

# THE FOUR CORNERS...



By EUGENE MARSHACK, Chairman,  
International Relations Committee;  
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EDUARDO VIOQUE and REINHARD  
MARCUSE,  
Corresponding Secretaries

India . . . . . K. S. Krishnan

## Oil Technologists' Association of India

### Central Zone

A seminar on Sal Seed (*Shorea robusta*) was held at Harcourt Butler Technological Institute, Kanpur, on November 21, 1969.

Sal is one of the forest trees of Eastern India, having a potential to yield about 600,000 tons of sal-fat per annum. Its exploitation depends on effective collection of sal seeds prior to onset of monsoon (i.e., summer rains), which is engaging the attention of Government forest-departments, private contractors and related agencies.

The seminar was inaugurated by B. Gopala Reddi and Governor Uttar Pradesh, and presided over by Hirdey Narain. It was divided into three sessions: Availability and Collection of Sal Seeds (Chairman, N. S. Maini); Processing and Technology (Chairman, K. T. Achaya); and Chemistry, Analysis and Utilization (Chairman, D. R. Dhingra). Special lectures were delivered by T. R. Seshadri on Multiple Uses of Trees, and by K. T. Achaya on Commercial Synthetic Fatty Materials.

The seminar was convened by N. S. Rajagopal.

### Eastern Zone

The 25th OTAI Annual Convention and Seminar was held in Park Hotel, Calcutta on January 10 and 11, 1970. It was inaugurated with a thought-provoking presidential address by T. R. Seshadri, F.R.S., President of OTAI. Also addressed by S. N. Mukherjee, Minister for Agriculture of the Government of West Bengal and the Vice-Chancellor of Calcutta University.

The seminar was divided into three sessions: Developments in Processing and Testing Techniques (Chairman, T. R. Seshadri); Synthetic Detergents and Their Impact on Soap Industry (Chairman, J. G. Kane); and Import Substitution in Paint Industry (Chairman, A. S. Bhaduri).

The seminar was convened by M. M. Chakrabarty, University College of Science and Technology, 92-Acharya Prafulla Chandra Road, Calcutta-9.

### Northern Zone

The 26th Convention and Symposium of OTAI will be held in New Delhi on January 16 and 17, 1971. The theme for the symposium will be Planning for Oils and Fats in the Seventies. The seminar will be convened by S. S. Ramaswamy, Production Manager, M/s., The D.C.M. Chemical Works, Najafgarh Road, New Delhi, 15.

### Southern Zone

A seminar on Re-evaluation of Hydrogenated Fats was convened by S. Venkob Rao at the Regional Research Laboratory, Hyderabad, A.P., on April 11 and 12, 1970. It was organized to review the nutritional aspects of hydrogenated edible fat, with particular reference to the content of polyunsaturated fatty acids.

The seminar was attended, among others, by G. C. Boyd, J. W. E. Coenen and A. Corssley from the United Kingdom and R. M. Starr from the United States, whose contribution to the seminar was very significant.

Other activities of the zone included a lecture on Hydrogenation of Oils, by W. H. Lehmann of the National Soybean Processors' Association of the United States, on February 11, 1970.

### Western Zone

A seminar on Synthetic Detergent Industry, Its Problems and Prospects was held in Taj Mahal Hotel, Bombay on November 22 and 23, 1969. It was inaugurated by Padmabhusan N. N. Godbole.

The seminar was divided into five sessions as follows:

Session 1: Chemistry and Raw materials (Chairman, B. P. Godrej). Papers: Chemistry of Synthetic Detergents, by D. Rebello, A. D. Hydrocarbons, by S. Varadarajan; STPP, by V. N. Godbole; Builders Other Than STPP, by N. R. Bhow; and Optical Brightener, by S. Chatterji.

Session 2: Processing (Chairman: T. Thomas). Films and papers: Ballestra Sulfonation and Spray Drying Plants, by Saporoti; Mazzoni Sulfonation and SLB Plants, by D. D. Daftary; Chemithon Sulfonation System, by M. S. Misra; Techno-economic Considerations on Oleum and SO<sub>2</sub>-Sulfonation, by K. S. Krishnan; and Spray Drying Technique, by D. N. Daruwala.

Session 3: Surface Active Products (Chairman: S. M. Mistry). Papers: Raw Materials, by M. D. Dhamankar; Condensation Products, by R. R. Shah; Alcohol Sulfates by V. M. Kale; Emulsifiers, by B. B. Bhagalkote; and Applications of Surface Active Products, by M. V. Nimkar.

Session 4: Storage, Handling and Packing (Chairman: K. K. Ajila). Papers: Storage and Handling of Detergents, by Y. P. Pundol and M. A. Bhatt; and Packaging Problem, by M. C. Patel.

Session 5: Marketing (Chairman: M. A. Wadud). Papers: Marketing of Household Detergents, by J. C. Chopra, H. K. Lall and P. K. Choudhary; and Marketing of Industrial Detergents, by S. M. Mistry.

There was a special popular lecture on Detergents by B. M. Milwidsky of Haifa, Israel, which was presided over by V. G. Rajadhyaksha. The seminar was convened by N. R. Bhow, General Manager (Projects), M/s. The Tata Oil Mills Co. Ltd., Bombay House, Bruce Street, Bombay-1.

## Oil Technological Research Institute, Anantapur

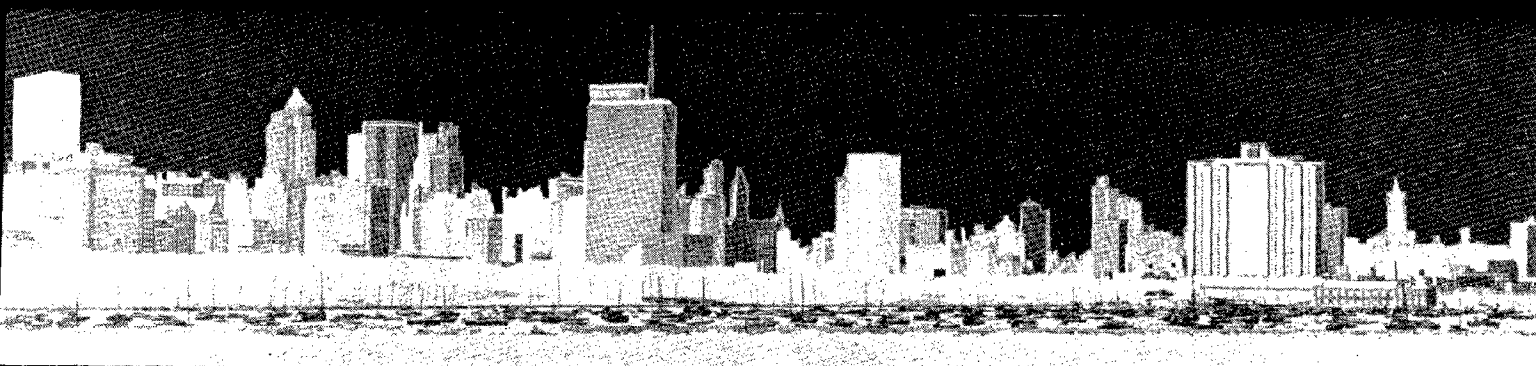
The following is a write-up on recent research conducted by the Oil Technological Research Institute, Anantapur, A.P.:

### Sesame Seed Dehusking

Sesame seed is gaining limelight in recent years as a source of nutritious protein. The outer cuticles, which are of unattractive color and contain oxalic acid and crude fiber, hinder more extensive use of sesame seed especially as a source of protein. A simple, continuous mechanical method of decuticling sesame seed is, therefore, developed at the Institute. The method consists of soaking sesame seed in water, passing the moist seed between two discs (one of which moves and the other remains stationary), washing away the loosened skins, and drying the dehusked seed in sunlight or artificial dryers.

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# Chicago, Illinois, Scene of the 44th Fall Meeting of AOCS and 10th Biennial Congress of ISF September 27-October 1, 1970



## All Roads Lead to Chicago

There are certain spots on the globe that were meant by destiny to occupy key positions no matter what the change in civilization or the new twists in man's developments with their attendant results on his habits, and one of these is Chicago.

Situated at the bottom of Lake Michigan in the richest section of the Mississippi Valley and within a few hundred miles of both the nation's center of population, as well as its geographical center, Chicago occupies a strategic location unparalleled anywhere.

This Fall, the spotlight is on Chicago, as it plays host to the 44th Annual Fall Meeting of the American Oil Chemists' Society in joint session with the 10th Biennial Congress of the International Society for Fat Research, at the famed Conrad Hilton Hotel September 27 through October 1st.

With world food problems being brought more into focus, and with the reformulation of soaps, detergents and cosmetics moving at a rapid pace, this World Congress should be the most important marketing event in the oils and fats industries in 1970.

## Technical Program

Bob Reiners and his excellent staff have put together the most comprehensive technical program ever prepared for a meeting of this type. Papers will be presented on the scientific, technological and economical aspects of oils, other lipids and associated substances. The program will consist of four daily plenary lectures by invited speakers, a broad array of symposia and many reports of original research divided into topical sessions. As an example of the excellent quality of the symposia being offered, we are advised that Reinhard Marcuse of the Swedish Institute for Food Preservation Research at Göttenborg, Sweden, has assembled an imposing group of speakers for his symposium on "Metal Catalyzed Lipid Oxidation." Abstracts of the complete technical program will appear in the July issue of your AOCS Journal.

In addition, two excellent short courses have been scheduled in conjunction with the World Congress; one immediately before the Congress and one immediately after. They are: "Processing and Quality Control of Fats and Oils" and "Behavior of Membrane Lipids at Surfaces." These courses are expected to appeal to a broad spectrum of participants, from both industry and the academic world as well. Do not overlook the opportunity to attend one or both of these fine courses.

There will also be an International Conference on the "Science, Technology and Marketing of Rapeseed and Rapeseed Products," at the Le Chantecler Hotel, Ste. Adele,

Quebec, Canada, September 20-23. This Conference is being organized by Bernd Weinberg of the Edible Oils Section, Department of Industry, 112 Kent Street, Ottawa 4, Ontario, and requests for additional information should be addressed to him.

## Plant Visits

The Chicago Area provides an important concentration of industrial and academic facilities devoted to the various facets of the fat, oil and lipid sciences. Visits to a number of these outstanding plants and laboratories will be available to registrants.

## International Fats and Oils Exposition

The first truly "international" Fats and Oils Exposition will be held in conjunction with the World Fat Congress. Here is an opportunity for all registrants to examine and discuss the latest innovations in laboratory and plant equipment, processes and techniques, ingredients and additives, and the latest in literature.

Anyone wishing to inquire about display space should contact W. R. Deutscher, Exhibits Chairman, at Somes-Nick & Co., 407 South Dearborn Street, Chicago, Illinois 60605.

## Social Events

When the business meetings are over, it is time to relax; to talk with old friends and make new ones. It is time to have fun.

On Sunday evening, there will be the traditional Reception and Cocktail Party. "Christine" at the electric organ will provide entertainment, while colleagues from every corner of the globe will gather to celebrate the opening of this first ISF Congress to be held in the United States.

Monday evening is left free to enjoy as you wish. Registrants will be provided with complete information on Chicago's renowned restaurants and supper clubs, as well as the other forms of entertainment available within easy distance of the hotel.

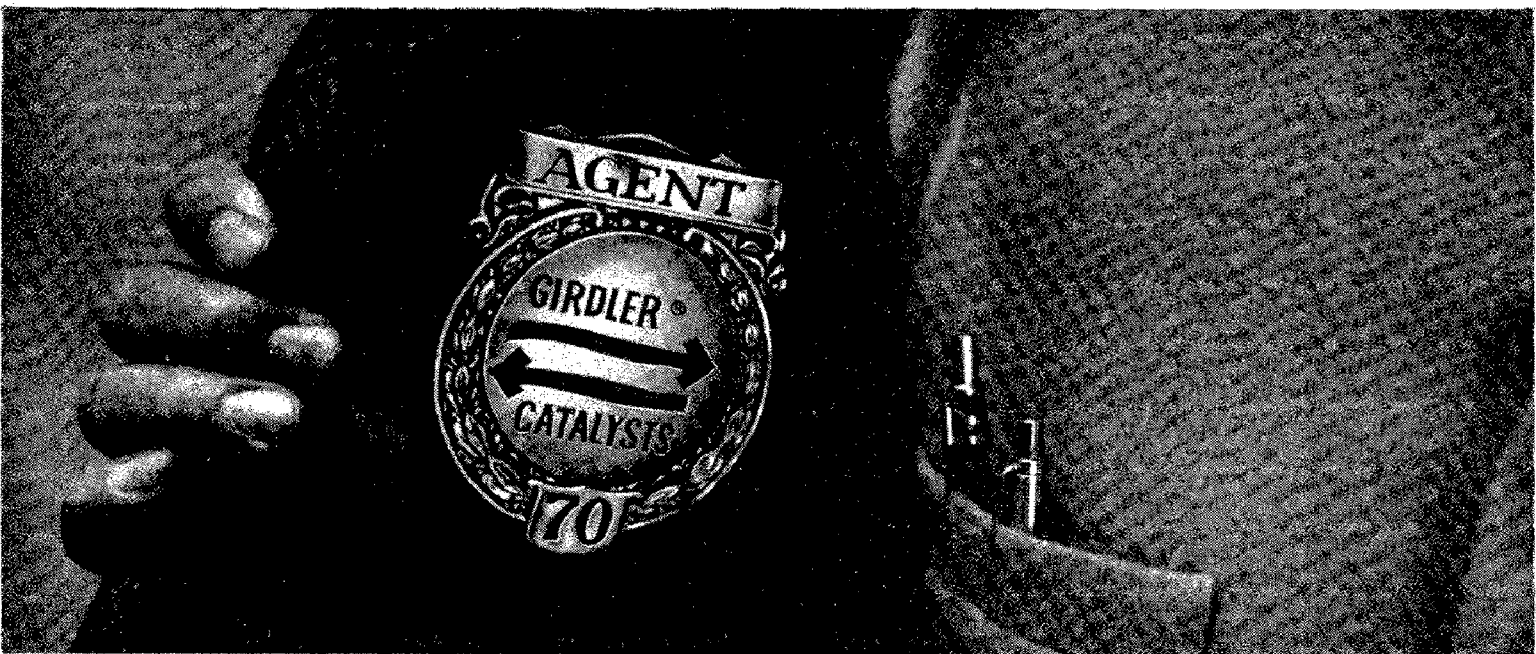
On Tuesday evening, we will be treated to a special concert by the world-famous Swedish Glee Club with the singing magic of their 60 beautiful voices.

Highlighting the social schedule of the Congress will be the banquet on Wednesday evening. There will be dinner in the Conrad Hilton's Grand Ballroom, dancing to Lou Breeze and his orchestra, and superb entertainment starring the well known comedian and television personality, Don Riee.

In addition to all this, Toni Trinchese, Ladies' Chairman, assures us that she has a special, exciting program planned, just for the ladies.

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## • Four Corners . . .

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### Technology of New Oil-bearing Materials

Exploratory work has been completed on the characteristics and processing of hitherto uninvestigated oil-bearing materials in India such as muskmelonseed, sweet orange seed, palm oil fruits and spent silk worm pupae. Pilot plant processing has been carried out on muskmelonseed and sweet orange seed. A centrifugal method of recovering palm oil using indigenous equipment has been developed. Spent silkworm pupae, produced to the extent of 7,000 tons per year, have been found to contain 25% of fat. Its extracted meal is high in protein content (70%), which is found suitable as substitute for fishmeal in poultry feed and as a sumptuous feed for sheep when mixed with molasses.

### Regional Research Laboratory, Hyderabad

The Regional Research Laboratory is the only national laboratory of India which functions under the auspices of the Council of Scientific and Industrial Research, and in which research on oilseeds and oils, as well as on surface coatings, is conducted. Much attention is devoted to castor oil on which the following work is currently in progress: preparation of monoglycerides of over 90% purity by a solvent-glycerolysis technique, preparation and evaluation of direct ethylene oxide condensates of castor oil, development of a continuous method for alkali-fusion of castor oil to sebacic acid and 2-octanol and development of a one-stage process to obtain tristearin from castor oil.

In the area of hydrogenation, a study is in progress regarding the effect of modifying agents on the nickel-catalyzed hydrogenation of peanut oil, with particular reference to the course of the reaction. The presence of a trace of phosphoric acid greatly speeds up the saturation reaction without affecting its course. Considerable acyl migration has been shown to occur during commercial fat hydrogenation, and the presence of linolic moieties in the 1 and 3 positions facilitates hydrogenation.

A process for continuous conversion of fatty oils to fatty alcohols is under development in which comparatively low pressure of only 70 atm are used. The first seed oil of the Malpighiaceae family, *Hiptage benghalensis*, has shown a remarkable resemblance in fatty acid composition to castor oil, which belongs to the Euphorbiaceae family. In contrast to stearic oleate oil, *Garcinia indica*, the seed fat of *Garcinia xanthochymus* is found to be a palmitic oleate oil with some hexadecenoic acid.

### Indo-Soviet Symposium on Natural Products

The second Indo-Soviet Symposium on the Chemistry of Natural Products (including Pharmacology) was organized by the Indo-Soviet Joint-Committee for Scientific Collaboration, under the auspices of the National Institute of Sciences of India, in New Delhi on February 1 to 6, 1970. It included the following papers relating to lipids.

Synthetic Studies on Optically Active Phosphoinositides, by N. A. Preobrazhensky from the Institute of Fine Chemical Technology, Moscow, USSR.

Two unusual Natural Fatty Materials (Kamalaseed Oil, i.e., *Mallotus philippinensis* and Seed Oil of Snake Gourd, i.e., *Trichosanthes anguina*) by M. R. Subbaram and co-workers, from the Regional Research Laboratory, Hyderabad-9, India.

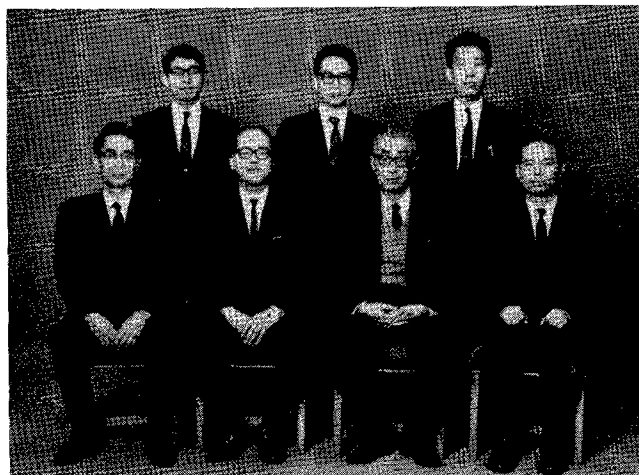
The symposium was convened by S. Rangaswami of the Department of Chemistry, University of Delhi; abstracts of papers are available from S. Rajaraman, National Institute of Sciences of India, Bahadur Shah Zafar Marg, New Delhi-1.

## Japan . . . . . Teruzo Asahara

### General Meeting

At a recent meeting in Tokyo, several oil chemists, who conducted research on fats and oils and on flavor chemistry

at Rutgers University, New Brunswick, New Jersey, gathered for the following portrait. S. S. Chang, AOCS President, who worked with them while they were in the United States, received the picture from the chemists.



Top row (left to right) Yoshiyuki Kawase, Nisshin Oil Mills, Ltd.; Tsukasa Kawada, Kao Soap Company, Ltd.; Yukinobu Murase, Asahi Denka Kogyo Company. Front row (left to right) Choichiro Hirai, Nihon University; Kosaku Yasuda, Nisshin Oil Mills; Yoshiyuki Toyama, Toyo University; Akio Kato, Government Chemical Industrial Research Institute.

### Activities of the JOCS

—A biodegradation test method for nonionics is being studied by the Detergent Committee of JOCS. An interim report presented by the Technical and Materials Division of the Soap and Detergent Association will be considered as the prototype procedure for this study.

—A Preparatory Committee for the JOCS Joint Meeting with AOCS in 1972 was formed. The meeting is expected to be very successful, considering the intensive cooperation expected from both societies in the next two years. As part of this preparation many participants from Japan are expected to attend the coming AOCS-ISF Joint Meeting.

### Statistics

Production of Soaps and Detergents in Japan for the Calendar Year of 1968 and 1969 (unit metric tons).

	1968	1969	ratio (%)
Soaps	154,263	152,633	99
Detergents	558,453	634,775	114
Total	712,716	787,408	110

Supply Plan of Fats and Oils in Fiscal Year of 1970 (unit thousand metric tons).

	Edible	Industrial	Export	Total
Import	837	324	23	1,184
Domestic production	208	77	24	309
Total	1,045	401	47	1,493

### Annual Meeting of the Chemical Society of Japan

The 23rd Annual Meeting of the Chemical Society of Japan was held starting on April 3. Almost 10,000 registrants joined this meeting and over 2,000 papers were reported. Thirty-seven lectures by guest speakers included Solvation Effects on the Conformational Equilibria of Carbohydrate Substances, by R. U. Lemieux of the University of Alberta, Canada; Progress in the Chemistry of