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**FROM WASHINGTON**


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## Congress considers aflatoxin bill

Rep. Jim Jontz of Indiana in June introduced the Aflatoxin Food Safety Act of 1989 to Congress "to standardize and improve the accuracy and validity of tests for aflatoxin."

Directed at corn, the bill would require the Federal Grain Inspection Service to establish uniform standards for aflatoxin-testing equipment and uniform testing procedures and sampling techniques. The bill also calls for mandatory testing of all corn exports, research to determine safe levels of aflatoxin and indemnification to farmers for contaminated corn.

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## USDA okays field testing

In June, USDA's Animal and Plant Health Inspection Service told Monsanto Agricultural Co. it could plant genetically engineered soybeans in Whiteville, Tennessee, and Jersey County, Illinois, without preparing an environmental impact statement.

The agency ruled that field-testing soybean plants, which are modified to be tolerant to the herbicide

glyphosate, would pose no significant impact to the quality of the human environment and would not present a risk of plant pest introduction. Details: *Federal Register*, June 7, 1989, pp. 24366-24368.

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## FGIS proposes rapeseed standards

The U.S. Department of Agriculture's (USDA) Federal Grain Inspection Service (FGIS) is accepting comments on its proposal to consider official U.S. standards for common rapeseed (*Brassica napus*) and turnip rapeseed (*Brassica campestris*). Comments are due by Aug. 28.

"Official standards should facilitate and enhance trade of rapeseed and rapeseed products in domestic and international markets," FGIS said in its *Federal Register* notice. The agency noted that the economic importance of rapeseed is increasing in the U.S., and rapeseed oil imports are projected to increase from an estimated 330 million pounds in the 1987/1988 crop year to 440 million pounds in the 1988/1989 crop year.

If FGIS chooses to propose rapeseed standards for the U.S., it will consider using the Canadian term "canola" in standards for rapeseed varieties from which canola oil is derived. Details: *Federal Register*, May 30, 1989, p. 22924.

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**FOOD TECHNOLOGY**


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# Applications for genetically modified oils

Various sources of triglyceride oils are used by technologists to achieve desired functional properties. The chemist, of course, has been able to manipulate oil characteristics through blending, rearrangement and hydrogenation. Now, manipulation of oil characteristics and the development of new oil types may be possible through genetic manipulation.

Genetically modified oils are not a new discovery but they are receiving more attention. Currently, modified rapeseed, sunflower and safflower oil are marketed for specific applications with implied functional or health benefits. Soybean oil also is being investigated for development of functional and nutritional characteristics.

The following article is a composite of three papers on genetically modified oils written at the request of Frank Orthofer of Riceland Foods, who serves as Associate Editor for *JAOCs News for Food Technology*. The canola oil review was prepared by N.A.M. Eskin and M. Vaisey-Genser of the University of Manitoba; the sunflower review was written by R. Yodice of SVO Inc.; the soybean review was prepared by T.L. Mounts of the U.S. Department of Agriculture's Northern Regional Research Center. Particular emphasis is placed on the

applications of the modified variants and the benefits obtained.

### Canola oil

Canola oil is obtained from rapeseed modified through the work of Canadian researchers Keith Downey and Baldur Stefansson. This modification resulted in a marked reduction of erucic acid (C22:1) from 20-40% to a level of 2% and a corresponding increase in oleic acid (C18:1) from 23-34% to levels ranging from 55-64% depending on the cultivar (1). This change in fatty acid composition resulted in dramatic improvements in the nutritional characteristics of the oil without compromising yield. These nutritional benefits combined with the recent acceptance by the U.S. Food and Drug Administration (FDA) have brought recognition of canola oil in the North American market. Although canola is used extensively in Canada, information on its performance in frying and baking is sparse.

Early studies showed that finished canola and soybean salad oils were comparable in flavor stability under accelerated storage conditions (2). Recent studies by Warner and co-workers (3) in the U.S. reported canola oil to be inferior to soybean oil during accelerated