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# Industry News

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## Canadian fatty acid report released

A long-awaited report on fatty acid content in Canadian margarines and other fats and oils foodstuffs became public near the end of September.

The report's recommendation generally says that nutritional claims should be permitted on labels of such foods if the *cis,cis* linoleic acid (18:2 [n-6]) is at least 40% of the total fat content in oils and at least 25% in shortenings, margarines or margarine-like products. The recommendations also suggest all margarine and margarine-like products have at least a 5% linoleic fatty acid content and that there be less than 1% *trans,trans*-octadecadienoic acid in all margarines, shortenings and margarine-like products.

The recommendations were made to the head of the Health Protection Branch of the Canadian government where they are being reviewed prior to development of draft legislation that would implement the recommendations.

The seven recommendations in the report basically say: (1) there is a need for margarines, shortenings and salad oils with fatty acid characteristics on the labels to provide information for persons who want to reduce serum lipids and also to ensure adequate consumption of linoleic acid; (2) products making nutritional claims should have at least 40% of the fat content in the form of the *cis,cis* linoleic acid in oils, 25% in shortenings, margarines and margarine-like products, with linoleic content specified on the label; (3) the standard for polyunsaturated fatty acids for margarines, shortenings and margarine-like products should be *cis,cis*-linoleic rather than *cis,cis*-methylene-interrupted polyunsaturated fatty acids; (4) all margarine-type products, margarine and shortening should have less than 1%

*trans,trans* and the margarine and margarine-like products should have at least 5% linoleic acids; (5) industry should be encouraged to increase linoleate content and reduce *trans* fatty acid content in Canadian foods; (6) further research is needed on the effects of *trans* acids on serum lipids, on the physiology and biochemistry of body organs including the heart, kidney, testis and brain; on the effects of fatty acid isomers in the biological systems, on processing of fats and oils to conserve linoleic content, and the biological role of polyunsaturated fatty acids and their derivatives; (7) Canada's Bureau of Nutritional Science should review this subject every five years, including an assessment of the fatty acid composition of Canadian retail foods.

Industry representatives in Canada apparently will be asked for comment after the tentative legislative proposals are drafted by Health Protection Branch employees. Industry obviously would prefer to have a chance to comment before then, as once specific legislation is agreed upon, it may be more difficult to get health authorities to accept changes.

Canada's Institute of Edible Foods Oils, as of late October, had not received a copy of the official report and does not expect to have any comment until the official report is available. Release of the report apparently was awaiting completion and approval of the English and French versions which was expected by the end of November.

One source in Canada did say it may be hard for margarine producers who use 100% canola (rapeseed) oil to meet the requirement for 5% linoleic acid content. □

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## ASA expects China to import more soybeans

American Soybean Association chief executive officer Ken Bader says mainland China is likely to import 850,000 to one million metric tons of soybeans a year for the next five years and within 10 years could be buying four to 10 million tons of U.S. soybeans annually.

In a report in *Soybean Update*, the ASA's weekly newsletter to members, Bader commented that, right now, China lacks transportation from ports to interior markets and adequate processing facilities to increase imports rapidly in the next few years.

The article said an ASA team touring China said the majority of the processing plants there can handle up to

100 tons of oilseeds per day, compared to U.S. plants that process from 1,000 to 2,000 tons each day. □

## NCPA opposes tariff waiver

The National Cottonseed Products Association registered its opposition during October to any proposals to add cottonseed meal to the Generalized System of Preferences, which would permit duty-free importing of those commodities from certain developing nations.

The NCPA generally noted that cottonseed producers and processors are in a strongly competitive market in the fats and oils and meal sectors and adding oil and meal to the duty-free list would "add another element of risk to a highly sensitive market." □

## Standards association proposed

Charles J. Collazzo, a former member of the board of directors of the American Society for Testing and Materials, is seeking to contact persons who would be interested in setting up an association to develop standardization as an academic or scholarly discipline. Persons interested in further information should write to Dr. Collazzo, College of Business Administration, Department of Management, Northeastern University, 360 Huntington Ave., Boston, MS 02115. □

## NSPA elects officers

C. Lockwood Marine will continue as chairman of the board of directors of the National Soybean Processors Association for 1980-81. Marine is with Central Soya Co. Inc. Other officers are: vice-chairman, Gaylord O. Coan, Gold Kist Inc.; secretary, Edward J. Cordes, Ralston Purina Co.; and treasurer, Donald H. Leavenworth, Cargill Inc. John Reed of Continental Grain is the immediate past chairman and Sheldon J. Hauck continues as president. □

## Briefs

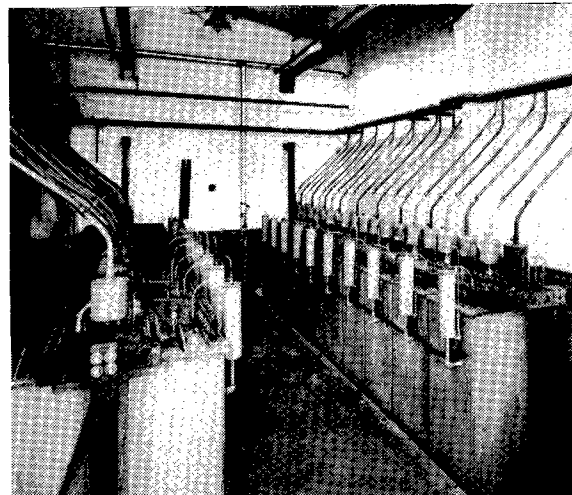
Chuan Choon Edible Oil Co., Telok Anson, Perak Malaysia, has purchased a physical refining system and palm oil fractionation system from EMI Disc Corp., in Des Plaines, Illinois. . . . Bio-Botanica Inc. of Farmingdale, New York, has completed its new plant, laboratories and warehouse facility in Hauppauge, New York. . . . EMI Disc has announced the start-up of a palm oil physical refining system they provided for Kempas Edible Oil Sdn. Bhd. Co. of Johore Baru and General Oil Refining Sdn. Bhd. of Taiping, Malaysia. . . . And, EMI Corporation has announced purchase of all the stock of Morgan Storage and Van Co. of Wheeling, Illinois; the purchase represents EMI's first major venture outside its systems for oilseed refining and related processes. □

## NRA elects officers

Ralph B. Dainty of Darling-Delaware, Chicago, will serve as president of the National Renderers Association for the current fiscal year. Murray Couture of Alex Couture Inc., Canada, will be first vice-president and DeWayne Ehler of National By-Products Inc. of Des Moines, Iowa, will be second vice-president. NRA Executive Director Dean Specht was elected secretary-treasurer. □



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Manufacturers of the Stuart Cell

## U.S. per capita fats, oils usage rising

Domestic disappearance of fats and oils in edible products in 1979 was about 57.7 pounds per capita, according to preliminary figures from the USDA's Economics, Statistics and Cooperatives Service.

If later verified, it would be the highest annual per capita total, surpassing the 56 pounds-per-capita figure of 1976. Total fats and oils usage in edible products was 12.6 million pounds, according to the preliminary figures.

Per capital consumption by category (with the 1978 preliminary figure in parentheses) was: butter, 4.6 pounds (4.5); lard, 2.6 (2.2); margarine, 11.5 (11.6); baking and frying fats, 18.9 (18.2); salad and cooking oils, 21.4 (20.5); and other edible uses, 1.7 (2.2). Butter and margarine figures are actual weight.

The butter consumption figure is the highest since 4.8 pounds per capita in 1975; the lard figure is the highest since 2.7 pounds in 1976. The figures for consumption of baking and frying fats as well as for salad and cooking oils represent all-time highs.

Total usage of fats and oils in industrial products totaled 28.2 pounds per capita in the preliminary figures, below the 29.4 pounds-per-capita preliminary figure for 1978. Per capita usage of fats and oils in various industrial products (with 1978 figure in parentheses) was: soap, 3.9 pounds (4.1); drying oil products, 1.7 (3.2); fatty acids, 10.6 (9.9); animal feeds, 6.0 (6.8); and other industrial products, 5.5 (5.4).

Total per capita disappearance of fats and oils for 1979

## Acids, in thousand pounds

Month: August 1980 Issued: Oct. 21, 1980 No. of manufacturers reporting: 15	Disposition									
	Exported in thousands of tons	Production	Receipts	Crude consumption	Domestic shipment	Inventory change	Stockpile at year end	Total	Final inventory in thousands of tons	
<b>SATURATED</b>	7.31								8.31	
Stearic acid (40-50% stearic content)	8,075*	12,900	-	4,442	SP 523 DP 4,886 TP 2,257	173	267	12,548	8,427	
Hydrogenated animal and vegetable oils										
60 C max ester & min. I.V. 5	6,817*	6,549	-	102	5,801	-	11	5,914	7,452	
57 C max ester & max I.V. 5	5,204*	10,417	-	5,806	4,627	207	78	10,718	4,903	
Min. stearic content of 20%	1,785*	2,355	-	660	1,436	-	-	2,096	2,044	
High oleic acid 60% palmitic, I.V. max 121	1,214*	487	-	65	361	-	68	494	1,207	
Hydrogenated fish & marine animal fatty acids	556*	320	-	33	558	-	-	592	284	
Lauryl type acids (I.V. min 5, sapon val min 245, inc. coconut, palm kernel, babassu)	3,878*	6,759	-	2,399	3,044	972	3	6,418	4,219	
Fractionated fatty acids C18 or lower, inc. lauric, myristic and/or myristic content of 95% or more	879*	1,768	-	-	1,565	101	-	1,766	881	
1,997*	1,100	36	-	385	783	152	20	1,340	1,793	
Total saturated fatty acids	30,405*	42,655	36	13,892	25,342	1,605	447	41,888	31,210	
<b>UNSATURATED</b>										
Oleic acid (free oil)	13,178*	10,796	10	5,831	ND 178 SD 2,477 MD 1,523	118	374	10,501	13,483	
Animal fatty acids other than oleic (I.V. 35 to 80)	4,825*	9,624	-	4,789	6,161	260	39	11,249	3,200	
Vegetable or marine fatty acids (I.V. max 115)	37*	-	-	-	3	-	-	3	34	
Unsaturated fatty acids (I.V. 116 to 130)	3,894*	6,739	-	1,005	3,039	595	780	5,419	5,214	
Unsaturated fatty acids (I.V. over 130)	2,296*	1,013	-	12	896	-	22	930	2,379	
Total unsaturated fatty acids	24,230*	28,172	10	11,637	14,277	973	1,215	28,102	24,310	
TOTAL all fatty acids saturated & unsaturated	54,635*	70,827	46	25,529	40,219	2,578	1,662	69,990	55,520	

SP - single pressed DP - double distilled TP - triple pressed  
ND - not distilled SD - single distilled MD - multiple distilled  
\* Revised

totalled 85.9 pounds, an all-time high. Total consumption of fats and oils in edible and industrial products was estimated at 18.8 million pounds (includes only the fat content of butter and margarine).

Table I shows the types of oils used in various edible products. All data is from the July 1980 *Fats and Oils Situation* report (FOS 300) from the USDA's Economics, Statistics and Cooperatives Service. □

TABLE I. Production of edible products, fats and oils used in manufacturing (in million pounds).

	Soybean	Cottonseed	Corn	Peanut	Safflower	Olive	Palm	Coconut	Lard	Beef fats	Other
<b>Salad and cooking oils</b>											
1960	887	752	247	28		51					1
1965	1,564	915	239	53	9	44					
1970	2,471	527	246	139	12	62					7
1975	3,032	432	280	100	22	48					105
1979 <sup>a</sup>	4,060	403	317	98	27	52					75
<b>Shortening</b>											
1960	1,169	365						11	480	268	
1965	1,471	403					14	20	456	388	
1970	2,182	276					90	45	430	546	
1975	2,025	154					758	106	165	602	
1979 <sup>a</sup>	2,680	169					222	93	316	713	
<b>Margarine</b>											
1960	1,105	136	55						56	6	9
1965	1,112	114	161		20				90	9	29
1970	1,410	68	185		22				90	9	
1975	1,568	46	188		7				45	7	59
1979 <sup>a</sup>	1,643	25	222		5				76	10	

<sup>a</sup>Preliminary figures.

# Cargill opens sunflower plant

The first large-scale U.S. processing plant designed to handle sunflower began operations Oct. 6, 1980, when Cargill Inc. brought its new Riverside, North Dakota, plant into operation.

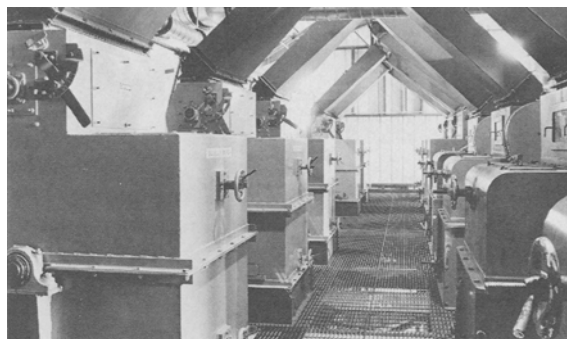
The elevator portion of the facility had been receiving seed since November 1979. The elevator can store up to 55,000 tons of seeds, 7,500 tons of sunflower oil and 2,500 tons of sunflower meal.

The elevator dries seed intended for export to 9.5% moisture; seed intended for processing into oil and meal is dried to 5-6% moisture. Most seed hulls are burned in the facility's steam-generating unit.

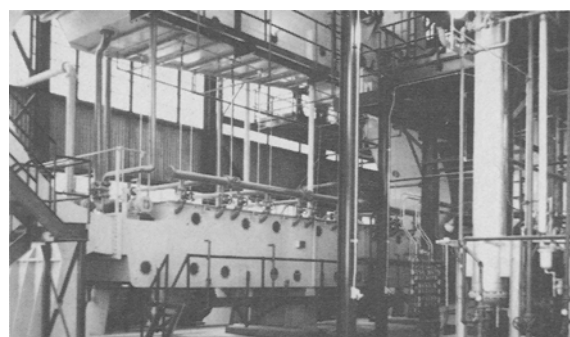
The cleaned, dried seeds are first pressed to remove about half of the oil content, then go to a solvent extractor to complete oil removal. The crude oil is filtered and then shipped to food processors for further refining or incorporation into products. Exported oil is shipped via Gulf of Mexico to customers in North Africa, Venezuela, Japan, New Zealand and Australia. Initial oil production is approximately 450 tons per day.

Total cost of the complex was approximately \$18 million.

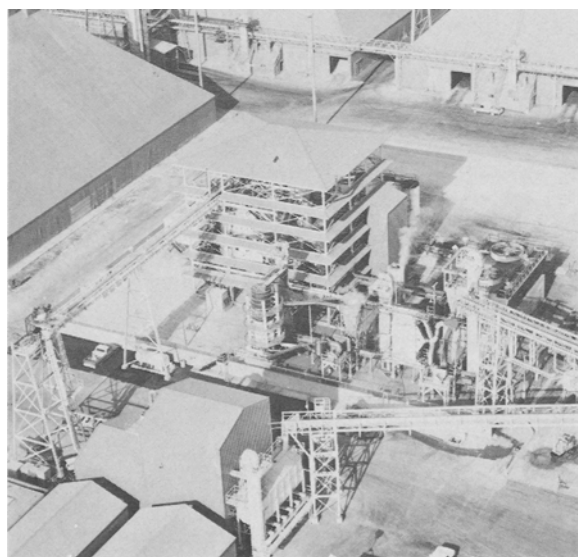
The complex reflects the increasing production of sunflower in the United States during the past decade. Other current sunflower processing in the United States is done at plants originally designed for other oilseeds, primarily flaxseed. □



Fifteen decorticators can each split 80 tons of seeds daily.



Crown Iron extractor similar to this one completes oil extraction.



The 1980 cottonseed crop is the first crop to be processed at the new Plains Cooperative Oil Mill extractor unit in Lubbock, Texas. The unit has a capacity of 1,200 tons per day, which the manufacturer (French Oil Mill Machinery Co.) says makes it the largest plant of its type in the world. The stationary basket extractor replaces a 750-ton-per-day vertical basket originally installed in 1951, also by French Oil Mill Machinery. Plains Cooperative Oil Mill produces bleachable prime summer yellow cottonseed oil. The new unit went on stream in May 1980.

## Food R&D discussed in article

"The Food Industry: Innovation and Industrial Structure" provides a brief review of research and development activities by food companies in the European and North American markets.

The article appeared in the September 1980 issue of the *OECD Observer*, a bimonthly publication of the Organization for Economic Cooperation and Development in France. Table I, from the article, lists the major multinational food firms based on 1976 food sales.

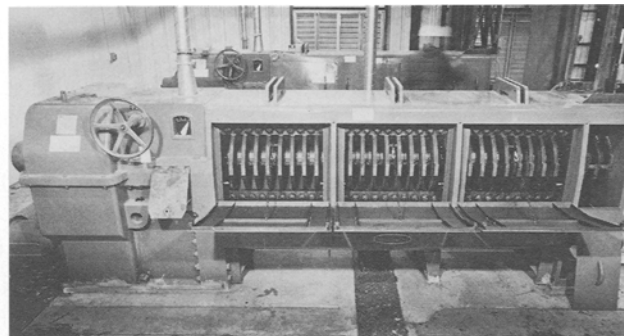
The article notes that food manufacturing has now taken dominance over food production or distribution; food industries in the United States bought 66% of total American farm production in 1975. All but 9% of the food sold by U.S. supermarkets that year had first been bought and processed by a food firm, the article said.

While large food firms maintain R&D labs, most food firms do not, relying on technological information provided by equipment manufacturers and suppliers. For 1976, the article estimates more than 90% of the food R&D expenditures of \$302 million were accounted for by three dozen firms.

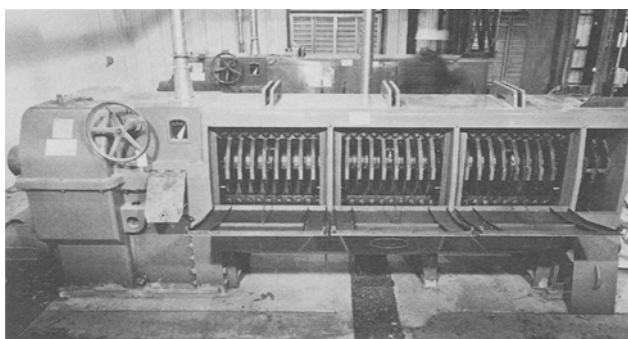
In the past, product innovation has been the major focus of food R&D, the article says, even though only 55 out of each 1,000 new items tested eventually are marketed. Most successful new products have been achieved through marketing of traditional foods in a more convenient form. □



Eight dehulling units separate hulls and meats.



Expeller presses remove about half the oil from seeds.



Oil from expeller presses is filtered at rate of 500 tons a day.



Twin towers at left can dry 15,000 tons of seeds daily.

The Fifteen Leading Food Firms (rank-ordered by 1976 food sales)

Rank	Parent company	Home country	Food processing revenue (\$ US million)	Total revenue		Net income		Total assets	
				Amount (\$ US million)	Proportion foreign (%)	Amount (\$ US million)	Proportion foreign (%)	Amount (\$ US million)	Proportion foreign (%)
1	Unilever Ltd.	Neth/UK	8,741.2	17,638.4	40.0	1,276.8	51.0	5,977.8	35.9
2	Nestlé Alimentana, S.A.	Switzerland	6,247.8	7,247.8	95.0	n.a.	n.a.	2,693.0	n.a.
3	Kraft Inc.	US	4,775.8	4,977.0	15.1	135.7	n.a.	1,016.0	n.a.
4	General Foods Corp.	US	4,401.6	4,910.0	25.8	127.3	15.3	1,085.0	28.0
5	Esmark Inc.	US	3,955.2	5,300.6	16.0	82.6	14.4	710.6	17.2
6	Beatrice Foods Co.	US	3,943.0	5,289.0	21.2	182.8	19.9	1,158.0	27.3
7	Coca-Cola Co. Inc.	US	2,911.5	3,032.8	44.0	285.0	55.0	1,356.5	37.0
8	Greyhound Corp.	US	2,384.9	3,738.1	n.a.	77.1	n.a.	652.3	n.a.
9	Ralston Purina Co.	US	2,365.5	3,393.8	24.4	125.9	13.9	765.5	13.8
10	Borden Inc.	US	2,336.3	3,381.1	16.0	260.5	20.0	938.2	16.7
11	United Brands Co.	US	2,130.4	2,276.6	25.6	16.3	n.a.	499.0	68.6
12	Iowa Beef Processors Inc.	US	2,077.2	2,077.2	—	26.8	n.a.	134.3	—
13	Imperial Group Ltd.	UK	2,070.5	5,789.9	11.7	132.1	n.a.	1,485.5	n.a.
14	Archer-Daniels-Midland Co.	US	2,065.5	2,118.5	26.7	61.4	n.a.	415.4	n.a.
15	Pepsico Inc.	US	2,051.2	2,727.6	20.8	136.0	15.0	753.0	22.3

Source: United Nations Centre of Transnational Corporations. Reprinted from *OECD Observer*, September 1980.