

World Conference on Cottonseed Protein Marks Industry Progress

The brightest prospects for expansion of markets for cottonseed meals as well as other oilseed meals lies in increased utilization of these products for human consumption. The greatest commercial market potentials for such products are likely to be found in the industrial and high-income countries, even though interest in such products has been largely focused heretofore on the low-income and slowly developing countries.

A world conference on cottonseed protein concentrates held in New Orleans recently heard reports on economic prospects for vegetable proteins, together with reviews on fundamental, scientific and technological advances in cottonseed investigations made since the previous conference in 1960. The conference was sponsored by the USDA, ARS, So. Utiliz. Res. and Dev. Div., in cooperation with UNICEF and the National Cottonseed Products Association.

It was attended by 87 research scientists, engineers, and representatives of various government agencies and commercial firms from nine countries.

The prediction regarding the future of plant proteins in human nutrition was made by H. L. Wilcke, Vice President and Director of Research, Ralston-Purina Co. He pointed out that in 1947 meal accounted for 45.5% of the total value of soybeans, and 28% of the total value of cottonseed. In 1962-63, the value of soybean meal had increased to 63.7% of the total; cottonseed meal to 40.5%.

Current usage figures show that practically all of the cottonseed and soybean meals are now going into animal feeds, but that animal and poultry feeds cannot continue to absorb more and more plant protein concentrates at favorable price levels. As one of the more spectacular demonstrations of the use of plant protein in the human diet, he cited the use of the soy protein fibers in the production of foods with meatlike fibrous texture. The possibility of totally new food forms based on plant proteins is an attractive goal, and a large amount of industrial research is now going on in this area.

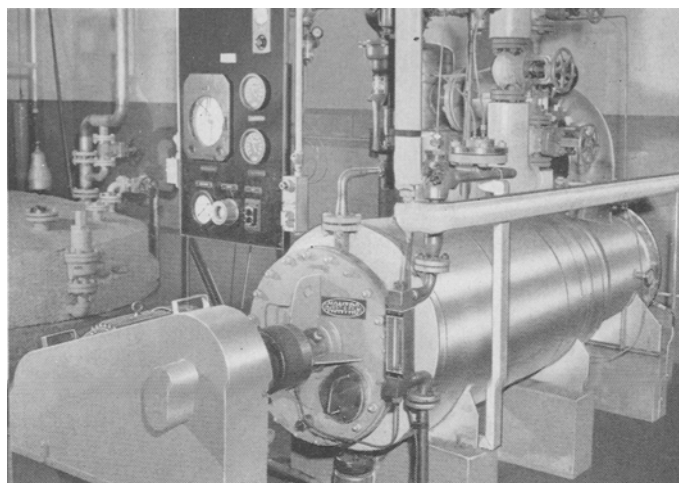
Experiences in introducing and marketing these food supplements were also reported by H. W. Bruins, Quaker Oats Co. Research Lab. About four years ago they began exploring the marketing of Incaparima in Colombia, under an agreement with the Nutrition Institute of Central America and Panama (where they already had a plant and marketing organization) primarily with the idea of helping solve the severe malnutrition problem prevalent there. An intensive educational program, and support of the medical profession and other workers in the field of health is necessary to success, but great progress has been made in Colombia. He believes that a protein-rich product based partly on cottonseed flour can be sold there.

Suitability of cottonseed protein for use in such a program, and technological advances in the production of a high-quality product were brought out in reports. Notable among these were comments by M. T. Milner, UNICEF, on cottonseed flour produced in the

pilot plant of the So. Utiliz. Res. and Dev. Div by the mixed solvent extraction process developed at the Southern Div. UNICEF workers had never before seen a processed cottonseed product with the nutritional quality of this flour, as indicated by the test for available lysine, and subsequently confirmed by animal feeding trials and metabolic studies of infant feeding.

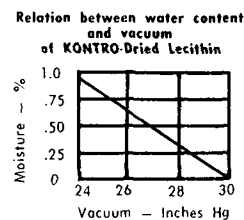
One section of the conference program was devoted to results of fundamental research on structure of the cottonseed, and location in the cells of the various constituents. Mrs. Wilda H. Martinez, So. Div., reported that various amino acids occur in different proportions in different parts of the cells. A. M. Altschul, So. Div., in his summation of the conference, suggested that information of this kind might form the basis for an entirely new concept of processing methods in the future. As he put it, present methods of processing, by which the meats are first crushed and then separated into oil, protein, and other components, are like breaking and mixing packages of pennies, nickels and quarters, then separating them according to denomination.

Superior lecithin produced world-wide in KONTRO ^{thin}/_{film} assemblies continuously



Package assemblies include a Kontro tapered thin-film dryer for water removal... and a Kontro scraped-surface cooler. Feed and product pumps... vacuum system... and instruments also in the package. High quality lecithin produced continuously to low moisture contents in approximately one minute.

- Sizes for handling from one hundred to several thousand pounds per hour
- Feed rates can be greatly decreased with equal quality
- Unusually high unit capacities
- Horizontally mounted on one floor, requiring minimum space
- Quick start-ups and shut-downs



Write for complete information, giving production requirements

A MEMBER OF ARTISAN INDUSTRIES

KONTRO

THE KONTRO COMPANY, INC.

PETERSHAM, MASSACHUSETTS, 01366 • Tel. Area code 617 - 724-3202