

# THE FOUR CORNERS...



By EUGENE MARSHACK, Chairman  
International Relations Committee;  
and K. S. MARKLEY,  
MADHU SAHASRABUDHE,  
HAROLD JASPERSON, TERUZO ASAHARA  
and HELMUT KORP, Corresponding  
Secretaries

## Brazil . . . . . K. S. Markley

L. Hartman, Fats Research Laboratory, Department of Scientific and Industrial Research, Wellington, New Zealand, is presently on a leave of absence to serve for 21 months as an advisor for the Food and Agricultural Organization of the United Nations with the Centro Tropical de Pesquisas e Tecnologia de Alimentos at Campinas, Sao Paulo. (He is acting as advisor to this relatively new research institute in developing a program of fat and oil research.) Since arriving in Brazil Dr. Hartman has visited oil products manufacturing factories in Rio de Janeiro and Sao Paulo and expects to visit other plants in Porto Alegre in the state of Rio Grande do Sul. In a recent letter he stated with respect to his visits to these factories "I can only confirm your opinion as to the high development of the Brazilian Fat Industry."

## Canada . . . . . Madhu R. Sahasrabudhe

### Committee on Fats and Oils Meets

The Canadian Committee on Fats and Oils (CCFO), a government-sponsored committee under the auspices of the National Research Council, meets annually to review the fats and oils situation in Canada and to discuss research reports. At the meeting this year, held October 11-12, a one-day symposium on "Developments in the Production and Utilization of Marine Oils in Canada," was organized by R. G. Ackman of the Fisheries Research Board, Halifax.

The marine oils were considered as follows: 1) "Fatty Acid Composition of Marine Oils," by R. G. Ackman, Fisheries Research Board, Halifax, N.S.; 2) "Production Statistics," by L. G. Rupert, Department of Industry, Ottawa; 3) "Herring Fishery and Processing on the Pacific Coast," by K. Andrews, B.C. Packers Ltd., Vancouver, B.C.; 4) "West Coast Regulations Affecting Herring Industry," by C. R. Levelton, Department of Fisheries, Ottawa; 5) "Herring Fishery and Processing on the Atlantic Coast," by P. M. Jangaard, Fisheries Research Board, Halifax; 6) "Prospects for the Sealing and Whaling Industry in Canada," by E. B. Young, Department of Fisheries, Ottawa; 7) "Problems of Utilization of Inedible Fish Oil and Soapstock," by D. Hey, Harchem Limited, Toronto, Ontario; 8) "Fish Oils in Poultry Rations," by J. Biely, University of British Columbia, Vancouver; 9) "Marine Oils and the Codex Alimentarius," by R. P. A. Sims, Food Research Institute, Canada Department of Agriculture, Ottawa.

Following the presentation of papers, a panel discussion on the "Utilization of Marine Oils" was chaired by L. G. Rupert. Members on the panel included the major marine oil producers and processors in Canada.

The panel recommended the following objectives:

1. A Uniform Quality Standard. Some processors use a standard based on FFA (2.0% max) and bleached color (5.0 Red max). It was felt that the producers should have no difficulty in meeting a uniform standard.

2. Improved processing techniques. It was suggested that experimental batches of marine oil be prepared under "ideal" conditions for evaluating of oil quality.

3. A study on flavor stability of marine oil with respect to fatty acid composition, unsaponifiable matter, conditions of hydrogenation and use of antioxidants.

4. New methods for the evaluation of quality and flavor stability.

5. A study on hydrogenation characteristics of marine oils with particular reference to the catalyst.

On the second day of the meeting, current research reports from government laboratories, Universities and Industries were reviewed and discussed.

## Great Britain . . . . . Harold Jasperson

On May 18th Ewart Jones, Waynflete Professor of Chemistry at Oxford University and President of the Chemical Society, formally opened the new Unilever Research Laboratory at The Frythe, Welwyn, Hertfordshire.

Research at the Frythe is an extension of the traditional field of edible oils and fats and embraces both applied and basic studies of ice cream, the baking processes and baked foods, the properties of phospholipids and long term studies regarding the way in which these properties are modified by interaction with proteins, i.e., where the interacting molecules are food, detergent or cosmetic in nature.

The Second International Lecture of the Oils and Fats Group of the Society of Chemical Industry was given on October 24th by H. A. Boekenoogen, on the subject "Straight Carbon Chains in Nature." The President of the Society, Ronald Holroyd, presided. Among those present from overseas was Carter Litchfield of the University of Texas who was visiting the Unilever Research Laboratory, Welwyn, and other research centers.

A full program has been arranged by the Oils and Fats Group for the 1966/67 session and members of the American Oil Chemists' Society visiting the United Kingdom will be welcomed at the meetings.

Nov. 16, 1966	London	Measurement of rheological parameters and their application to some common foodstuffs.
Dec. 5, 1966	Hull	Tall oil.
Dec. 8, 1966	Liverpool	Tropical fats and oil seeds
Jan. 10, 1967	London	DAG/D oil refining plant.
Feb. 7, 1967	London	Biosynthesis of unsaturated fatty acids in plants.
March 13, 1967	London	Emulsions and emulsifiers in the food industry: four lectures.
April 19, 1967	Edinburgh	Epoxy curing agents from conjugated esters

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May 2, 1967

London

The contribution of British science and industry to the improvement of tropical fats and oilseeds.

Further information can be obtained from the office of the Society of Chemical Industry, 14 Belgrave Square, London S.W.1, or from the writer.

An appeal has been launched to establish a fund to provide a permanent tribute to the memory of T. P. Hilditch in the form of Memorial Lectures. Chemists from many countries are signatories to the appeal and include W. C. Ault and W. O. Lundberg of the USA. Members of the American Oil Chemists' Society are invited to contribute to the appeal by sending donations to Martins Bank Ltd., Water Street, Liverpool, England, and made payable to the Hilditch Memorial Fund.

*Japan . . . . . Teruzo Asahara*

**Soaps and Detergents Industry**

**Marketing**

During the last decade, growth of the detergent industry has been remarkable and, in 1963, production of detergents exceeded that of soaps. It is estimated that over 500,000 metric tons will be produced in 1970.

**Suppliers**

Domestic production of detergent alkylate (hard type) was started in 1962 by two petrochemical firms and now two more companies have entered into this field. The newest of these companies went on stream for linear alkylate production in April of 1966.

Total production capacity of alkylate is announced to be 92,000 metric tons per year but with the addition of the two new firms, a capacity of 137,000 metric tons is anticipated by the four firms combined.

**Soap Producers**

There are seven major soap producers manufacturing and marketing household detergents; their market share is estimated at over 80%. Of these seven, two soap producers are dominating the detergent market and their share is presumably over 60%.

Since the detergent industry has grown so rapidly, many chemical process companies have recognized that it is a large potential market and are entering into this field as suppliers of raw materials such as alkylates, alcohols, or "builders." But the final products, household detergents, are marketed by very few soap producers, as mentioned above, and it seems that these producers have a disproportionate influence in establishing policy.

**Biodegradable Detergents**

In the past few years, especially since the legislative intention to ban hard ABS in West Germany was reported, many discussions on biodegradability have heard; the appearance of foam in streams has been consistently blamed on detergents. This controversy had reached its peak at about the time that West Germany and the US switched over to linear alkylate in 1964 and 1965.

Since many individuals would have been affected by this situation, many soap producers began marketing new

liquid dishwashing detergents containing LAS in 1965 and heavy-duty powder in 1966. This movement is quite voluntary but also aims at extending the market share for the individual soap producer.

**Measurement of Biodegradability**

During the course of this biodegradability controversy, two official organizations were established in the Ministry of International Trade and Industry (MITI), and two scientific divisions have been set up within the Japan Oil Chemists' Society (JOCS) since 1963.

The Biodegradability Division under JOCS reviewed German, British and Soap and Detergent Association (SDA) methods and found the Shake Flask Method of SDA acceptable in Japan after several joint experiments including variations of activated sludge and assimilation conditions.

Since the Biodegradability Division had an obligation to MITI to recommend the draft for the Japan Industrial Standard (JIS) method of detergent biodegradability, and since most of the active ingredients in Japanese detergents were alkylbenzene sulfonate, the Division aimed to establish the simplest and least expensive method for LAS/ABS. Further, they intended that the method adopted be universal.

The draft was reported to MITI in March of 1966 and is now under study by the JIS committee of MITI which will reach its conclusions by the end of 1966 or early 1967.

**Prospect**

There will be no compulsory legislation for the switch-over to biodegradable detergents, but by issuing the JIS "mark" for individual brands of biodegradable detergents, soap producers will gradually change over to biodegradable products.

*Sweden . . . . . Helmut Korp*

**International Society for Fat Research Meets**

Nearly 600 scientists from more than 30 countries attended the 8th Congress of the International Society for Fat Research at Budapest, Oct. 10-16, 1966. The meeting was an outstanding opportunity for fat chemists from West and East to exchange ideas and to get acquainted with each other. Unfortunately only a few US scientists attended the meeting, probably because of the AOCS meeting in Philadelphia.

Among the AOCS members who contributed to the Budapest meeting were A. Rutkowski (1965), G. Jacini (1951), H. Niewiadomski (1965), G. Maerker (1960), W. C. Ault (1941), M. Naudet (1966), and R. Paoletti (1963).

The ceremonial session was opened by J. Holló, President of the ISF. Z. Babos, Deputy Minister of Food, welcomed the members on behalf of the Hungarian Ministry of Food and the Hungarian Scientific Society for the food industry. A. Gerecs, member of the Hungarian Academy of Sciences, welcomed the group on behalf of the department of chemical sciences.

The lectures of the ceremonial session were given by Henrik Dam, Denmark (Vitamin E Deficiencies and Their Relation to Edible Fat), and P. V. Naumenko, USSR (The Main Problem of Scientific and Technological Improvements in the Oil and Fat Industry of the USSR).

The social program included a performance at the National Opera House with works by Béla Bartók. The highlights of the program were a banquet at the Citadella Restaurant and a wonderful excursion to Lake Balaton.

The 8th Congress of the International Society for Fat Research was very well organized and everybody appreciated the warm hospitality of our Hungarian hosts. The unique position of Budapest near the borderline between West and East created a fruitful atmosphere of exchange of ideas between all scientists the world over.

I should like to express my gratitude to J. Holló and his co-workers for all the work done in organizing the congress.

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