

Research makes soy candidate for universal food protein

PEORIA, Ill. - A new research program here will be aimed at making soy protein into a universal food protein - one that would fit international cuisines; ap-

peal to personal tastes and help balance the diet at a low cost.

Many food products have been developed using protein from soybeans, a major world protein source. But the flavor of soy protein could prevent more widespread international acceptance in the future.

Therefore, the long-range goal of the new study is development of a bland soy protein. The research will be conducted under a three-year cooperative agreement between the American Soybean Association Research Foundation (ASARF) and the Agricultural Research Service (ARS), United States Department of Agriculture.

Under terms of the agreement, ASARF will contribute \$60,070 for the studies. Soybean producers in many states provide funds for ASARF-sponsored research through their state soybean checkoff programs.

ARS will recruit a Ph.D. biochemist with education in lipid chemistry and enzymes. He will study the role of compounds called phospholipids in causing bitterness in soy protein foods.

Lipids are fat-like substances; those that contain phosphoric acids are phospholipids. They are among fat-related materials that remain in soy flakes after soy oil is removed.

ARS scientists at the Northern Regional Research Center in Peoria recently

obtained the first evidence relating oxidized lipids to bitter flavors in soy flakes. David J. Sessa, Kathleen A. Warner and Joseph J. Rackis isolated oxidized compounds of the phospholipid group and found two of them strongly bitter. Dr. Rackis says other Northern Center studies link enzymes to bitterness and show that a solvent treatment followed by toasting is not as effective in removing bitterness as in removing

some other flavors from soy flakes.

The cooperative studies will follow these leads in seeking to develop commercially feasible processes to remove all objectionable flavors from the high-protein flakes.

Dr. Ken Bader, ASARF executive director, Hudson, Iowa, and Everett H. Pryde, oilseeds crops research coordinator at the Northern Center, will administer the agreement.

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New heifer classes listed

HARRISBURG, Pa. - At the Keystone International Livestock Exposition, November 5 through 11, there will be a special breeds heifer show. The special breed classes are open to all duly recorded or registered animals that are not eligible for the breed classes provided. Cattle eligible for exhibition in the special breed classes must be duly recorded with a recognized breed association with ownership requirements in accordance with the foregoing rules.

Heifers of breeds that require specific weights prior to registration must submit a copy of the application for recordation, complete with exception of missing weights if the animal is too young at the time of entry to be weighted and recorded. The above exception does not apply to

animals eligible for recordation in their respective breed association.

All breeds will show together. The management will weigh all heifers and calculate the weight per day of age prior to the judging. No exhibitor will be awarded more than two premiums in any one class.

Classes are: 1. Junior Heifer Calf, calved after January 1, 1977; 2. Senior Heifer Calf, calved between July 1 and December 31, 1976; 3. Yearling Heifer, calved between January 1 and June 30, 1976; 4. Champion heifer; and 5. Reserve Champion Heifer.

For more information, entry blanks, and premium lists contact: Keystone International Livestock Exposition, Farm Show Building, P.O. Box 3362, Harrisburg, Pa. 17120; or call 717-787-2905.

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