the report assigned top priority to work on edible defatted protein products. Ranked next in priority were research on edible full-fat protein products, edible oil products, feed protein products and industrial oil products.

Utilization is the only major soybean research area where the number of scientist years (SYs) in research declined between 1972 and 1975. (The other two research areas are production and marketing.) The report suggests that while there were 46.4 SYs available for utilization research in 1975, by 1980 there should be 64.1.

Most of the research goals for use of soybeans as food call for more work on flavor, functional properties, flatus factors, and color. In the case of edible oil products, the three areas identified are flavor, odor, and oxidative stability.

Industrial oil products research is needed to maintain and expand present markets for soybean oil as well as help provide new ones. While edible uses dominate soy oil use, the report notes that soy oil can be used for some of the same applications as depletable petrochemicals.

R.J. Aldrich of the University of Missouri serves as chairman of the research coordinating council. ●

Simon-Rosedowns announces Sudan contract

Simon-Rosedowns of Hull has delivered equipment to the Sudan for three vegetable oil plants under contracts worth more than \$1.25 million.

Oceantrade SA, Geneva, placed an order for two identical plants, each to process up to 35 tons each day of groundnut kernels. The equipment, being installed at Khartoum factories of Yousif Ahmed Alabass an Al Kattani Oil Mill, consists of seed preparation, screw pressing, and oil and cake handling machinery. Simon-Rosedowns also supplied equipment to screen and filter the extracted oil, and to handle the extracted cake through to weighing and sacking.

The third order was from Malik Industrial Co. Ltd. of Khartoum for a plant to process 80 tons per day of black Sudanese cottonseed. The equipment includes material for preparation, screw pressing, screening and filtering of the oil, and weighing and sacking of extracted cake. ●

● Profile (Continued from page 610A)

slighted the oil chemists," he says smiling.

Being a gardener, he plans his vacations for winter time, usually to Florida. He and his wife do take periodic trips to Chicago to visit museums (the King Tut exhibit attracted them this summer). They don't do much foreign traveling, although Dr. Milner is considering attending the Fifth International Congress of Food Science and Technology during September 1978 in Kyoto, Japan.

What about his previous interests in soybeans?

They still have a special place — in his vegetable garden. Dr. Milner has long grown green vegetable soybeans, specially bred for large seed size, with a flavor like baby lima beans "but better," he says. They're preserved by freezing since "soybeans don't take well at all to canning," Dr. Milner says.

The Milners enjoy retirement in a university town, at least partially because of the cultural opportunities it offers. Not to mention the information and specialists available to a dedicated gardener. ●