

Fats & Oils News

Record peanut harvest

World peanut production for the 1984/85 crop year is projected to have reached a new high, according to figures released in March by USDA.

World production is estimated at 20.1 million metric tons (MT), inshell basis, slightly above the 20 million MT harvested in 1981/82.

Three countries had record peanut harvests. In the United States, 1984 peanut production reached 2.008 million MT, compared to 1.495 million MT in 1983 and 1.806 million MT in its previous record crop in 1981. Factors for the record crop included a larger acreage harvested and a record average yield of 2,918 pounds per acre.

Meanwhile, peanut production in China totaled 4.81 million MT, compared to 3.951 million MT in 1983. In Burma, the third country to see a record harvest, peanut production increased from 519,000 MT in 1983 to 600,000 MT in 1984.

In India, the largest peanut-producing country, production declined from 7.284 million MT in 1983 to 6.5 million MT in 1984.

The world crush of peanuts during 1984/85 is estimated to rise 4% above last year, although India's peanut crush is estimated to be below last year due to the smaller harvest.

World food use of peanuts during the marketing year, meanwhile, is estimated at 5.8 million MT, or 6% above last year. Major food use increases are projected to occur in China, the United States and Senegal. In China, for instance, food use of peanuts is projected to increase 202,000 MT, of which 107,000 MT will be consumed in peanut form while the remaining increase will be consumed as peanut oil.

In the U.S., food usage is projected to increase by 56,000 MT for peanuts and 13,000 MT for peanut oil. However, in India, food usage is projected to decline 50,000 MT, to 423,000 MT for peanuts, and 113,000 MT, to 1.46 million MT for oil.

U.S. peanut exports for the 1984/85 marketing year are forecast to increase 11% over the previous year, while world peanut exports are estimated at 1.1 million MT, up 4% over last season. South Africa is expected to reenter the peanut export market after a two-year absence, although South African peanuts will not be available until the latter part of the U.S. marketing year.

For more figures on peanuts and peanut products, see USDA's five-year, country-by-country data base on peanuts published as Foreign Agriculture Circular FOP Supplement 1-85. The publication is available from Director, Information Division, Room 5918-S Foreign Agricultural Service, Washington, D.C. 20250.

Soy boom in Italy

Italy's soybean acreage is increasing rapidly and is expected to more than double to 80,000 hectares in 1985 and perhaps reach 100,000 hectares in 1986, according to a report from the U.S. agricultural representative in Rome.

Acreage was about 2,900 hectares in 1982 and about 36,000 hectares in 1984, the report said.

Most of the acreage is in northern Italy and about 10% in irrigated areas of southern Italy. The rapid acreage

increase reflects the fact that soybeans are now the most profitable row crop for Italian farmers. Under the present pricing system, farmers could average the equivalent of \$1,340 per hectare.

In mid-February, a major meeting to discuss soybeans was held in Modena, Italy, under sponsorship of the Italy Ministry of Agriculture, Italiana Oli e Risi (the leading Italian processor of soybeans) and several banks.

Production in 1986 could reach 300,000 to 350,000 metric tons, if the 100,000 hectare plantings materialize. Observers estimate Italian acreage could go as high as 130,000 hectares. In recent years, Italy has imported 1.3 to 1.5 million tons of soybeans annually.

The acreage pattern could change if European pricing policies change.

NIH panel: Obesity a killer

A 14-member panel of experts, who took part in a consensus conference on obesity in February at the National Institutes of Health, has concluded that obesity is a killer disease and a serious health risk even for those who are 20% overweight.

Panelists agreed that obesity has multiple causes and that there are different types of obesity. However, they said obesity clearly is associated with hypertension, hypercholesterolemia, diabetes and an excess of certain cancers and other medical problems.

Citing data from National Health and Nutrition Examination Studies conducted during 1971-1974 and 1976-1980, the panel said the prevalence of hypertension is 2.9 times higher for those overweight, with the prevalence 5.6 times higher for obese 20- to 44-year-olds than for their peers and twice as high for obese 45- to 74-year-olds as for non-overweight peers.

"Thirty-four million adult Americans have a body mass index greater than 30, a commonly used marker for medically significant obesity. At a weight increase of 20% above the ideal, treatment is strongly advised. When diabetes, hypertension or a family history of these diseases is present, treatment will lead to benefits even when lesser degrees of obesity are present," the panel's draft consensus statement pointed out.

Panelists said there is convincing evidence that obesity, when measured by relative weight, adversely affects longevity. They said weight reduction may be lifesaving for those who are extremely obese, arbitrarily defined as weight twice the desirable weight or 100 pounds over desirable weight. However, they added, recent studies suggest that the distribution of fat deposits may be a better predictor of mortality than body mass index (weight in kgs. divided by height in meters squared) or relative weight (measured body weight divided by desirable weight recommended in the 1959 or 1983 Metropolitan Life Insurance Company tables). While not definitive, height and weight tables based on mortality data or the body mass index are helpful measures to determine the presence of obesity and the need for treatment, they added.

Panelists suggested the following directions for future research on obesity:

- Search for biological (genetic, metabolic or anthro-

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pometric) markers in infants and children as predictors of adult obesity.

- Define the factors that regulate the regional distribution of fats and develop methods to assess this distribution.
- Study the regulation of energy balance (satiety factors, control of food intake, role of thermogenesis components, effects of the central nervous system, endocrine and autonomic nervous system, adipose tissue cellularity and metabolism).
- Develop relative risk tables that incorporate both fat distribution and height-weight data.
- Conduct studies using cultural and physical measurements in several cultures.

AIN Fellows named

The American Institute of Nutrition has chosen Roslyn B. Alfin-Slater, Max Milner and Nevin S. Scrimshaw as Fellows of the Institute.

Alfin-Slater, assistant dean for academic affairs at the School of Public Health, University of California at Los Angeles, is professor of nutrition in the School of Public Health and professor of biological chemistry at the School of Medicine at UCLA. Her major area of research has been lipid metabolism, with emphasis on the relationships between cholesterol and essential fatty acid metabolism.

Milner retired as executive officer of the American Institute of Nutrition in June 1984.

Scrimshaw is institute professor at the Massachusetts Institute of Technology and director of the MIT/Harvard International Food and Nutrition Program.

In addition, AIN honored Willard J. Visek at its annual meeting in April. Dr. Visek, professor of clinical sciences and director of clinical nutrition at the University of Illinois College of Medicine at Urbana-Champaign, Illinois, received the Osborne and Mendal Award of the Nutrition Foundation in recognition of outstanding recent basic research in nutrition.

Yemen refinery announced

Neumann Inc. has been contracted to construct a 100-ton-per-day physical refining and pretreatment facility for the National Butter and Oil Manufacturing Co., Sanaa, Yemen. The plant is the first modern vegetable oil refining facility to be installed in Yemen. According to Neumann, the facility will handle soybean, palm and sunflower oil for use as cooking oils and in margarine. The crude oils will be trucked up to the site. Neumann projects the facility will be in operation by early 1986.

Explosion damages Argentine port

A mid-March explosion severely damaged Argentina's only deep-water grain export port, Bahia Blanca, with one initial estimate saying repairs would take up to a year to complete. The facility is Argentina's second largest grain export port.

During 1984, the port shipped about 4.4 million metric tons, about 22% of Argentina's grain and oilseed exports,

according to a report in the Wall Street Journal. Most of the port's exports are wheat, the report said. It has not been a major oilseed port.

The port is used by the Soviets, whose large, ocean-going ships can't berth in Argentina's other ports.

Egypt to build palm oil facility

A palm oil processing facility has been announced for the free trade zone in the port of Suez, Egypt, according to a report from the U.S. agricultural counselor's office in Cairo.

The report said the plant would produce palm stearin and fatty acids. Estimated cost was US \$20 million, with completion sometime in 1987. The plant is a project of the Gulf Arab Investment Co., according to the report.

News briefs

AOCS member Russell T. McIntyre, director of special products research at Capital City Products Co., has been appointed director of marketing of chemical specialties for the company.

Scott D. Fields has been appointed product manager of organic chemicals for Morton Thiokol Inc., Alfa Products.

Adrian J. Lathe has joined C.J. Patterson Co.'s specialty chemicals division and has been elected a vice president of the company. He will assume general management responsibility for the company's specialty chemicals division.

Anco-Votator Division of Cherry-Burrell has promoted Bob Moyer and Marty Scholand to eastern and western regional sales managers, respectively.

P.G. Punchihewa has become the executive director of the Asian and Pacific Coconut Community, succeeding the recently retired G.P. Reyes, the first executive director of that group. The organization, which has been in temporary quarters since a fire last November, has now relocated into the Wisma Bakrie Building on Kuningan Road in Jakarta. The mailing address remains PO Box 343, Jakarta, Indonesia.

Extraction De Smet provided the deodorizing plant for L'Air Liquide's facility in Chalon/Saone, France, that produces plastic containers for mineral water. The containers are made from epoxidized soybean oil. The containers are designed to prevent changes in the mineral water's organoleptic properties.

Food processing course offered

The University of Illinois will offer its Food Science 301 course in eight weekend sessions this summer. The course covers principles and applications of food preservation and processing by heat, low temperatures and mechanical operations.

The course will be offered on Fridays and Saturdays from the weekend of June 14/15 through Aug. 9/10. No

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classes will be held July 5/6 because of the Independence Day holiday on July 4. Enrollment fee is \$240. Further details are available from Ramona LaMontagne, Department of Food Science, 567 Bevier Hall, 905 S. Goodwin Ave., Urbana, IL 61801.

Obituaries

LEONARD J. ARMSTRONG

AOCS has been informed of the death Dec. 31, 1984 in Janesville, Wisconsin of Leonard J. Armstrong, a pioneer in the development of household fabric softeners. Dr. Armstrong was 67.

He received his bachelor's degree in 1937 from St. Olaf College, his master's in 1942 from North Dakota Agricultural College and his doctorate in 1942 from the University of Illinois. He joined Armour's research group in 1946, helping develop a household fabric softener. In 1951 he became a staff member at Harshaw's Cleveland, Ohio, research labs, helping develop the second household fabric softener for consumer sales. In 1957 he founded Varney Chemical Co. in Janesville, Wisconsin, a specialty chemical manufacturing company producing surface active agents. This firm eventually became part of what is now Sherex

Chemical Co. In 1963, he founded Armstrong Chemical Co. in Janesville, a firm that was sold in 1979 to Stokeley-Van Camp, eventually becoming the Chemical Specialty Division of Capital City Products Company.

Survivors include his wife, Virginia, four children and five grandchildren.

YUKIO TAKAHASHI

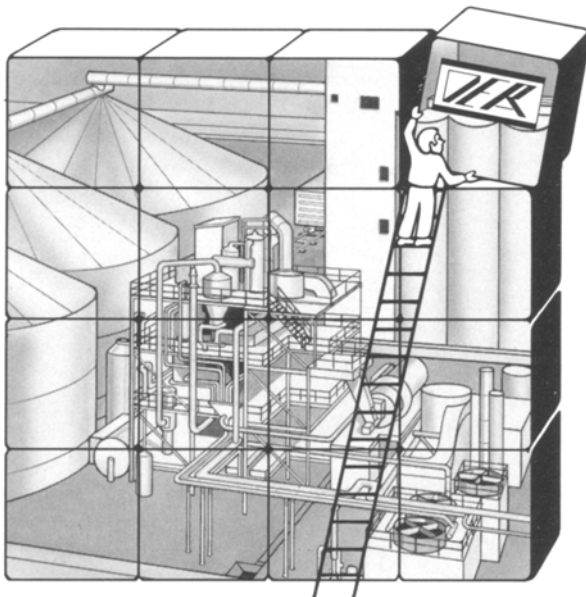
AOCS has been informed of the Feb. 6, 1985, death of Yukio Takahashi, who had retired from the Ghiradelli Chocolate Co. in 1981. Mr. Takahashi and his wife, Stella, had headed the hospitality committee for members of the Japan Oil Chemists' Society attending the 1979 AOCS-JOCS joint meeting held in San Francisco, California.

Mr. Takahashi was a 1938 graduate of the University of British Columbia. He joined AOCS in 1961 while with the Guittard Chocolate Co.

EVAN F. BINKERD

AOCS has been informed of the death of Evan F. Binkerd, retired vice president and director of research at Armour Food Company. He had been a member of AOCS since 1946 and an emeritus member since 1979. He was a 1942 graduate of Iowa State College.

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Profile: Tony James

Tony James is known best for his work on gas liquid chromatography, as co-developer (with A.J.P. Martin) of the widely used gas liquid chromatogram and for lipid biochemistry. He is the creator and director of the Biosciences Division of Unilever Research at Colworth Laboratory, Bedfordshire, England.

A list of prestigious awards he has received includes the 1959 John Price Wetherill Medal of the Franklin Institute of the United States, jointly with A.J.P. Martin and R.L.M. Syngé; the Bronze Medal of the French Biochemical Society (1962); AOCS Award in Lipid Chemistry (1972); and the 1976 Twsett Medal for Chromatography (USA). In 1979, he was made a Commander of (the Order of) the British Empire, and in 1983 he was elected Fellow of the Royal Society.

In an interview last fall, James said his fascination with science as a child was kindled by J.B.S. Haldane's "Possible Worlds" and a lecture on liquid air which he attended when he was 12 years old. Always an omnivorous reader, James was admitted at age 7 to the adult section of his local library in Cardiff, Wales, because he had read all the children's books. At home, he was allowed to set up a laboratory, using a microscope and chemistry kits and filling the house with fumes from the bromine made in his bedroom.

During the depression year of 1929, James' carpenter father left Wales to look for work, first in Bristol and then in North London, where he settled and sent for the family. At age 11, James won a scholarship from the London County Council and chose University College School in Hampstead, which he attended from 1933-1938.

By the age of 15, James knew he wanted to be a scientist. He left school the following year to become a lab assistant at Kodak, testing batches of photographic material and helping devise photographic systems for the armed forces. At the same time, he attended evening classes at the Northern Polytechnic in London for an Intermediate B.Sc. In 1940, James took a special examination and won a Senior Science scholarship for University College, London, to study under Ingold, one of the "greats" of modern organic chemistry.

Heavy bombing in the city in the early 1940s crippled industry and learning institutions, many of which were evacuated to quieter areas in Wales and the North. In spite of the fact that the University College Chemistry Department switched back and forth between London and Aberystwyth, Dr. James emerged with a first class honors special chemistry degree in 1943. It was due to the urgency of the war that

he was able to go on to earn a Ph.D. in two years instead of the statutory three.

James still found time in those tight years to squeeze in a Presidency of the National Union of Students in 1944, pursuing what he calls "the constant thread of bureaucracy" in his life. He was married in 1945—on the only free weekend for three months either side.

By 1945, James' professional interest was focusing on biochemistry, and specifically biological systems, although he had no training in the field. A bold and unorthodox letter to Sir Charles Harrington, director of the National Institute for Medical Research, resulted in a Medical Research Council studentship at Bedford College, London, with Professor E.E. Turner, to work on the synthesis of potential anti-malarials. At nights, of course, James continued his studies—this time, on biochemistry and microbiology. In 1947, he became a scientist at the Lister Institute for Preventive Medicine and, with Dr. Syngé (later a Nobel laureate), studied the structure of the antibiotic *Gramicidin S*. He was later awarded a Beit Memorial Fellowship.

When A.J.P. Martin arrived at the Lister Institute in 1950, he and James struck an immediate rapport. Together, they designed and constructed the first successful automatic fraction collector. The following year, Martin transferred to the National Institute for Medical Research and invited James to work with him. It was at the Mill Hill Labs that their limited success with a countercurrent column procedure, using crystallization, led to the idea that they should develop the gas liquid chromatogram. Within a year, a model was in operation, using an elegant microburette designed by Martin. The apparatus was then automated and described in a 1952 *Biochemistry Journal* paper which outlined many of the future developments of the technique.

James recalls the excitement of 1952 when their work was attracting enormous attention all over the world. Visitors turned up frequently at Mill Hill to view the apparatus in action, in particular the president of a large fractional distillation company in America. He told James that the gas liquid chromatogram was very interesting, but of no commercial importance to him. The company subsequently had many problems.

For their last joint paper, in 1956, when the basis of GLC was firmly laid, Martin and James entered the lipid field and produced the first good separations of long-chain fatty acids. In 1955, Tony James became a permanent member of staff at the National Institute for Medical Research and turned his attention to the biosynthesis of fatty acids. With Peters and Laurysens, he was the first to demonstrate directly the biosynthesis of long-chain, odd-numbered fatty acids from propionic acid. Much work followed on the biosynthesis of fatty acids, especially in plants.

Since his experience at Kodak, James had never liked the idea of working in industry, where science is always applied, and not fundamental. Nevertheless, in the early 1960s, he undertook some consulting work for the Unilever Company, on the subject of fatty acids and gas chromatography. One day, he happened to mention to colleagues at Unilever that there was never enough space at Mill Hill. They later asked if he would be interested in working for them. In fact, the then head of Unilever's Research Division asked James to simply name his price and tell them what he'd like to work on. Determined not to be lured, James decided to make his

demands unreasonable so that he would not be offered a job. He told Unilever he wanted a 15-person staff, no restrictions on his research and double his existing salary. They offered him the job.

In 1962, James joined the Unilever team at the Colworth Laboratory, a beautiful 1,200-acre site surrounded by rolling hills and some scattered Bedfordshire villages. For six years, he said, he had a wonderful time until he "started minding everybody else's business." To keep him happy, the company asked James to run a department himself, and the Division of Biosciences was created. A lot of the biotechnology work at Unilever since then has come out of this division. Perhaps the most well known in recent years has been the oil palm clones, a project which started in 1965 and took nine years to complete. Unilever now produces 250,000 cloned oil palms at one of its Bedford factories, which James says is logical enough since it's equally far from everywhere. Work is well advanced on

a coconut palm clone; after only 4.5 years research, the first plant is already into soil.

Never really able to leave the organizing to others, James says his bureaucratic instinct has got him increasingly involved with policy-forming at Unilever. It matters to him, he says, to be involved in using science for change.

Now that he has less and less time to spend in the labs, he does some "manual" work at home instead—engraving on glass. He also collects antiques for the house he owns in a village seven miles from the Unilever site. James' first wife died in 1980, after 35 years of marriage. His new wife, Linda, whom James describes as "a highly professional, well organized woman," was formerly head of the Travel Department at Unilever, Colworth Laboratory. They were married in April 1983—on the only free weekend for three months either side.

James retired from Unilever on March 6, 1985, and is taking up other duties.

Comprehensive New Volume—AOCS Monograph 10

Dietary Fats and Health

Edited by E. G. Perkins & W. J. Visek

This new AOCS monograph is the proceedings of a conference held in Chicago in December 1981. Containing 60 chapters by leading scientists in biochemistry and nutrition, the book presents the latest scientific information in fat chemistry and technology related to nutrition. Specifically, it covers the general role of fats in nutrition, metabolism of isomeric fats, and the role of vitamins A, D, E and K in health and disease. Included are controversial topics such as the role of lipids in heart disease and cancer, and the effects of diet on high density lipoproteins and the techniques of lipoprotein fractionation. The book also contains information devoted to emerging research on dietary fats and nutrition in such areas as multiple sclerosis and the immune response. Numerous illustrations and references are found throughout.

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