Sesame Seed in China and India

Digest of Reports to Bureau of Foreign and Domestic Commerce Covering Culture of this Desirable Oil-bearing Seed*

SESAME seed is produced throughout China from Manchuria to the extreme southern part of the country and as far west as Szechuen. The chief producing area is the Yangtze Valley and the next important region extends from southern Manchuria to Chihli Province. Sesame seed does not constitute the chief crop in any section of the country, but in those localities where a surplus is produced, from 5 to 10 per cent. of the cropped land is devoted to it. It is impossible to give an estimate of the acreage sown with sesamum, nor of the amount produced annually. In Manchuria the crop is only incidental even though a considerable amount of sesame seed is exported through Dairen. In North China, that is, Chihli, Shansi and Jehol, it is estimated that less than 5 per cent. of the cropped land is planted with the seed, and the exports from this area are negligible. Of the Yangtze Valley area, Honan, Hupeh, Anhwei and Kiangsu are the chief producing provinces, wherein from 5 to 10 per cent. of the cropped land is devoted to sesamum.

There are five qualities recognized in export trade, i.e. "white," "black," "yellow," "red," and "mixed." Most of the seed exported is classed as "white," "yellow" or "white and yellow." The black seed is consumed locally. To be classed as "white," the seed must contain less than 25 per cent. dark seed, while if the percentage of dark seed is more than 15 per cent. an allowance must be made in the purchase price. Mixed seed must contain at least 35 per cent. of white seed.

It would probably be easily possible for China to greatly increase the amount of seed produced, but it is not likely that any rapid increase will take place. The Chinese farmer does not react quickly to market demands. His primary object is to produce a sufficient amount of food to fill his own needs and he rarely sows a crop with the idea of marketing it and buying his own necessities. He produces his own necessities and sells his surplus. It is true that the production and exportation of sesame seed on its present scale is due to the fact that it has found a good market abroad and consequently the Chinese farmer has gradually increased the acreage devoted to it. It is also true that the suppression of poppy cultivation was coincident with the increase in sesamum production and probably has been an important factor in this development. There are no arable lands that are not now under cultivation which could be used to increase present production and unless the Chinese farmer has some compelling reason for devoting greater areas to sesamum it is doubtful whether any appreciable increase will take place. If the demand increases, it is probable that the farmers will respond to it, otherwise it seems reasonable to expect that the present production will remain rather constant.

Exports of sesame seed in large quantities began in 1906 as a result of the opening of the Peking-Hankow Railway which opened up the chief sesame seed producing area. Trade in this product was considerably lowered during the World War as European markets, which have always been the largest consumers of this crop, were cut off. In 1919 a very large increase in exports occurred, China's total shipments amounting to 2,838, 500 piculs (one picul equals 133 1/3 pounds). The following table shows total exports for the past seven years:

	Piculs	Value in gold
1923	1,926,000	$9,729,076
1924	934,000	5,265,897
1925	529,000	3,458,852
1926	901,500	5,489,810
1927	656,650	3,277,261
1928	956,160	5,817,929
1929	1,467,208	7,767,803

It is very difficult to determine how much sesame seed was exported during 1930 as reports at present available do not cover the entire year. Exports in general have fallen off and it may be that exports of sesame seed have also been affected by the lack of foreign demand. The chief producing provinces for sesame seed had good crops this past year and it is probable that the quantity exported during 1930 at least equalled the average of the past few years. Sesame seed prices throughout the year were low and declined further during the last quarter. During the early part of 1931

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there was a good demand from abroad, especially from the United States for sesame seed and local prices have advanced rapidly. Stocks at Hankow and Shanghai are estimated to be small, but it is understood that there are large quantities of seed yet to be marketed. One of the main reasons for this is that the Hankow-Peking Railway which usually brings this crop to market is now carrying only merchandise that brings high freight rates, thus necessitating that sesame seed be brought in by slower but cheaper methods of transportation.

Hankow has always been the largest shipping point with Shanghai second, these two ports usually accounting for about three-fourths of the total exports. Shasi, Dairen and Kiukiang export almost all of the remainder of China's exports. Exports from these ports in 1929 were as follows:

Port	Piculs
Hankow	603,000
Shanghai	421,000
Shasi	191,000
Dairen	148,000
Kiukiang	104,000

Japan (including Korea) is the largest single consumer of Chinese sesame seed, although the total amount going to European countries is usually greater than that taken by Japan. Holland, Italy, Germany, and Denmark are the chief European importing countries. In 1924 the United States imported 114,000 piculs from China but the next year her imports fell off and were negligible until 1928, when the United States took 50,000 piculs. In 1929 the United States imports of sesame seed from China reached 112,000 piculs. United States imports during 1930 are estimated to be considerably greater. The imports of all of the chief importing countries of Chinese sesame seed have varied considerably in the past few years as is shown by the following table:

Imports of Chinese Sesame Seed

	1923 Piculs	1924 Piculs	1925 Piculs	1926 Piculs	1927 Piculs	1928 Piculs	1929 Piculs
Japan	309,000	254,000	289,000	289,000	310,000	383,000	406,000
Italy	649,000	121,000	77,000	163,000	21,400	131,000	301,000
Holland	253,000	185,000	75,000	158,000	68,000	160,000	342,000
Germany	261,000	131,000	25,000	23,400	17,674	25,310	135,600
Denmark	44,400	42,300	12,000	74,000	33,000	68,000	136,000
France	145,000	13,300	9,000	111,000	40,000	32,600	15,500
United States	63,000	114,000	121,000	18,700	29,000	50,000	112,000

The Chinese Bureau of Commercial and Industrial Information has estimated the average annual production of sesame seed in China, to be about 2,600,000 piculs or something over twice the amount exported. An accurate check of the total production is impossible and the above estimate is probably as accurate as any other. It is only reasonable to assume, inasmuch as Chinese farmers think of their own needs first, that the amount consumed domestically would exceed exports considerably.

The chief use of the seed is for making sesame oil, which is used extensively by the Chinese as a cooking oil. It is generally regarded as superior to other vegetable table oils for this purpose and commands a higher price. The seeds are also used in Chinese confections, and in medicine, especially for poultices. The cake residue after the oil has been removed is used as a fertilizer, and to some extent as a fuel.

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Indian Production and Exports

ALTHOUGH India continues to have more than 5,000,000 acres under sesamum each year, exports of sesame seed have practically ceased. During the year just prior to the war exports aggregated 112,201 tons; but by 1929 the trade had declined to 21,298 tons, and in 1930 total foreign shipments amounted to only 1,235 tons.

Exports of Sesamum Seed from India—9 Months
Tons of 2,240 Lbs.

	Nine Months		
	1928	1929	1930
United Kingdom	1,117	3,453	.....
Netherlands	3,100	2,850	.....
France	2,211	535	.....
Italy	7,350	1,700	.....
Ceylon	770	292	120
Other countries	4,921	1,454	610
Totals	19,469	10,284	730

The decline in exports of sesame seed has not been accompanied by an increase in exports of oil obtained therefrom, foreign shipments of the oil having remained more or less stationary during recent years. During the first nine months of 1930, 113,848 tons of sesame oil were exported, while shipments during the corresponding period of 1929 and 1928 were 124,018 and 127,108 tons respectively.

(*Turn to page* 395)

Robert Gair Co., New York, has established a fellowship at Mellon Institute, Pittsburgh, for research on moistureproofing and greaseproofing paperboards used in cartons.

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Ross Heater & Manufacturing Co., Buffalo, has issued a booklet showing Ross equipment which includes boilers, condensers, expansion joints, exchangers, bleeder heaters, pipe line coolers and vacuum steam jets.

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The C. O. Bartlett and Snow Company, of Cleveland, Ohio, have recently issued their new Bulletin No. 69, descriptive of their complete line of dryers of all types. Among the various styles of equipment illustrated in this bulletin are to be found direct heat dryers, indirect, and indirect-direct dryers. Each type may be adapted to batch or continuous operation. Particular attention is directed to the Bartlett and Snow Style A steam heat dryer, which is used for drying tankage and similar residual products. This type of equipment is also suitable for drying chemicals and earthy materials of various kinds.

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Offices of Irving R. Boody & Co., vegetable oil dealers, have been moved from 132 Front Street, New York to 99 Wall Street. The new telephone number is DIgby 4-2051.

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Durkee Famous Foods, Inc., Long Island City, has announced the removal of its foreign department to 82 Corona Ave., Elmhurst, L. I., N. Y., on September 1st. The new phone number is POmeroy 6-4900. William B. Foster is manager of the foreign department.

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Harry G. Cowan, district salesmanager for Spencer Kellogg & Sons, Minneapolis, recently completed twenty-five years of service with the company. His associates honored him with the presentation of a suitably engraved watch.

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Diamond Alkali Co., Pittsburgh, recently began the manufacture of a very pure grade of salt which will run over 99.9 per cent pure sodium chloride and be entirely free of calcium and magnesium compounds.

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Position Wanted: *Manager*—Sales Manager or General Manager, margarine, compound, salad oils, coconut butters, any edible fats. Address Box M52, *Oil & Fat Industries*, 136 Liberty St., New York.

New Books

BUTTER-FAT (GHEE), *Its Nutritive Value, Adulteration, Detection and Estimation*: By Prof. Dr. N. N. Godbole, and Sadgopal, B.Sc. Privately published at Benares Hindu University. 48 pp.:

The authors have undertaken a discussion of clarified butter-fat (ghee), from the standpoint of protection of the purity of this product which is so popular with the native Indian population. Their monograph is separated into three parts: 1. on the composition, nutritive value and digestibility of the product, 2. a study of previously employed methods of analysis and detection of adulteration, 3. new methods suggested.

The new methods suggested comprise chiefly observation of color fringes which are said to appear in the Wollny refractometer during the examination of the clarified butter-fat. The authors assert these color fringes to be characteristic of the adulterating fats, and aver that the amount and kind of adulteration can be determined by the determination of the refractive index, the Reichert-Meissl and Polenske values and the examination of the color fringe in the refractometer. The booklet contains a number of interesting tables of values determined by the authors.—A. P. L.

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Sesame Seed

(*From page* 390)

The explanation of the decline is exports of sesame seed is to be found in the fact that while production has not increased, consumption in India has been steadily expanding. The oil is used as an illuminant and for anointing the body, but the large use is for cooking purposes. This home demand has placed prices at such a level that it is not advisable to market the seeds abroad in competition with other producing countries.

The final forecast of the 1930-31 crop, which has just been issued by the Government of India, places the total reported area under sesamum at 5,294,000 acres, as against 5,011,000 acres last year. These figures do not cover the entire area planted but it is officially estimated that they include 89 per cent. of the total area under sesamum in India. The total yield of the 1930-31 crop (excluding Hyderabad for which no quantitative estimate of outturn is made at this stage) is estimated at 466,000 tons, as against the corresponding estimate of 390,000 tons for the 1939-30 crop.