Table V-6-2: Outline of Development Programs for Oleochemical Industry

Program & Project	Project Outline	Required Conditions	Recommendation on Implementation
I. Improvement of the Industrial Environment			
1. Incentives equal to those in competing countries	Establishment of investment incentives equal to Malaysia, which is producing palm kernel oil as competing raw material of coconut oil. Following measures are preferable. 1. Extension of import duty exemption on capital goods imported by BOI registered firms. 2. Establishment of net operating loss carry-over and accelerated depreciation. 3. Extension of land leasing periods.		1. Promotion of project: BOI
2. Elimination of obstacles to new investment	1. Stabilization of price and supply of coconut oil.	- PCA frequently announce the progress of the Small Coconut Farms Development Project to alleviate the supply-related uneasiness of oil and fat manufacturers which use coconut oil.	1. Promotion of project: PCA
	2. Facilitation of import duties on chemical raw materials for oleochemical industry which are not produced in the Philippines.	- In spite of the reduction of import duties by EO470, further reduction will be discussed in cases where costs of import duties become unfavorable compared to those in competing countries.	1. Promotion of project: BOI 2. Implementation of project: POMA will request the government to reduce import duties if necessary.
II. Strengthening of R&D Activities			
1. Establishment of the Coconut R&D Center (tentative name)	Establishment of the R&D Center which conducts research based on Philippine needs. Its main objectives focus on contributing to a recovery in coconuts production and the development of oleochemicals. Through the promotion of integrated research in coconut related sectors such as agriculture and industry, it aims to foster R&D activities as same level as PORM.	1. Agreement on funds, staff and operation among concerned organizations. 2. Coordination of research themes with established coconut-related research organizations. 3. To secure necessary operating funds.	1. Promotion of project: Coconut R&D Network. DOST will be centered for the promotion of project. 2. Implementation of project: DOST. A promotion council based on the Coconut R&D Network will be established to implement the project. Further feasibility study should be conducted to secure building lot and others.

Table V-6-3: Comparison of Major Incentives Given to Oleochemical Industries

Item	Philippines	Malaysia
Status in Investment	Glycerol, Methyl Esters, Fatty Alcohols, Alkanolamides Fatty Acids (Non-pioneer), Other CNO fractionated Products/Derivatives (Pioneer and Non-pioneer)	Fatty Acids/Derivatives, Fatty Esters/Derivatives, Fatty Alcohols/Derivatives, Fatty Amines/Derivatives, Crude & Refined Glycerol, PKO-based Oleic Acids and Stearic Acids (Pioneer).
Tax Exemption	Income taxes are exempted 4 years (Non-pioneer).	Companies which apply for and are granted pioneer status on or after 1 November 1991 will no longer be exempted from tax on all their income. 30% of their statutory income will be taxed. The companies will effectively be subject to tax at a rate of about 11%. Strategic projects with heavy capital investment and high technology which have a significant impact on the Malaysian economy may be granted more favourable tax relief on a case-by-case basis, including a 100% tax exemption. No extension of tax relief period will be allowed for companies which apply for pioneer status on or after 1 November 1991. (*)
Investment Tax Allowance	None	Exemptions of up to 60% are given on qualifying capital expenditure. The allowance will be subject to a maximum of 70% of the statutory income. (*)
Tax-Exempt Import of Capital Goods	Applied until August 12, 1992	Applied
Investment Ratio	100% ownership by foreign firms is allowed in industries which are not included in the negative list.	100% ownership by foreign firms is allowed if they export 80% of their products.

Note: (*)Pioneer firms can select either of the two items.

Table V-6-4: Evaluation of the Philippine Oleochemical Industry by Japanese Firms

Evaluation of Coconut Oil	Evaluation of the Oleochemical Industry, Market, and Industrial Policies of the Philippines
1. The price of coconut oil has been fluctuant than that of palm kernel oils. (Formerly some manufacturers used only coconut oil. But recentrly more manufacturers are trying to use both coconut oil and palm kernel oil. They usually purchase cheaper oils.)	1. The domestic market for finished products is small and oligopoized by large manufacturers.
2. Because of its higher content of C8 and C10, coconut oil is more used for plasticizers than palm kernel oil. (Some manufacturers think that higher content of C8 and C10 has resulted in higher production cost of fatty alcohols.)	2. Production technology of inter-mediate derivatives has not been established yet.
3. Coconut Oil is more used for processed food than palm kernel oil. (The volume of coconut oil used for processed food has not increased in Japan where demand for higher-grade products are growing.)	3. Chemicals necessary for the production of intermediates deriv-atives are difficult to procure. Some manufacturers point out that the absence of local petrochemical industries has made it difficult for foreign manufacturers to expand their businesses.
4. Japanese consumers tend to pre-fer PKO-based cosmetics and personal care products, because it is milder and less stimulative.	4. Application fields of husks, meals, and other parts of coconuts remain to be developed.
	5. Infrastructures are not developed.
	6. The Philippine side is lacking in long-term and consistent policies for developing the oleochemical industry.
	7. There are few oleochemical manu-facturers in Mindanao which has easier access to coconut oil.
	8. Enough incentives are not given to foreign investment.

Table V–6–5: Import Duties on Major Chemicals Used for Oleochemicals Production

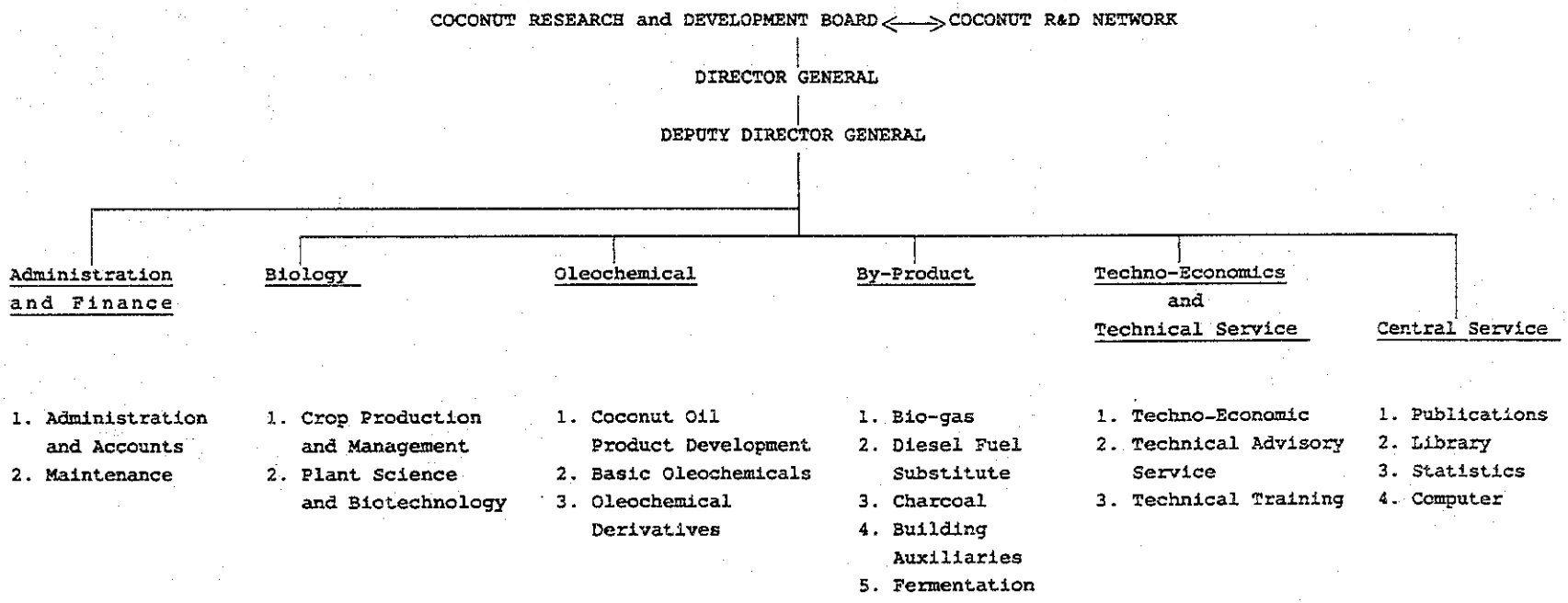
HS Code	Chemicals	Philippine	Malaysia	Indonesia
2807.00	Sulphuric Acid	20%	5%+M$78.74	30%
2815.11	Sodium Hydroxide (Solid)	20%	20%	5%
2833.19	Sodium Sulfate	10%	2%	10%
2835.31	Sodium Tripolyphosphates (STTP)	40%	2%	5%
2836.20	Sodium Carbonate	10%	2%	5%
2839.19	Sodium Silicate	20%	5%+M$39.37	20%
2905.11	Methanol	3%	Nil.	10%
2907.11	Phenol and its Salts	3%	2%	5%
2910.10	Ethylene Oxide	10%	2%	5%
2917.35	Phthalic Anhydride	20%	2%	20% +10%(Surcharge)

Source: Tariff Code Tables of Respective Countries

Table V-6-6: Oleochemical Equipment to be Introduced at the Coconut R&D Center

	Equipment	Specification	Set
1	Hydrolysis Apparatus	5l, Max. 200deg.C/50kg/cm2	1
2	Hydrogenation Apparatus	5l, Max. 250deg.C/50kg/cm2	1
3	High Pressure Apparatus	500ml, Max. 300deg.C/200kg/cm2	1
4	Reactor (Sulphation)		1
5	Reactor (Esterification)	5l, Max. 260deg.C	1
6	Reactor (Esterification)	1l,Max. 260deg.C	1
7	Distillation Apparatus Set	Ho-C-500	1
8	Vacuum Distillation Apparatus Set	HPC-A-1500B, concentric column	1
9	Fractional Distillation Apparatus Set	HPC-A-1500B, packed column	1
10	Molecular Distillation Apparatus Set		1
11	Soap-making Equipment		1
12	Analytical Instruments		1
	(1) Gas Chromatograph	GC-14A, a.500, GC-14AHF-SC	2
	(2) Infrared Spectophotometer	FTIR-8501	1
	(3) UV-VIS Spectrometer		1
	(4) NIR Spectrometer		1
	(5) Atomic Absorption Flame		1
	Emission Spectrometer		1
	(6) X-ray Fluorescence Spectrometer		1
	(7) NMR Spectrometer		1
	(8) GC-MS QP 1000 EX		1
	(9) Thermogravimetric analyzer		1
	(10) High pressure liquid chromatograph	a.1100, SPD-M6A	1
	Fluorescence Detector		
	(11) Balance (Analytical)	a.40	2
	(12) Balance (Direct Reading)	400g, 0.01g, a.12	4
	(13) Water Softener		2
	(14) Water Distillation Apparatus		1
	(15) Detergent Test Apparatus		1
	(16) Surface Tensionmeter		1
	Total Cost (Estimated)	US$4,250,000	

Figure V-6-1: Organization Chart of the Coconut R&D Center (Proposed)



Annex V-1. Information and Data on Prospective Oleochemical Derivatives in the Philippines

1. Metallic Soaps

(1) Current Uses

1) Lead soaps:	stabilizers for plastics incl. PVC, base materials for cosmetics, ointments, drying agents for boiled oil
2) Manganese soaps:	drying agents for boiled oil
3) Ammonium soaps:	printing ink, lubricating oil, splashing cloth, base materials for cosmetics (C18)
4) Copper soaps:	astringent juice
5) Zinc soaps: plastics incl. PVC	ointments, base materials for cosmetics (C12, C14, C18) stabilizers for
6) Magnesium soaps:	base materials for cosmetics (C16, C18)
7) Calcium soaps:	base materials for cosmetics (C18) stabilizers for plastics incl. PVC
8) Tin soaps:	stabilizers for plastics incl. PVC
9) Barium soaps:	stabilizers for plastics incl. PVC

(2) Prospective Uses

Calcium soaps:	livestock feed (C8, C10). Mixing calcium soaps into the existing livestock feed or mixing of lime into coconut meal to improve the quality of milk and meat.

(3) Production in Japan

Production of PVC stabilizers and metallic soaps in the recent five years is as follows.

(Unit: tons)

	1985	1986	1987	1988	1989
PVC Stabilizers	57,480	58,414	60,669	63,348	64,752
Metallic Soaps	20,698	22,356	23,453	25,337	24,953
Total	78,178	80,770	84,122	88,685	89,705

Source: MITI

With regard to calcium soaps for use in livestock feed, Agro Medic Corp., a joint venture including Nippon Oil and Fats (Japan) and Pollack (U.K.), started production of feed for dairy cattle in 1988.

2. Monoglycerides and their Derivatives

(1) Current Uses

1) Food Additives
(C8, C10, C18): emulsifiers/dispersants, solvents for spices, anti-molding agents, antibacterial agents (for use in a variety of processed food incl. margarine, ice cream, bread, cake, noodles, bean curd, etc.)

2) Plastic Additives: lubricants, antistatic agents, antifogging agents
(C18)

Sodium/ammonium salts of monoglycerides are used for shampoos, toothpaste, and solid soaps.

(2) Prospective Uses

1) Food additives

2) Base materials for cosmetics and toiletries

3) Base materials for liquid synthetic detergents

Monoglyceride derivatives will be also used as base materials for liquid synthetic detergents.

(3) Production

Production in the U.S., Western Europe, and Japan for 1990 is estimated as follows.

(Unit : tons)

	Food	Toiletries	Textiles	Others	Total
U.S.	42,200	30,100	11,700	14,800	98,800
Western Europe	40,900	22,200	8,400	24,100	95,600
Japan	19,500	9,000	5,800	10,600	44,900

Source: Helim International Corp.

Production of alkyl sulfates and alkyl ether sulfates in Japan is as follows.

(Unit : tons)

	1986	1987	1988	1989	1990
Alkyl Sulfates	62,466	68,816	67,954	79,710	85,558
Alkyl Ether Sulfates	74,730	85,080	74,802	66,089	75,532

Source: MITI

At present, 20% of alkyl sulfates and 30% of alkyl ether sulfates are used for detergents and personal care products.

3. MCTs (Medium Chain Triglycerides)

(1) Current Uses

1) Diluent for food coloring/flavoring agents, additives for edible oil

2) Solvents for cosmetics

3) Special nourishing food, food for medical treatment, pharmaceuticals

(2) Prospective Uses

Additives for Dietetic food: MCTs have been so far used solely as food additives. Recently, a new technology to apply lipase to synthesize MCTs was developed. They are expected to find more uses because they can contain necessary fatty acids.

(3) Production in Japan

Annual production of MCTs is estimated at 2,000 tons in 1990.

(4) Market Price in Japan

Japanese yen 800 ~ Japanese yen 1,200/kg

4. Alpha-sulfo Fatty Acid Methyl Esters

(1) Current and Future Uses

They are now used for liquid synthetic detergents. There is a possibility that they will be more commonly used as raw materials of liquid synthetic detergents because of their cheaper production cost. But as liquid synthetic detergents using alpha-sulfo fatty acid methyl esters are manufactured under patent, it appears difficult for non-licensees to take advantage of these raw materials to commercialize liquid synthetic detergents.

5. n-DOPs (Di-octyl Phthalates)

(1) Current and Future Uses

At present, they are used as PVC plasticizers for automobile leather seats, wrapping materials for electric wires, films, and paste. They are expected to have more demand because of their low viscosity and thermoplastic stability to other materials than glycerol glycols and some amines. CNO-based plasticizers applying adipic acids or acrylic acids are also manufactured in Japan.

(2) Production in Japan

Plasticizers based on fatty acids have been manufactured 1,200,000 to 1,300,000 tons annually since 1985.

(3) Market Price in Japan

Japanese yen 280/kg

6. AEs (Polyoxyethylene Alkyl Ethers)

(1) Current Uses

1. Emulsifiers/dispersants for cosmetics, pharmaceuticals, and agricultural chemicals

2. Kitchen-use cleaners

3. Scouring agents, spinning oil, dying agents (for textile industries)

4. Emulsifiers for polymerization, antistatic agents, anti-fogging agents (for plastic industries)

5. Felt wash, sizing agents (for paper and pulp industries)

(2)Prospective Uses

They will be also widely used as raw materials for liquid synthetic detergents.

(3) Production in Japan

Production of AEs reached 167,000 tons in 1990, accounting for 41.7% of total production of non-ionic surfactants.

(4) Market Price in Japan

AE with ethylene oxide of 2 to 5 mols (emulsify water into oil) .....Japanese yen 600/kg

AE with ethylene oxide of 20 mols (emulsify oil into water) .....Japanese yen 700/kg

7. Primary Amines, Tertiary Amines, Quaternary Ammonium Salts

(1) Current and Future Uses

1. Softeners (for textile and plastic industries)

2. Antistatic agents (for textile and plastic industries)

3. Disinfecting wash

4. Asphalt emulsifiers

5. Rust preventing agents

6. Floating agents

7. Base materials for hair rinses

(2) Production in Japan

Production of primary and tertiary amines is estimated at 60,000 tons in 1990.

(3) Market Price in Japan

Di-lauryl tertiary amines ..... Japanese yen 850/kg

Tri-octyl tertiary amines ..... Japanese yen 2,600/kg

8. Soap Chips and Noodles

(1) Prospective Uses

Materials for synthetic detergents

(2) Import in Japan

Import of soap chips and noodles for use in liquid synthetic detergents amounted to 2,980 tons in 1990, although it was only 350 tons in 1989. Korea and Malaysia were major suppliers in 1990, accounting for 62.8% and 30.0% respectively.

9. Alkyl Polyglucocides

(1) Current and Future Uses

1. Synthetic detergents

2. Kitchen-use cleaners

They were marketed just recently in Japan and Western Europe. They are mild to skin compared with the existing non-ionic surfactants. They use only natural raw materials and are expected to find more demand in the future.

Annex V-2. Major Japanese Oleochemical Manufacturers Using CNO

No.	Name of Company	Address	Phone No.	Products	CNO Product
1	Cow Brand Soap Kyoshinsha Co., Ltd.	2-4-7, Imafuku Nishi, Joto-ku, Osaka 536	06-939-1451	Toilet Soaps	Toilet Soaps
				Toiletary Goods	-
2	Fuji Oil Co., Ltd.	2-1-5, Nishi Shinsaibashi, Chuo-ku, Osaka 542	06-213-8151	-	Copra, Refined O
				-	-
3	Kao Corporation	1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo 103	03-3660-7111	Soaps, Detergents	Crude Oil
				Toiletry Goods	Methyl Esters
				Hardened Oil	Fatty Alcohols
				Fatty Acids	Fatty Amines
				Glycerol	Alkyl Phosphates
				Surfactants	Soaps
				Fatty Alcohols	-
				Household Cleaner	-
4	Kawaken Fine Chemicals Co., Ltd.	2-3-3, NIhonbshi Horidomecho, Chuo-ku, Tokyo 103	03-3663-8521	Hardened Oil	Methyl Esters
				Surfactants	Alkanolamide
				Fatty Acids	-
5	Lion Corporation	1-3-7, Honjo, Sumida-ku, Tokyo 130	03-3621-6211	Soaps, Detertents	Soaps
				Toiletry Goods	-
				Household Creaner	-
				Surfactants	-
6	New Japan Chemical Co., Ltd.	2-1-8, Bingocho, Chuo-ku, Osaka 541	06-202-0624	Hardened Oil	Methyl Esters
				Fatty Acids, Glyce	Alkanolamides
				Fatty Alcohol	-
				Surfactants	-
7	Nippon Lever K. K.	2-22-3, Shibuya Shibuya-ku, Tokyo 150	03-3498-4111	Toilet Soaps	Toilet Soaps
				Toiletry Goods	-
				Household Cleaner	-
8	Nippon Oil & Fats Co., Ltd.	1-10-1, Yurakucho, Chiyoda-ku, Tokyo 100	03-3283-7070	Laundry Soaps	Fatty Acids
				Hardened Oil	Metallic Soaps
				Fatty Acids, Glyce	MCTs
				Surfactants	-
9	Nisshin Oil Mills Ltd.	1-23-1, Shinkawa, Chuo-ku, Tokyo 104	03-3555-6923	Food	MCTs
				Food, Cake & Cerea	-
				Oils & Fats	-
10	Riken Vitamin Co., Ltd.	2-9-18, Misakicho, Chiyoda-ku, Tokyo 101	03-5273-5111	Food, Surfactants	Monoglycerides
				Vitamin, Feed	MTCs
11	Sakamoto Yakuhin Kogyo Co., Ltd.	1-2-6, Awajicho, Chuo-ku, Osaka 541	06-231-1851	Glycerol	Glycerol
				Industrial Chemica	-
				Plastics	-
12	Shiseido Co., Ltd.	7-5-5, Ginza, Chuo-ku, Tokyo 104	03-3572-5111	Toilet Soaps	Toilet Soaps
				Toiletry Goods	-
				Detergents	-

Annex V-3. Investment in the ASEAN Countries by Japanese Oleochemical Manufacturers

Company	Philippines	Malaysia	Indonesia	Thailand	Singapore
Kao Corp.	Pilipinas Kao Inc. -Production and sales of coconut oil derivatives -Established in Jan. 1977 (Joint Venture) Kao (Philippines) Inc. -Production and sales of shampoo and rinse -Established in Dec. 1979 (Joint Venture)	Kao (Malaysia) Sdn. Bhd. -Production and sales of shampoo and rinse -Imports and sales of soap and detergents -Operated in March, 1973 (Joint Venture) Fatty Chemical (Malaysia) Sdn. Bhd. -Production and sales of palm oil based products and derivatives -Operation will start in 1993	PT. Polekao Indonesia Chemicals -Production and sales of industrial surfactants -Established in Nov., 1977 (Joint Venture) P.T. Dino Industrial Ltd. -Production and sales of shampoo, rinse and detergents -Capital participation in Feb. 1985 (Joint Venture)	Kao Industrial Co., (Thailand) Ltd. -Production and sales of shampoo, detergents, bleaches and chemical products -Established in Sep. 1964 (Joint Venture)	Kao (Shingapore) Pte., Ltd. -Imports and sales of detergents, shampoo, rinse and bleaches. -Established in July, 1965 (100% Japanese capital) Kao (South East Asia) Pte., Ltd. -Regional head quater -Established in April, 1988 (100% Japanese capital)
Lion Corp.		Lion Home Products(M) Sdn. Bhd. -Production and sales of tooth pastes/brushes, shampoo and cosmetics -Operated in Jan. 1960 (Joint Venture) Southern Lion Sdn. Bhd. -Production and sales of detergents -Purchased in Nov., 1986 (100% Japanese capital)	P. T. Lion indojaya -Production and sales of shampoo, kitchen detergents and tooth pastes -Operated in Jan., 1990 (Joint Venture)	Lion Corp. (Thailand) Ltd. -Production and sales of synthetic detergents, shampoo and surfactants -Operated in Mar., 1969 (Joint Venture) Thai Silicate Chemicals -Production and sales of zeolites -Operated in Oct., 1990 (100% Japanese capital)	Lion Home Products Pte, Ltd. -Imports, production and sales of tooth pastes, shampoo, kitchen detergents -Operated in Apr., 1982 (100% Japanese capital)
New Japan Chemical Co., Ltd.	Proton Chemical Industries Inc -Production of coco methyl esters -Capital participation in Sep., 1975	Henkel Rika Sdn. Bhd. -Production of fatty alcohol -Operated in January, 1990 (Joint Venture)			

Company	Philippines	Malaysia	Indonesia	Thailand	Singapore
Asahi Denka Kogyo Co., Ltd.		Felda Oil Products Sdn. Bhd. -Refining and fractionation of palm oil -Operated in Dec. 1975 (Joint Venture) Palm Oleo Sdn. Bhd. -Production of fatty acids -Capital participation in Aug. 1991			Asahi Denka (Singapore) Pte. Ltd. -Production of edible oil and fats -Established in July, 1988 (100% Japanese capital)
Kawaken Fine Chemicals Co., Ltd.	Proton Chemical Industries Inc. -Production of coco methyl esters -Capital participation in Sep., 1975				K&FS PTE, Ltd. -Production of surfactants Established in Jun., 1988 (100% Japanese capital)
Sakamoto Yakuhin Kogyo Co., Ltd.	Sakamoto Orient Chemicals Corp. -Production and sales of refined glycerol -Established in Feb., 1990 (100% Japanese capital)				
Fuji Oil Co., Ltd.		Palmaju Edible Oil Sdn. Bhd. -Refining and processing of palm oil/palm kernel oil -Operated in Jan., 1988 (100% Japanese capital)			K&FS PTE., Ltd. -Production of surfactants -Established in Jun., 1988 (100% Japanese capital)
Miyoshi Oil and Fat Co., Ltd.		Palm Oleo Sdn. Bhd. -Production of fatty acids -Capital participation in Aug. 1991			

Note: Asahi Denka Kogyo and Miyoshi Oil & Fat plan to produce refined glycerol in tie-up with Palm Oleo (Malaysia).
In Malaysia, Asahi Denka and Riken Vitamine also plan to produce monoglycerides in 1992 separately.

Source: List of Japanese companies in overseas (Toyo Keizai)

Annex V-4: Profile of Oleochemical Manufacturers in the Philippines

Company	Address	Nationality	Registered Product	Date Registered /Status	Classification
Atson Coco, Inc.	Office: Km.84 Maharlika Highway Bo. Francisco San Pablo City, Laguna Tel: 2011, 2012 Officer: Sing Tiu, President Plant: Km.84, Maharlika Highway Bo. San Francisco San Pablo City, Laguna	Local 100%	Coconut methyl ester: failed to export due to inferior quality (smell & color) Not start (no operation): Crude glycerine Alkanolamide Cocoa butter subs.	Oct. 13, 1988 /Stopped operation	New Export Producer (Non-pioneer)
Chemphil Speciality Chemicals Corp.	Office: Chemphil Bldg. A.Arnaiz Avenue Makati, M.M. Tel: 8188711 Plant: Bauan, Batangas	Local 60% British 40%	Sodium coco fatty alcohol sulfate	April 20, 1989 /Operating	New Domestic Producer (Non-pioneer)
Colgate-Palmolive Philippines, Inc.	Office: 1049 J.P. Rizal, Makati, M.M. Tel: 8163711 Officer: G.D. Lane, President Plant: Barrio Cotta, Lucena, Quezon Tel: 713820	American 100%	1) Coconut fatty alcohol sulfate Sodium lauryl alcohol sulfate 2) Coco methyl ester Coco acid oil Hydrogenated CFA Glycerine Mono- (Di-)ethanolamide Dioctyl phthalate	Feb. 18, 1985 /Operating June 13, 1985 /Operating, start of ope.: July 1985	New Domestic Producer (Pioneer) New Export Producer (Non-pioneer)

Company	Address	Nationality	Registered Product	Date Registered /Status	Classification
Countryside Millers, Inc.	Office: 17th Fl. UCPB Bldg. Makati, M.M. Officer: Norberto Coronel, President Plant: Gingoog, Misamis Oriental Zamboanga del Norte, Lucena Quezon	Local 100%	Low FFA oil Cochin oil Crude fatty acid Acidulated oil Steam distilled oil	Jan. 17, 1984 /Operating	New Export Producer (Non-pioneer)
D&L Industries, Inc.	Office: 65 Industria Ave. Bo.Bagumbayan, Libis Quezon City Tel: 7211421 Officer: Dean Lao Plant: Bo. San Vincente San Pedro, Laguna	Local 100%	Methyl ester Coco-monoethanolamide and Coco-diethanolamide High gravity glycerine (95%)	Aug. 19, 1982 /Operating	New Export Producer (Pioneer)
Philippine Refining Co., Inc.	Office: 1351 United Nations Ave. Paco, M.M. Tel: 504011 Officer: Cesar B. Bautista, President & Chairman of the Board Plant: 1351 United Nations Ave. Paco, M.M.	British (affiliate of Unilever)	Coconut fatty alcohol sulfate	Mar. 15, 1984 /Operating	New Domestic Producer (Pioneer)

Company	Address	Nationality	Registered Product	Date Registered /Status	Classification
Pilipinas Kao, Inc.	Office: 108 A.E. Rodriguez, Jr. Ave. Libis, Quezon City Tel: 7225866-76 Officer: Alfredo Yniguez, Executive Vice President & Gen. Manager Plant: Bo. Luz Banzon, Jasaan Misamis Oriental	Japanese 70% Local 30%	1) Methyl ester Refined glycerine 2) Fractionated Alcohol Sodium lauryl sulfate 3) Methyl ester Refined glycerine 4) Monoalkyl phosphate (Coco Chemicals) 5) Lauryl diethanolamide Polythelene disteara Immidazoline Anti. int. browning 6) Coco-tertiary Amines 7) Fatty alcohol beads	Aug. 24, 1976 /Operating Mar. 20, 1978 /Operating Jan. 8, 1987 /Operating, start of ope.: Jan. 1987 Jul. 29, 1987 /Operating, start of ope.: July 1988 Feb. 29, 1988 /Operating Jul. 26, 1988 /Operating, start of ope.: Jul. 1989 Dec. 13, 1991 /Pre-operating	New Export Producer (Pioneer) New Export Producer (Pioneer) Expansion Export Producer (Pioneer) Existing & Expansion Exp.Prod'r (Pioneer) New Export Producer (Pioneer) New Export Producer (Non-pioneer) Expansion Export Producer (Non-pioneer)
Primofina Oleochemicals, Inc.	Office: c/o Robles Ricafrente & Aguirre Law Firm 4th Fl. Madrigal Bldg. Ayala Ave., Makati, M.M. Plant: Jose Panganiban Camarines Norte	Local 100%	Low MW fatty acid (C8-C10) High purity glycerine (99.8%) Fatty alcohol (C12-C18)	Jan. 27, 1992 /Pre-operating	New Export Producer (Non-pioneer)
Procter and Gamble Phils., Inc.	Office: Solid Bank Bldg. 777 Paseo de Roxas Makati, M.M. Tel: 8172921 Officer: Alex H. Keeler, President Plant: Velasquez St., Tondo, Manila	American 100%	Coco fatty alcohol sulfate Coco fatty alcohol sulfate	Dec. 27, 1983 /Not operating Jan. 26, 1990 /Operating, start of ope.: April 1991	New Domestic Producer (Pioneer) Expansion Export Producer (Non-pioneer)

Company	Address	Nationality	Registered Product	Date Registered /Status	Classification
Proton Chemical Industries, Inc.	Office: Suite 201 Golden Rock Bldg. 168 Salcedo St. Legaspi Village, Makati, M.M. Tel: 8176646 Officer: Edgardo O. Coronel, Executive Vice President/General Manager Plant: Bo. Caridad, Atimonan, Quezon	Japanese 60% Local 40%	1) Methyl ester Crude glycerine 2) Alkanolamide 3) Alkanolamide 4) Methyl ester Crude glycerine 5) Refined methyl ester /Crude glycerine	Dec. 17, 1974 /Stopped operation, cancelled May 4,'78 Nov. 24, 1980 /Operating May 21, 1981 /Operating Nov. 26, 1982 /Operating Aug. 11, 1987 /Operating, start of ope.: Oct. 1987	New Export Producer (Pioneer) Existing Export Producer (Non-pioneer) Expansion Export Producer (Pioneer) Expansion Export Producer (Pioneer) Existing & Expansion Export Producer (Pioneer)
Royal Industrial Development Corp.	Office: 88 E. Rodriguez, Jr. Ave. Murphy, Quezon City Tel: 7218322-25 Officer: Bienvenido Lim, President Plant: 88 E. Rodriguez, Jr. Ave. Murphy, Quezon City	Local 100%	Cocochem-based surfactants for the soap and detergent industry	May 22, 1989 /Pre-operating	Expansion Domestic Producer (Pioneer)
Sakamoto Orient Chemiclas Corp.	Ofice: Unit 5-D Plaza Royale 120 Alfaro Street Legaspi Village Makati, M.M. Tel: 875677 Plant: Bauan, Batangas	Japanese 100%	Refined glycerine	Dec. 27, 1988 /Operating, start of ope.: May 1990	New Export Producer (Non-pioneer)
United Coconut Chemicals, Inc.	Office: 17th Fl. UCPB Bldg. Makati Ave., Makati, M.M. Tel: 8160371-75, 8160376-79 Officer: Ramon Sy, Chairman Plant: Bauan, Batangas	Local 100%	1) Fatty acids Glycerine Fatty alcohol 2) Coco fatty alcohol	Mar. 9, 1982 /Operating, start of ope.: Jan. 1981 Sept. 8, 1989 /Pre-operating, start of ope.: Jan. 1993	New Domestic Producer (Pioneer) Expansion Export Producer (Non-pioneer)

Company	Address	Nationality	Registered Product	Date Registered /Status	Classification
Universal Robina Corp.	Office: URC Bldg. E. Rodriguez, Jr. Ave. Libis, Quezon City Tel: 7221351-75 Officer: Richard Locke, Vice President Plant: Robina Textile Compound Km.50, Bo. Mayapa, Calamba Laguna	Local 55%	Lauryl sulfate Lauryl ethoxylated sulfate	Oct. 7, 1981 /Stopped operation	New Export Producer (Pioneer)
Vegoil Philippines, Inc.	Office: Rm.811 Peninsula Court Bldg. Paseo de Roxas, Makati, M.M. Tel: 878416 Officer: Dennis T. Villareal, President Plant: 92 E. Rodriguez Ave. Libis, Quezon City	Local	1) Stearic acid Palm stearin Palm olein 2) Palm olein Palm stearin	Oct. 1, 1984 /Operating Aug. 21, 1989 /Operating	New Domestic Producer (Pioneer) Expansion Export Producer (Non-pioneer)

Sources: BOI and JICA Study Team

JICA