Australian Oilseed Federation

International Market Opportunities

Stage 1

1997

A project of the AOF Oilseed Development Fund: Funded by Grains Research and Development Corporation

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Project Outline and Criteria for Assessing Country Opportunities

Project Aims

- Identify high value/niche export opportunities for canola, cottonseed, sunflower, safflower, and edible soybeans
- Increase industry awareness of market opportunities and customer requirements
- Identify potential linkages between Australian industry and key players in target export markets
- Identify key elements of market entry strategies

Project — 2 Stages

1. Desk review to select opportunities by
   - country
   - product
   - market segment
2. In country research to
   - confirm opportunity
   - identify key players
   - nature of industry

Criteria for Assessing Country Opportunities

Population growth

Income growth

Growth in per capita consumption of oilseeds and vegetable oils

Oilseed and oilseed import growth rate

Australia's export capability

Country's capacity to pay

Taste and preference (health and environmental concerns)

Substitute between oils and fats

Market access

Population Growth

Population Growth in Selected Countries (millions)

Country	1995	2005	Growth (%)
China	1200	1368	14
India	935	1148	22
Pakistan	128	168	31
Bangladesh	123	148	20
Indonesia	197	238	20
Japan	125	130	4
Vietnam	72	89	23
Thailand	57	64	12
Malaysia	20	24	24
Philippines	67	83	23

Income Growth

GDP Per Capita in Selected Countries, 1995 (US$)

Country	GDP per capita	Food Expenditure
US	25,509	5,500
Japan	40,717	3,965
China	575	184
Malaysia	4,042	950
Indonesia	1,031	100
Hong Kong	21,753	4,800
India	347	140
Pakistan	460	233
Bangladesh	245	n/a

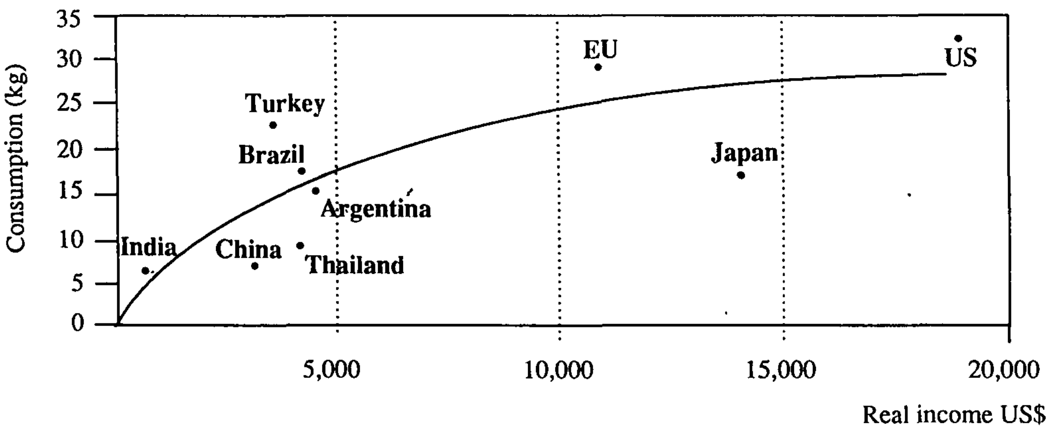
Source: Asian Oilseeds Conference, 1996, AOF Oilseed Forum

Oils and Fats Per Capita Consumption

Country	Per Capita Consumption (kg)	Growth Rate 1980-1995 (%)
Bangladesh	5	n/a
India	8.5	1.0
Pakistan	12	>5
China	11	5.3
Japan	20	1.5
Hong Kong	33	n/a
Indonesia	14	4.4
Thailand	10.8	8.0
Korea	19	5.4
Australia	31	n/a
US	45	1.4
EU	45	1.5

Source: Asian Vegetable Oils and Oilseed Markets, 1996

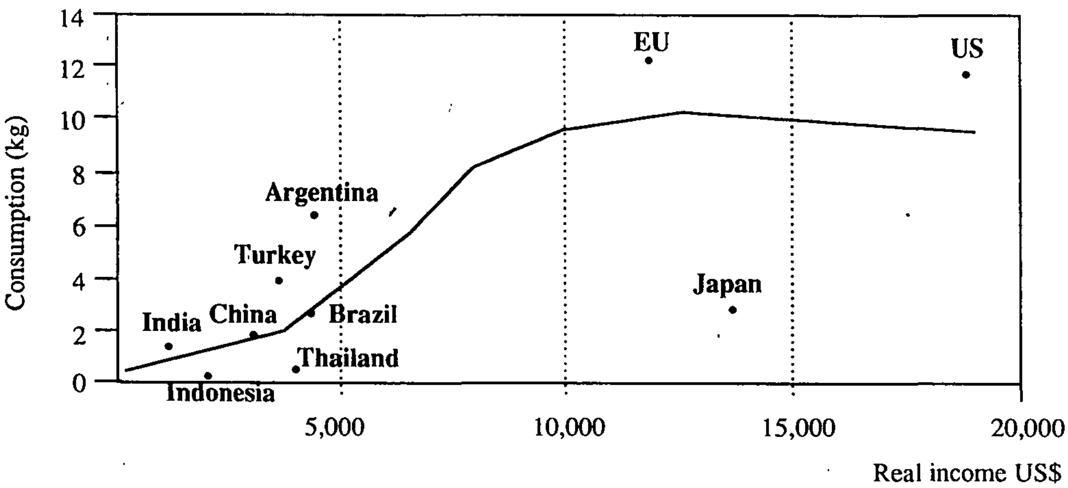
Per Capita Vegetable Oil Consumption related to per capita income, 1993



Source: Oil World, Summers and Heston, World Bank

China

Per Capita Animal Oils and Fats Consumption related to per capita income, 1993



Source: Oil World, Summers and Heston, World Bank

Substitution of Animal and Vegetable Fats

Per Capita Use of Oils and Fats (kg)*

	Animal		Vegetable		Annual average growth %)	
	1984	1993	1984	1993	Animal	Vegetable
USA	12.2	11.0	25.3	33.2	-1.1	3.1
Japan	3.3	3.6	14.0	17.2	1.0	2.3
EU	14.3	12.6	20.0	27.8	-1.4	3.7
FSU	9.4	7.6	12.6	9.5	-2.3	-3.1
Argentina	6.2	6.1	13.1	15.6	-0.2	2.0
Brazil	2.6	3.0	13.7	17.3	1.6	2.6
China	1.3	2.1	4.6	6.3	5.5	3.6
India	1.0	1.3	6.2	6.6	3.0	0.7
Indonesia	0.1	0.1	2.9	12.2	8.6	17.3
Thailand	0.3	0.4	2.9	8.6	12.3	12.8
Turkey	3.0	3.6	14.3	21.6	2.0	4.7
World	3.9	3.5	9.5	11.9	-1.2	2.5

Including oils and fats which are exported as secondary products in a later stage Source: Oil World

Changes in Vegetable Oil Consumption

Consumption of the Major Vegetable Oils (million metric tonnes)

	1984-86	1990	1992	1994	1995	Growth* %
Soybean oil	13.93	16.14	16.86	18.7	19.6	2.0
Palm Oil	6.65	11.04	12.36	14.53	14.71	8.8
Rapeseed oil	5.83	8.17	9.55	9.62	10.37	6
Sunflower oil	6.55	7.88	8.22	7.70	8.50	2.5
Cotton oil	3.58	3.81	4.36	3.52	3.88	1.1
Groundnut oil	3.36	3.95	3.96	4.25	4.11	2.0
Coconut oil	2.64	3.17	2.84	3.07	3.19	2.0
Olive oil	1.81	1.85	2.01	2.06	1.89	0.43
Palm kernel oil	0.83	1.38	1.56	1.95	1.96	9.5
Corn oil	1.14	1.41	1.51	1.67	1.78	4.3
Sesame oil	0.59	0.61	0.65	0.70	0.70	1.6
Linseed oil	0.78	0.63	0.64	0.63	0.67	-1.16
Castor oil	0.37	0.43	0.47	0.46	0.50	2.9
Total	48.04	60.48	64.99	68.86	71.86	4.0

* *Annual average growth 1985-1995 Source: Oil World, Oil World Annual*

Change in Vegetable Meal Consumption

Consumption of the Major Vegetable Meals (million metric tonnes)

	1984-86	1990	1992	1994	1995	Growth* %
Soybean meal	60.57	69.24	73.53	82.3	86.5	3.4
Cotton meal	13.93	14.41	16.45	13.4	14.8	0.85
Rapeseed meal	9.63	12.94	15.17	15.7	16.5	12.2
Corngluten meal	7.39	10.56	11.55	11.7	12.9	5.8
Sunflower meal	7.66	9.37	9.82	9.3	10.4	4.05
Fish meal	6.05	6.34	5.80	7.1	6.6	1.02
Groundnut meal	4.95	5.60	5.65	6.0	6.1	2.0
Corngerm meal	2.33	2.80	2.48	2.9	3.1	2.95
Palm kernel meal	1.08	1.83	1.83	2.3	2.4	9.0
Copra meal	1.54	1.94	1.65	1.7	1.9	5.07
Linseed meal	1.50	1.30	1.28	1.2	1.3	-1.13
Sesame meal	0.75	0.77	0.78	0.89	0.9	1.7
Total	117.37	137.12	145.98	154.49	163.4	1.8

Annual average growth 1985-1995

Source: OH World, Oil World Annual

Oilseed Import Growth

Country	Oilseed Import Growth 1990-1995 (%)	Vegetable Oil Import Growth 1990-1995 (%)
China	1900	49
Japan	7	15
India	242	148
Pakistan	387	34
Bangladesh	125	10
US	74	20
EU	34	7

Source: Oil World Annual, 1996

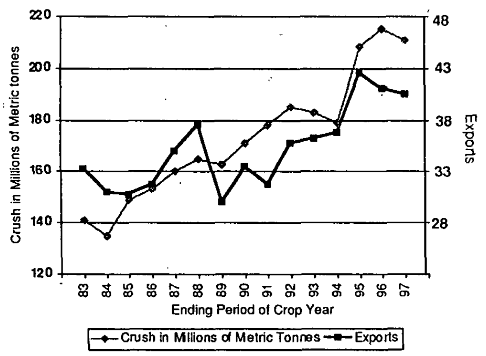
Market Access

Country	Tariffs			Comments
	Oilseeds	Oil	Meal	
Japan	—	—	High	
China	High	Mod	High	Complex system with varying values by commodity. Trading rules can be difficult to establish
India	High	High	Mod	Reducing
Bangladesh	Mod	Mod		

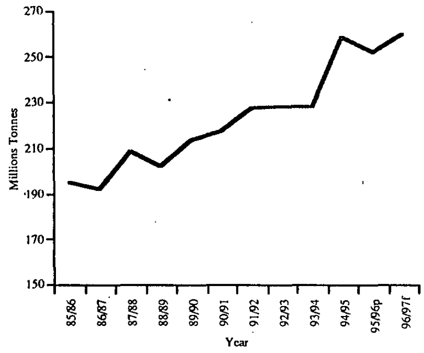
Section 2 - World Overview

World Oilseed Production

Crush and Exports, 1983–1997

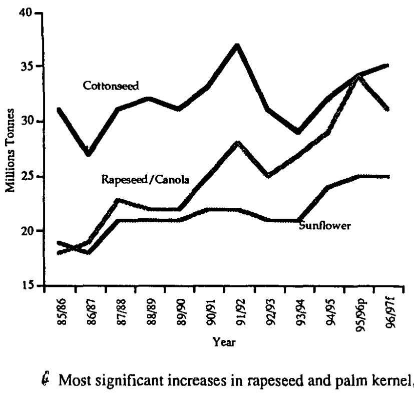


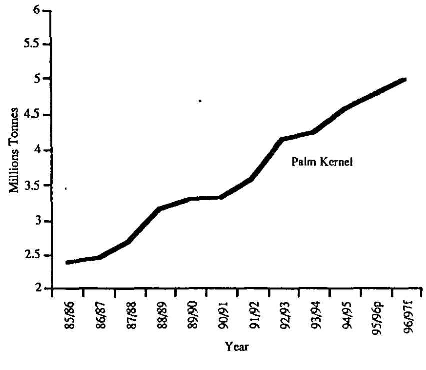
Production



- Increase of over 30% since 1980

World Production





- Most significant increases in rapeseed and palm kernel, 110 and 68 per cent respectively

Source: Oil World Annual, 1996

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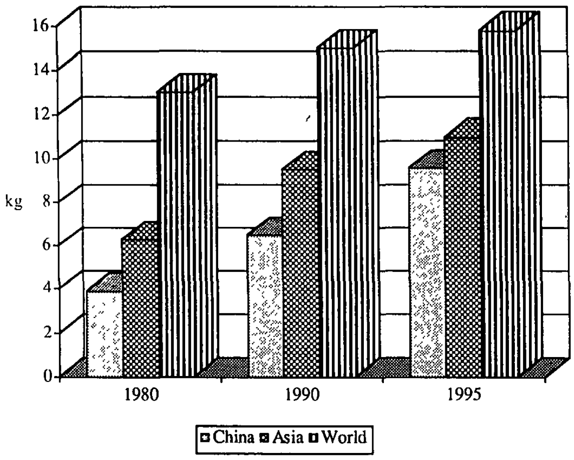
World Overview — Fats and Oils

Edible Fats and Oils: Per Capita Consumption



- Per capita consumption of edible fats and oils increasing
- Asia is showing most rapid growth
- Consumption increasing due to population growth, economic growth and changing taste preferences

Source: Asian Vegetable Oils and Oilseed Markets Conference, 1996

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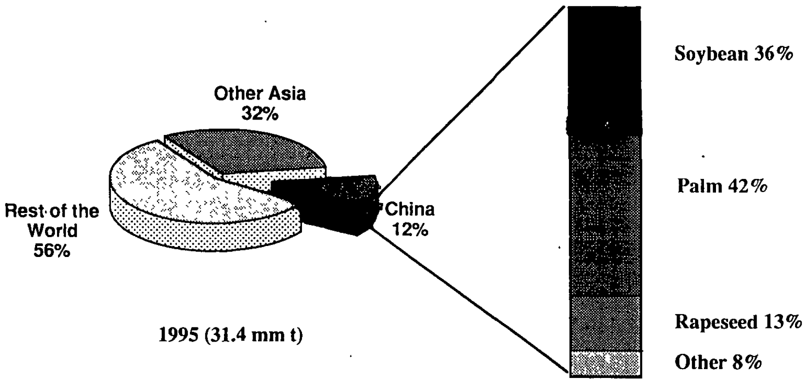
World Overview — Fats and Oils

World Imports of Edible Fats/Oils



Source: Asian Vegetable Oils and Oilseed Markets Conference, 1996

- World imports of edible fats and oils increasing
- China now represents 12% of total imports

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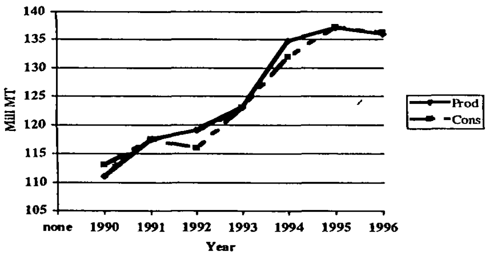
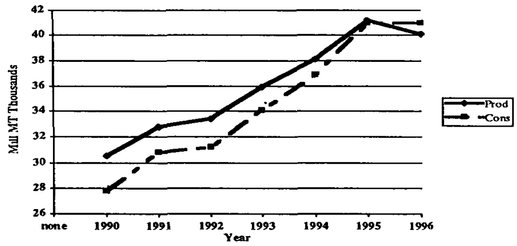
World Overview — Oilmeals

Oilmeal Production & Demand, 1990-1996



Asia: Oilmeal Production & Consumption, 1990-1996



Source: USDA

- Oil meal production and demand in total are matched
- In Asia, demand outstripping production and the gap is expected to continue to widen

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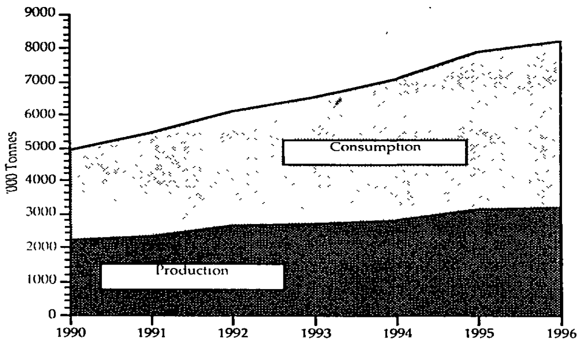
World Overview — Oilmeals

South East Asian Oil Meal Production and Consumption



- South East Asia will show greatest import growth due to growth in local meat industries
- In other Asian countries, such as Japan, meal imports will be replaced by meat imports

Source: Asian Vegetable Oils and Oilseed Markets Conference, 1996

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World Overview — Factors Influencing Supply in Short to Medium Term

- Agricultural policies in major producing countries
- Price characteristics
- Technology — GMO's
- Costs of production

Preliminary Assessment of Opportunities

From above analysis, countries selected for further review were:

- Japan;
- China; and
- Sub-continent.

Malaysia and Indonesia were also reviewed, but discounted due to strong palm oil presence. Whilst consumer trends associated with higher incomes are evident, these are unlikely to see significant shift away from palm oil due to price and taste factors.

Interviews indicated that Hong Kong and Singapore may also be opportunities.

Individual Country Profiles

Japan

Consumer Trends

- Move towards 'western' style foods
- Consumers arc increasingly quality orientated, particularly in relation to health and food safety
- Growth in demand for easily prepared convenience foods
- Increased expenditure on eating out
- Increased-price sensitivity as a result of recession
- Increased acceptance of imported foods

Key Characteristics of Oilseed Market in the 1990' s

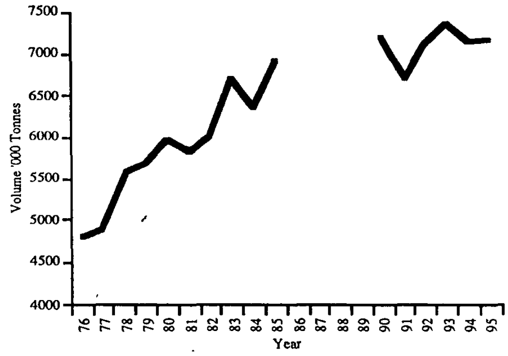
- Japan is a net importer of oil seeds, primarily soybean and canola
- Limited growth in imports of oilseeds due to Oat domestic demand for oils and stockfeed
- Declining imports of cottonseed oil and sunflower oil has been offset by increasing imports of soybean oil, safflower oil and canola oil
- Slight increase in overall consumption of oils and fats despite a fall in demand for cooking oils
- Increased health consciousness has lead to a decline in animal oils and fats consumption
- Oil consumption-by food service sector is increasing
- Edible oils and fats market is considered as mature with only limited growth predicted in the next 5 years. Growth will be driven by the introduction of new and improved oils
- Niche opportunities in the gift market for high quality
- Declining consumption of oilseed meal is likely to continue due to shift from domestic production of meat to imports
- Per capita consumption 15kg/annum compared to US at 28 kg and Australia at 21 kg/annum

Japan — Oilseed Imports

Imports of oilseeds, 1995 ('000 tonnes)

	1995/96	Country of Origin
Soybeans	4900	USA
Cottonseed	185	Australia, USA
Sunflower	3.6	USA, China
Canola	1935	Canada, Australia
Palm kernel	5	Papua New Guinea
Copra	34.5	Papua New Guinea
Linseed	70	Canada
Other	188.2	
Total	7321.2	

Source: Oil World Annual, 1996

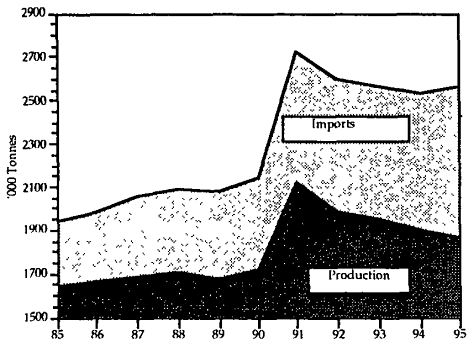


Source: Oil World Annual 1996 and Jetro 1996

- Oilseed import market grown by around 8% since 1990 and slowing
- Since 1990, safflower and sunflower imports show greatest growth

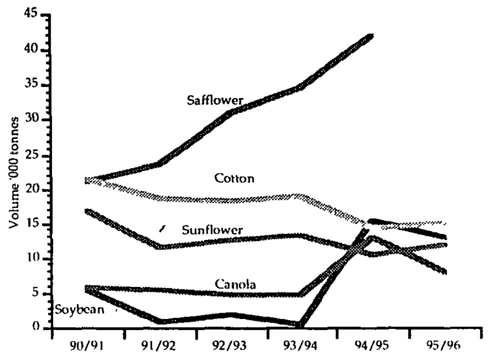
Japan — Vegetable Oil Imports

Production vs Imports



- Production declining due to:
  - economic slowdown
  - trade liberalisation
  - edible fats and oil markets reaching maturity

Oil Imports



- Soy, cotton, canola and sunflower only small proportion of overall imports but showing rapid growth

Source: Oil World Annual 1996

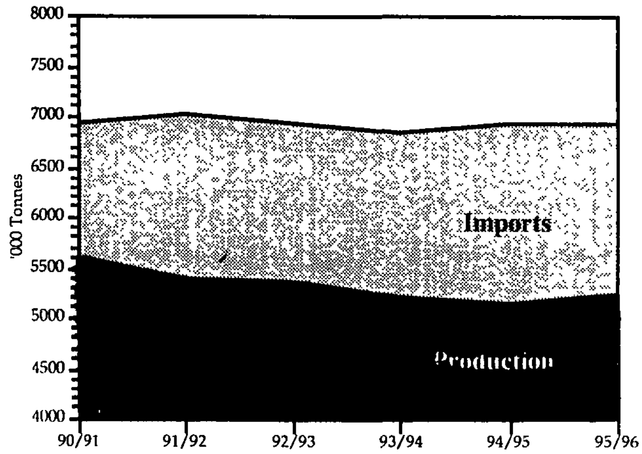
Changes in Vegetable Oil Market

- Japanese becoming more reliant on imports i.e. 15% in 1985, 27% in 1995
- Palm oil imports have increased by 20% since 1990/91 to reach 50,000 tonnes in 1995/96
- Significant decrease in imports of tallow and grease reflecting declining consumption
- Substantial increase offish oil imports as a result of declining fish stocks

Oilseed Meal Imports

- Domestic demand for oilseed meal is flat due to limited domestic livestock industry
- Increasing consumption of meat and dairy products is increasingly being met by imports
- Increased reliance on imports
- Decreasing oilseed meal exports, primarily due to the fall in fish meal supplies

Production and Imports of Oil Meal



Source: Oil World Annual, 1996

Key Players

- Number of small processors (capacity of less than 50 tonnes per day) are decreasing considerably as a result of growing reliance on imported raw materials
- Plants are larger and more specialised to reduce the costs of production
- Ten processing plants account for over 70% of total capacity
- Most plants are currently operating at around 75% capacity with further rationalisation likely to occur
- Most large plants use integrated production from extraction to processing of final products to distribution

Edible oils and fats is dominated by four companies

- Nisshin Oil Mills (39 per cent)
- Ajinomoto (25 per cent)
- Hohen Oil (14 per cent)
- Showa Sangyo (10 per cent)
- All other companies represent less than 5 per cent of market share

Margarine sector is dominated by four companies

- Kagome (21 per cent)
- Bulldog Sauce (20 per cent)
- Ikari Sauce (12 per cent)
- Kikkomann Shoya (7 per cent)

Leader in the stockfeed sector is Kyoda Shiryo

China

Consumption Trends

- Stronger demand for food products as economy improves
- Trends towards higher value foods such as meat as incomes rise
- Quality is important, but price remains the most important purchasing factor
- Convenience foods, especially fast foods (Chinese and Western style) and frozen foods, showing considerable growth
- Food service has grown in recent years
- Health foods are showing significant growth
- Processed foods currently represent 40 per cent of total food consumption, but is projected to increase to 50-60% by 2000

Key Characteristics of Oilseed Market

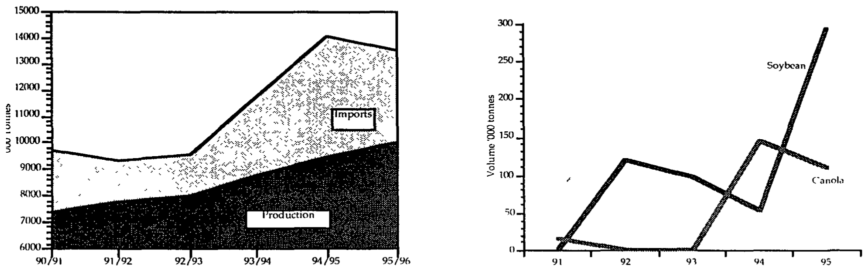
- China is the second largest consumer of oilseeds (13% of world total)
- In the last 10 years, China has become a net importer of soybean and canola
- China will continue to be a significant importer of vegetable oil and oilseed meal
- Most vegetable oil consumed is minimally refined. Palm oil is the leading oil for cooking
- Opportunities exist for cooking oil, salad oil and margarine
- Food service sector is expanding rapidly
- Market access is a major

- Currently the world's largest market for vegetable oils
- Domestic consumption is 13 million tonnes, representing 14% of total world imports of oils and fats
- Consumption of fats and oils has grown by 50 per cent since 1990/91
- Per capita consumption more than doubled between 1980 and 1995

Oilseed Imports

- Oilseed production has increased by over 35 per cent primarily soybean and canola
- Production growth result of improved yields, rather than increased plantings
- Crushing industry is highly inefficient compared to western countries
- Majority of crushing is carried out by approximately 1400 very small enterprises, most of which operate under the Ministry of Internal Trade and average a capacity of 16000 tonnes per year per factory

China — Oilseed Imports



- Since late 1980s, China a net importer of oil seeds
- Gap between production and domestic demand widening

Source: Oil World Annual, 1996

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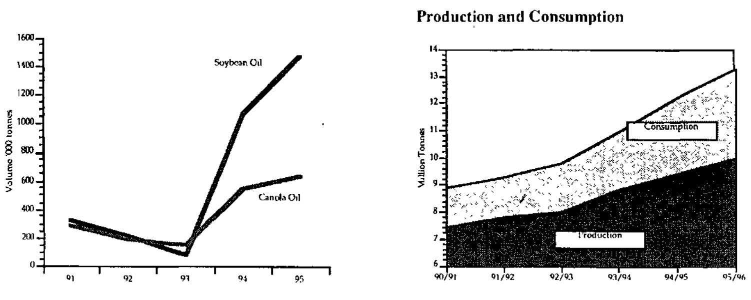
China — Vegetable Oil Imports



- Despite substantial increase in production, China has become net importer of vegetable oils.
- In 1995, China imported over 4 million tonnes and imports have doubled since 1991
- Majority of imports are palm oil, but substantial growth in canola and soybean oil imports since 1993

Source: Oil World Annual, 1996

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India

Consumption Trends

- High and increasing middle class
- Large number of young consumers
- Increasing urbanisation
- Increasing number of working women
- Smaller family units
- Emerging convenience lifestyle
- Increase quality and variety of products available
- Shift from primary to packaged convenience
- Increased popularity of health and organic foods

Key Characteristics of the Oilseed Market

- Oilseed production has grown by 6.5% per annum over last 15 years
- Domestic oilseed prices have increased significantly as a result of government policies restricting seed imports
- Production is likely to increase by 15% by 2000, but will be outstripped by demand
- Import restrictions on seed could be lifted in the future
- India is the fourth largest producer of edible oil
- Per capita consumption has significantly increased 5 kg in the 1970's to 9.7 kg currently
    - 1970's 5 kg/person
    - 1996 9.7 kg/person
    - 2000 10.9 kg/person

Oilseed Imports

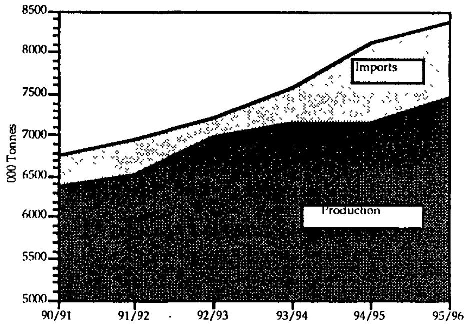
- Palm oil and soybean oil main edible oil imports
- India importer of cotton and sunflower oil since 1994 and expected to increase
- India is a net exporter of oilseed meal
- The is a high level of bureaucratic red tape in dealing with Indian authorities
- Oilseed imports prohibited at present
- Restriction on oilseed imports expected to be removed once the Government addresses producer concerns and quarantine needs

India — Vegetable Oil Imports

Factors contributing to increased imports are:

- **growing per capita intake of vegetable oils**
- **increasing disposable income**
- **increasing population and urbanisation**
- **reduced tariffs on imports**

Production and Imports of Oils



Source: Oil World Annual, 1996

Key Players

- India has a very large and diversified crushing industry that is growing rapidly
- The crushing industry consists of small to medium sized companies
- Efficiency of these companies is generally low
- The industry enjoys relatively tight protection from the Government as do producers of oilseeds

Summary of Opportunities

Country	Factors Driving Opportunities	Products/Segments
Japan	Trade liberalisation Health concerns	Canola seed and oil High oleic seed and oil Cotton seed/sunflower Edible soybeans Retail, food service and industrial
China	Population/income growth Trade liberalisation Domestic government policies	Canola Sunflower/safflower Retail/food service
Sub-continent	Population/income growth Changing government support for local crushing industry Trade liberalisation	Canola seed and oil Sunflower seed and oil Cottonseed seed and oil Retail/food service
Singapore/ Hong Kong	Import reliance Income growth Health concerns	Canola oil High oleic oil Food service
Industrial oils are also an opportunity		

Key Information Needs in Stage 2

- Supply/demand scenarios
- Internal operation of domestic industries
- End user views and directions
- Distribution channels
- Relationships and alliances
  - existing
  - potential for Australia