

# THE FOUR CORNERS...



By **EUGENE MARSHACK**, Chairman,  
International Relations Committee;

**NOLLY SIRKIS, BERTRAM HUDSON, K. S. KRISHNAN, TERUZO ASAHARA, H. NIEIADAMSKI, REINHARD MARCUSE and EDUARDO VIOQUE**

Corresponding Secretaries

## Argentina . . . . . Nolly Sirkis

### Oilseed Marketing

After a year's experience using the regulations for marketing sunflower seed and peanuts (JAOCS, December, 1968) the National Grain Board introduced the following changes for the 1969-70 harvest: The oil content of the sunflower seed must have a basis of 33%, as opposed to the previous 31% norm; the FFA of the fatty material of the seed must have a basis of 1.5%, as opposed to the previous 1.0%. The method for determining the oil content in seeds underwent some slight changes. The main one was the analysis of the fatty material in the clean seed.

### Crops

#### Sunflower

The 1969-70 harvest shows that sunflower is still by far the most important oilseed in Argentina. Its volume was last estimated at 1,140,000 metric tons, though some private sources say it could have reached 1,200,000 tons. This is a record crop in Argentina. The prospects for 1970-71 are most favorable due to the high earnings of the producers and the drought which prevented the sowing of wheat in many zones which will now be sown with maize sorghum or sunflowers. The persistent rains of September temporarily removed the danger of drought, and, if weather conditions remain favorable, the next harvest will be record-breaking for Argentina.

Although about 120,000 metric tons of sunflower oil are available for export in 1970, only 100,000 metric tons will be exportable; a government disposition set the limit to avoid the steady increase of vegetable oil prices in the local market.

#### Peanuts

At the last estimate, Argentina produced 170,000 metric tons of unshelled peanuts in 1969-70.

#### Cotton

Exceptional weather conditions in the cotton area allowed a big harvest of 270,000 metric tons of cottonseed (about 35,000 metric tons of cottonseed oil) in 1969-70.

This volume is not expected to be repeated in 1970-71, due to the carryover of fiber, and since producers have devoted their land to more profitable cultivations. The sowing of sunflower seeds has increased significantly in the typically cotton area.

#### Soybeans

In spite of the promotion for increasing cultivation of soybean, the volume of the crop remains stationary. It was 27,000 metric tons in 1969-70.

### New Variety of Flaxseed

The Experimental Station of Paraná (Province of Entre Rios) of the Instituto Nacional de Tecnología Agropecuaria (INTA) announced that a new variety of flaxseed was obtained, which will be called Tape Paraná INTA. It resulted from the crossing of Tape Paraná Taragui with

H 496 F.S.33. From the former it received its resistance to over-twinning and withering, and from the latter, its good industrial quality, i.e., high content and good quality of oil.

This experimental station has a collection of about 2,000 varieties of flaxseed from all parts of the world and uses them to obtain new varieties.

### Meetings

—The Fourth Symposium of the Oil Industry took place in Buenos Aires between November 12 and 14. It was organized by the School of Chemical Engineering of the University of Sta. Fe, as usual, but this year it was the first Latin American Symposium. The chairman was E. A. Elena, and delegates from Brazil, Colombia, Mexico, Paraguay, Uruguay and Spain attended. The main subject of the symposium was "Increase of Oil Production."

The program included the following:

Technological Session: (a) New Varieties of Oilseeds; (b) Hydrogenated Oils; (c) By-products.

Food Chemistry Session: Typification of Hydrogenated Oil Within the Latin American Market.

Economic Session: (a) Increase in the Production and Development of Regional, National and Latin American Economy; (b) The American Oil Map; (c) Coordination and Exchange of Technical Reports and Latin American Statistics.

—The Second Soybean National Technical Meeting took place in Buenos Aires between September 7 and 9. It was organized by the Faculty of Agronomy and Veterinary of the University of Buenos Aires and was sponsored by the Instituto Agroindustrial de Oleaginosos (IADO) and the Instituto Nacional de Tecnología Agropecuaria (INTA).

The following were some of the works presented:

Importance of Soybean for the Argentinian Oil Industry, Dr. Panellada.

Bioclimatic Requirements for Cultivation of Soybeans in the Blossoming Sowing Subperiod, A. J. Pascale.

Comparative Experiments With Soybean Varieties in Tucumán, V. Hemsy.

Soybean Cultivation in Brazil, F. de J. Verneti (Brazil) Experiment With Herbicides and Soybean Doses (Province of Tucumán), V. Hemsy.

Density of Soybean Sowing, Yield and Other Characteristics of the Plant, C. Remussi.

Soybean Cultivation in Misiones, L. A. Belabert.

Soybean Cultivation in Tucumán, V. Hemsy

Soybean Cultivation in Southwest Buenos Aires, M. A. Videla.

Development, Present and Future of Soybean Cultivation in Brazil, F. de T. Verneti.

Soybeans in Human Feeding, E. R. Morandi.

Versatility of Soybean Use, Manrique.

Use of Soybean Milk in Feeding, E. R. Morandi.

Industrialization of Soybeans for the Production of Human Food Products, Pommier Prado.

How to Increase Soybean Sowing in Argentina, E. B. Zeni.

Soybean Exportation, N. Stancanelli.

Soybeans as Source of Food for Man, A. Paguini.

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During this meeting, the Grain Exchange suggested that the cultivation of soybeans in every suitable area be promoted as a matter of national interest. The project was approved.

### Activities of the Argentinian Institute of Fats and Oils (IAGA)

—Present activities of the IAGA laboratorise concentrate mainly on two subjects. The following are the working plans:

1. Vegetable protein concentrates:
  - (a) Choice of raw material, preferably solvent-extracted meal.
  - (b) Research of appropriate method for the extraction of proteins.
  - (c) Purification of protein extract.
  - (d) Analysis of composition in amino acids, supplementation with those lacked.
  - (e) Study of the changes necessary for its future use.
  - (f) Cost reckoning.

The first results of this work were published in IAGA Journal Vol. 2, No. 1, 1970.

2. Production of a vegetable, animal or mixed fatty material which could be added to skimmed milk to produce an economical whole milk:
  - (a) Choice of an economical fatty material of a composition most similar to that of milk fat.
  - (b) Study of the process to modify the melting point.
  - (c) Research for an adequate emulsifier.
  - (d) Biological tests on the fattening of calves with this milk.
  - (e) Cost reckoning.

—A short course on the processes of elaboration of animal fats and by-products from the meat packing industry was organized by IAGA starting September 22. This course was given at the Technical School Otto Krause by IAGA staff and by professionals from other firms related to this subject. The attendance of 41 experts indicated the great interest it promoted.

### Shell Award for Scientific Work

P. Cattaneo received the Shell Award in recognition of his scientific and technological research. Dr. Cattaneo, member of the AOCS, is titular professor in the School of Sciences of the University of Buenos Aires. He has done research work in the field of food chemistry, especially fatty acids, for 30 years.

## Great Britain . . . . . Bertram Hudson

### Scientific Activities in Oils and Fats

The 1970–1971 Program of the Oils and Fats Group of the Society of Chemical Industry has begun under the continued Chairmanship of F. D. Gunstone of the University of St. Andrews. The new Secretary is B. K. Bullimore of Lyons Central Laboratories. Two meetings have already been held, the first being addressed by C. R. Elson of the British Food Manufacturing Industries Research Association on Chocolate Processing, and organized jointly with the Food Group. The second meeting broke new and highly topical ground—G. Eglinton of the University of Bristol talked to members on The Search for Organic Compounds in the Returned Lunar Samples.

Members are now looking forward to our Fourth International Lecture, this year by Professor D. Swern of Temple University, Philadelphia, who will speak on Some New Reactions of the Oxirane Group. The 1970 part of the Program will conclude with a further joint meeting with the Food Group, which will be addressed by G. R. Howat of Cadbury Schweppes Ltd., and will deal with Chocolate Composition—The Fat Content.

In the New Year the Group will meet in Liverpool to hear W. R. Morrison of the University of Strathelyde speak on Wheat Flour Lipids. A later meeting will be devoted, as in the two previous years, to original papers on specialized topics, an occasion which provides an opportunity for younger members to give first-hand accounts of current research, and which has previously been very successful. There will also be a symposium on Milk Lipids, but details of these two meetings have yet to be announced. As is customary the Session will close in April with the Chairman's address, this time on Some New Reactions of Unsaturated Long Chain Acids, a field in which Dr. Gunstone's Original work is widely known.

## India . . . . . K. S. Krishnan

### Oil Technologists' Association of India

#### Central Zone

A seminar on "Fatty Oil Industries in U.P., M.P., Bihar and Rajasthan States" was organized on November 21 and 22, 1970, at the H.B.T. Institute in Kanpur. It covered three industries: solvent extraction, fatty acids and detergents. The convener of the symposium was N. S. Rajagopal, H. B. T. Institute, Kanpur, 2.

#### Northern Zone

The 26th Annual Convention of OTAI and a symposium on "Oils, Fats and Their Products in the Seventies" will be held on January 16 and 17, 1971, at Vigyan Bhavan, New Delhi. It will be divided into three sections:

1. Resources. Improvements in farming techniques and development of improved varieties of seed, increasing production of marine oils and animal fats, minimizing losses during storage, handling and marketing of seeds and oils and development of oleaginous forest products.

2. Processes and Equipment. Processing of minor oils, substitution of edible oils for industrial products, modern technique and equipment for extraction, neutralization, bleaching, hydrogenation and deodorization and import substitution in equipments for oil processing.

3. Products. Vanaspati with polyunsaturated fatty acid (PUFA), shortening-bakery fats and edible refined oils.

The convener of the symposium is S. S. Ramaswami, Dy. General Manager, D. C. M. Chemical Works, New Delhi, 15.

#### Southern Zone

A seminar on Re-evaluation of Hydrogenated Fats, was held on April 11 and 12, 1970, at the Regional Research Laboratory, Hyderabad, 9. About 175 delegates, including research scientists, technologists, manufacturers of hydrogenated products and government officers dealing with regulations and standards, attended. Indian and foreign scientists, viz., G. C. Boyd, J. W. E. Coenen, A. Crossley and R. M. Starr, participated. V. G. Rajadhyaksha, Chairman of Hindustan Lever Ltd., Bombay, inaugurated the seminar.

A pamphlet issued by the organizers stated, "Hydrogenated hard fats have achieved distinct consumer popularity in India. Yet viewed in the light of current nutritional thinking, their content of polyunsaturated fatty acids is disquietingly low." The seminar was organized to suggest what specific measures at various levels, such as government standards and specifications, manufacture and research, could be taken to meet this situation. Prior to the seminar, all the participants received background material by several authorities in this field providing information on such aspects as the nutritive value of fats, including vanaspati as now manufactured, the place of hard fats in the Indian diet, the present specifications for vanaspati, and the types, specifications, methods of manufacture and nutritive value of the many edible hard fats now being produced in Europe and the U.S.

These papers formed the basis for three discussion sessions. Another session was devoted to the research efforts

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being made in India in associated areas. At the final session, recommendations for consideration by various bodies were made.

A follow up committee of four, with K. T. Achaya as chairman, was instituted to set down the recommendations of the seminar and to initiate follow up action. It was generally agreed that the fortification of vanaspati with natural linoleic acid to a 10% level was desirable, and that this could be done by making it mandatory to add a total of 10% sesame oil and 5% safflower oil to the product. At the same time, a comprehensive plan for research, development and testing involving the industry, research laboratories and nutritional institutes could be drawn up by the committee to elicit support from industry and organizations such as the Council of Scientific and Industrial Research, Indian Council for Agricultural Research and Indian Council for Medical Research. Thus a variety of products containing various levels of polyunsaturated fatty acids (PUFA) should be prepared and examined for technological feasibility, shelf life, appearance, nutritional value, packing, etc., under tropical conditions. A margarine of high PUFA content derived from hydrogenated fat and containing permitted color, flavor and additives of nutritional value may be developed to determine consumer and market reaction.

The seminar was cosponsored by the following organizations: All India Cottonseed Crushers' Association, Council of Scientific and Industrial Research, Hindustan Lever Ltd., Tata Oil Mills Company Ltd., Tungabhadra Industries Ltd., USAID and Vanaspati Manufacturers' Association of India. The organizing committee consisted of the following members: K. T. Achaya, N. Bhojraj Naidu, V. V. S. Mani, K. S. Murti (deceased) and M. R. Subbaram. Convener of the seminar was S. Venkob Rao, Regional Research Laboratory, Hyderabad, 9.

The following lectures were arranged: Hydrogenation of Oils, by W. J. Lehmann, Technical Expert, National Soyabean Processors' Association, U.S.A., on February 11, 1970; Fundamentals of Vinyl Polymerization, by P. C. Chatterjee, Scientist, Regional Research Laboratory, Hyderabad, on July 10, 1970; NMR in Lipids, by R. Kannan, National Institute of Nutrition, Hyderabad, on August 6, 1970; Chemical Derivatives of Castor Oil, by K. T. Achaya, Deputy Director, Regional Research Laboratory, Hyderabad, on August 28, 1970.

A two day demonstration-lecture on Aflatoxins was organized at the Central Leather Research Institute, Madras, on December 12 and 13, 1970, for the benefit of peanut growers, oil millers and oil cake exporters.

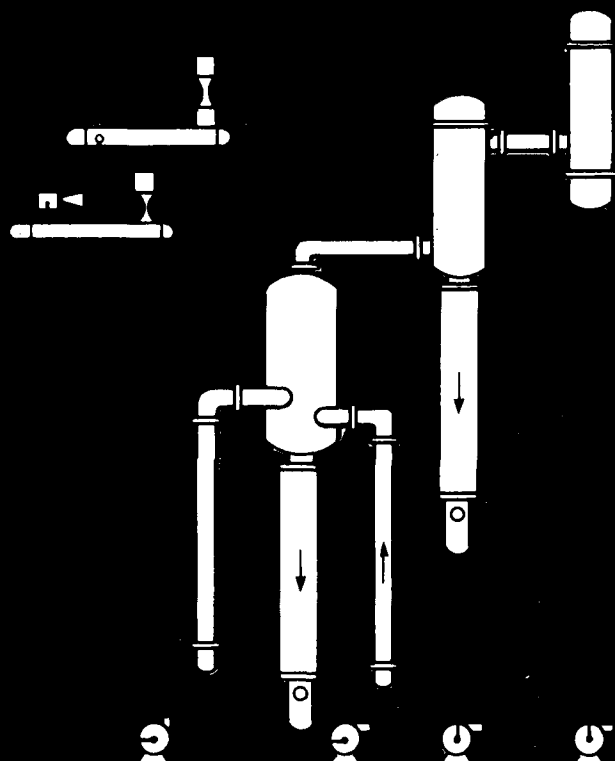
A condolence meeting was held on September 3, 1970 to mourn the sudden death of the Southern Zone President, K. S. Murti, at the Regional Research Laboratory, Hyderabad.

### Western Zone

—Refresher Course: The Third Refresher Course was organized with the support of the National Soyabean Processors' Association, U.S.A., in January-February, 1970. It was inaugurated by B. P. Godrej, Managing Director of Godrej Soaps (Pvt) Ltd. Twenty candidates from India participated. Lecturers included leading scientists and technologists from universities, research institutions and industry. J. G. Collingwood, Research Director, Unilever, London, and W. J. Lehmann of N.S.P.A., U.S.A. also lectured. The lecture topics of the course included chemistry, processing, economics, nutrition, toxicology and analytical techniques of oils and fats. The course was conducted at Hindustan Lever Training Center at Worli, Bombay. The practical classes were conducted in U.D.C.T. and Hindustan Lever Research Center, Bombay.

The course was highly appreciated and Certificates were presented to the participants by V. G. Rajadhyaksha, Chairman of Hindustan Lever Ltd. The following lectures were arranged: Commercial Synthetic Fatty Materials, by K. T. Achaya, on February 2, 1970; Aerosol Packaging, by J.

(Continued on page 588A)



## PROBLEM

Removal of approximately 1% light ends and 3% heavy ends from Glycerine at a feed rate of 1500 PPH.

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