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VEGETABLE OILS AND FATS AND ANIMAL FEED INDUSTRIES IN LEBANON 1/

by

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I. Introduction

The industry involved in the processing and conditioning of vegetable oils and fats in Lebanon can be divided historically and technologically into two categories:

A. The old classically established olive oil industry whereby locally produced olives are pressed and the oil in water emulsion resulting is then separated using deep wells to slough off the top oil layer by dipping and skimming.

B. The more sophisticated and recent industry of producing other vegetable oils from oil seeds and utilizing the press method or the more recent solvent extraction method.

While there are scores of small olive oil presses that are scattered around in Lebanon and which deal solely with the olive seeds; there are only four major plants that process vegetable oil seeds, extracting the oil and processing the meal for animal feed.

II. Raw Materials

A. Availability: Supply

The three major oil seeds used are cotton seed, soybean and sunflower. The first two are totally imported while a minor percentage of sunflower is produced locally.

In addition to the above mentioned seeds, oils as such are imported for the processing industries. They include; colza oil (rape seed oil), copra oil, ground nut oil and palm kernel oil. Furthermore, there exist only two main plants which process further vegetable oils and tallow into shortening (animal and vegetable) margarines.

B. Suitability:

The oil seeds and the imported oils are purchased from several sources in the world depending on the competitive world price market. The suitability of the raw materials greatly depends on the sources of the oil seeds and oils. Generally speaking however, the seeds and oils are suitable for processing and should, as in the case of some of the oils such as coconut, cotton seed and olive oils, conform to certain standards passed by the Lebanese Standard and Measure Bureau.

C. Prices:

Needless to say the past few months have witnessed a sharp increase in the prices of food stuffs including the oil-seeds and oils. The Government of Lebanon does not set a price for the oils and oil seeds locally. The interviewed processing plant owners could not give a definite price or trend in prices for their raw materials. They observed that they purchase from the cheapest sources available and this price varies and will continue to vary from day to day. As a result, they pass on the increases to their consumers.

D. Imports and Exports:

As stated earlier, the majority of the oil-seeds that are processed in Lebanon into meal cakes and oil, are imported except for olive oil and a minor portion of sunflower sseds (about 5000 tons yearly).

Table I shows the quantity in kg of imported and exported vegetable oil during the years 1970, 1971 and 1972, and Table II shows total production in 1970. Raw oil-seeds are imported into the country duty free except for sunflower, sesame seed and rape seed, which are subject to eight per cent import duty (Decree 962-14-12-59). There is however, a municipality import tax (Decree 11009-7-10-68) on oil seeds according to the following schedule:

Soybeans	1	piastre per kg
Sunflower	1.5	piastre per kg
Cotton seed	1	piastre per kg
Ground nut	2	piastre per kg
Rape Seed	2	piastre per kg
Copra	2.5	piastre per kg

There is also custom duty on edible oils and fats that are imported into the country (Decree 2558-9-10-68). The following is a schedule of this decree on some vegetable oils.

Soybean oil	43 piastres/kg or 28% advalorem which ever is higher
Sunflower oil	41 piastres/kg or 28% advalorem which ever is higher
Cotton seed oil	43 piastres/kg or 28% advalorem which ever is higher

Ground nut oil	41 piastres/kg or 28% advalorem which ever is higher
Corn oil	43 piastres/kg or 28% advalorem which ever is higher
Coconut (tin) oil	56 piastres/kg or 28% advalorem which ever is higher

TABLE I

Vegetable Oils Imports and Exports

		Imports Quantity kg	Exports Quantity kg	Re-exports Quantity kg
Flax Seed Oil	1970	1,209	130	
	1971	3,090	2,000	
	1972	35,492	180	
Sunflower	1970	111,531	6,800	
	1971	208,614	3,897	
	1972	357,602	1,205	
Corn Oil	1970	636,608	-	
	1971	838,407	-	
	1972	1.012,217	881	
Soybean Oil	1970	135,201	49,382	
	1971	1.140,480	-	
	1972	2.080,118	-	20,350
Cotton Seed Oil	1970	3,973	625	
	1971	44,850	175	
	1972	473,403	676	
Peanut Oil	1970	133,371	-	
	1971	241,576	-	
	1972	478,182	-	
Caster Oil	1970	4,314	-	
	1971	3,505	80	
	1972	18,206	-	
Olive Oil	1970	77,169	58,271	
	1971	926,048	191,712	
	1972	192,761	121,133	16,000

Source - Statistiques du Commerce Exterieur Republique Libanaise

TABLE II

Plant No.	Total production in 1970 of vegetable oils in kg.
1	1.764,000
2	67.946,000
3	17.664,000
4	8.740,000

Source: IDCAS Report on the Industrial Report in Development of the Republic of Lebanon, part three, November 1972.

III. Production and Processing: Description of existing plants

Although there are about a dozen plants listed for the production and processing of vegetable oils and fats, only three major plants were visited and interviewed, since they constituted an overwhelming percentage in production and processing (85-95 per cent). These plants are:

1. N. Imad
2. M. Ghandour
3. Sinno and Jabbour

A. N. Imad

The plant is located in Zouk Michayel on the way to Jounieh. The oilseed processing is done by pressing. Although the capacity of the plant is 70 tons/day, this capacity is not ordinarily reached due to raw material unavailability and product marketing difficulties. The plant employs 100 workers of which ten positions are management and technical staff. The plant employs no technical consultant. The plant is equipped with a small quality control laboratory, although some samples are sent outside the country periodically for gas liquid chromatography analysis. Fifty percent is exported. The plant also refines vegetable oils and produces hydrogenated oils and fats and margarine.

B. M. Ghandour

The plant is located in Shoueyfat, fifteen kilometers from Beirut. The oilseed production and processing is done by pressing and the new addition of solvent (Hexane) extraction. The capacity of the plant is large, 200 tons/day for solvent extraction unit and 100 tons/day for the pressing unit.

The plant is modern and is adequately designed for economy and efficiency. In addition, the plant has a full line of refining, winterizing, bleaching and hydrogenating oils and fats and a full line of margarine and shortening production. A sophisticated and fully equipped quality control laboratory is operating in the plant.

C. Sinno and Jabbour:

The plant is located about twenty kilometers north of Beirut. The plant operates a solvent extraction unit and has a capacity of seventy tons/day. However, because of production delays and stoppages due to repair and maintenance of this old MIAG (baskets band) extractor, the actual production is around forty - fifty tons/day. The plant employs forty workers, of which ten positions are managerial or technical in nature. Because of experienced difficulty with the extractor, Sinno and Jabbour have ordered new solvent extraction units with a bigger capacity than the present one.

IV. Animal Feed

The Lebanese poultry industry has grown to a giant size (200 million Lebanese pounds/year). This growth has naturally stimulated the increased production and processing of mainly soybean meal and to a lesser extent cotton seed meal and peanut meal. The total production of soybean meal for poultry rations is around 70,000 tons/year. Forty five thousand tons are consumed locally and the rest is exported to neighbouring Arab countries. Attempts to market soybean meal in non-Arab countries have failed due to price dumping of Israel competing in the region.

V. Summary, Conclusions and Recommendations:

A. Conclusions:

1. Eleven or twelve plants exist in Lebanon for the production and processing of vegetable oils, fats and animal feed, and of these only five or six are viable.

2. The production and processing capacity is much larger than the actual one (500 - 600 tons per day capacity Vs 300 - 400 tons per day actual).

3. The vegetable oil and fat as well as the feed industries are viable enterprises due to the following reasons:

(a) Growing need and dependence on vegetable oils and shortening in everyday cooking replacing the classical and the more expensive olive oil and Ghee (Samneh).

(b) Ease of exporting these goods due to the geographical and language conveniences throughout the region.

(c) Ease of expediency of exporting small order quantities which cannot be matched by European or American countries.

4. In the past five years the consumption, and therefore the production trend has been increasing in both the vegetable oil and the animal feed, and all indications point to a continued increase.

B. Recommendations:

1. Assistance to the industries by the Government seems to be imperative for its thriving and flourishing. This assistance should take the form of:

(a) To ensure uninterrupted flow of electricity. The many interruptions experienced by the industries, especially in the Winter, lead to many wasted hours of cleaning mills.

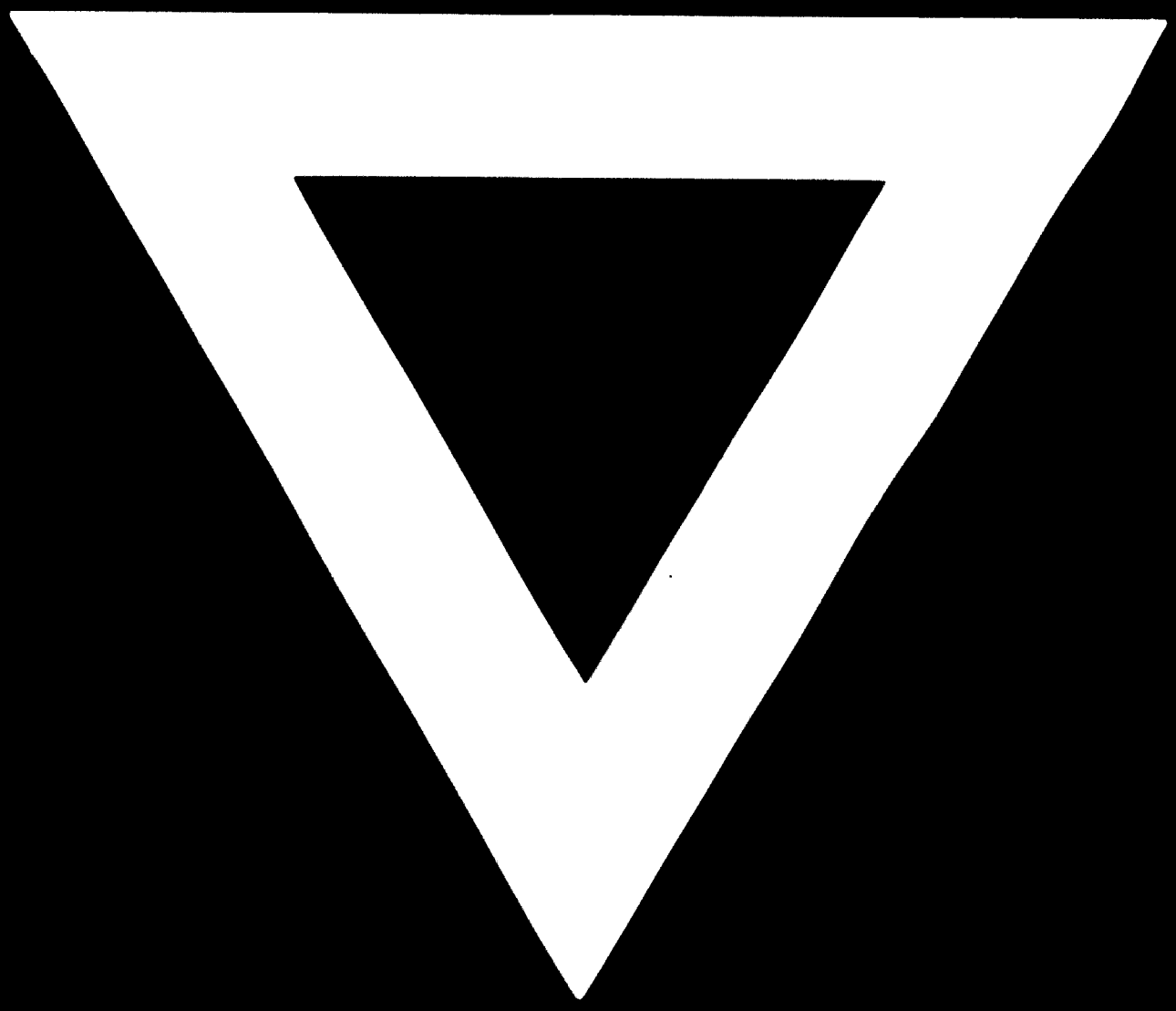
(b) Ensure the flow of water supply and the improvement of its present state. Industries with no guaranteed water supply are poor ventures.

(c) Assisting the packaging industries, the qualities of packages used for the oils and fats are inferior and need vast improvements.

(d) Solving the effluent and waste disposal to prevent polluting the sea with untreated effluents.

2. Better quality control measures cannot be over emphasised. The sanitation and hygiene of most of the plants is not adequate. Better quality control from within the industries should be exercised.

3. Technical assistance in the form of good training-production and processing, as well as laboratory analyses are needed. The programme still lacks the sound scientific approach and much assistance can be rendered in the field of true technical advice, concerning the technical process as well as maintenance, supply, and even the order of proper equipment to do the job. Often is the case where planning and technical assistance were not followed or rendered causing the expensive yet not needed equipment to sit idle and unused.



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