

EDIBLE OIL PROCESSING

DISCOVER. INVEST. PROFIT

Bangladesh is a potential market for essential commodities, including edible oils. The insufficient local production with a steadily growing population and an improving economy makes edible oil market in Bangladesh a promising one. Raw material required for oil extraction including rapeseed and rice bran is abundantly available. Rice bran oil has an array of health benefits and is considered as a premium health product globally. The rice bran oil manufacturing in Bangladesh is steadily growing. Bangladesh encourages and supports investments from national and international organizations in edible oil processing, including the highly beneficial rice bran oil.

OVERVIEW OF RICE, MUSTARD AND PALM PRODUCTION

Rice contributes to more than 80 percent of the total crop production. More than 95% of population consumes rice and it alone provides 76% of calorie and 66% of total protein requirement of daily food intake. In fact, Agriculture sector is largely dominated by rice production.

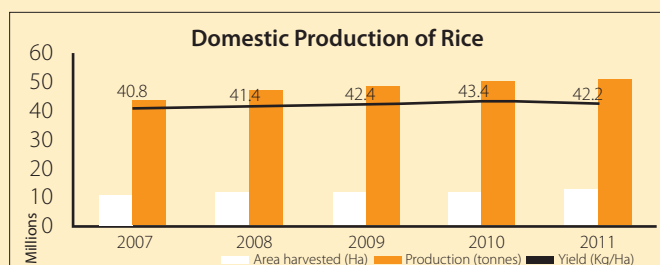


Figure 1: Domestic Production of Rice in Bangladesh

Rice and Rice Bran Statistics

- 6th in Global Production
- 75 % of total cultivable land (12 Million Hectares). 64% of Irrigated land
- 2-3 crops/year
- Amount of available Rice Bran – 12million tonnes
- Most of the varieties consist of
 - Hull – 20%
 - Bran – 8-12%
 - Milled Rice – 68-72%

Palm Oil

Palm oil is the dominating edible oil market since 2003 in Bangladesh. In 2012, palm oil occupied about **64 percent market share** in the edible oil market. Apart from its use as cooking oil, Palm oil is also used as one of the important raw materials for shortening and food industries.

Palm oil is imported both in crude and refined forms. Crude palm oil (CPO) and crude palmolein (CPL) are refined in local refineries for marketing the refined products.

Year	Refined Palm Oil Production (tonnes)
2010	945,000
2011	996,000
2012	1,027,200
2013	1,313,700

Figure 2: Refined Palm Oil Production in Bangladesh

Mustard

The mustard/rapeseed blends grown in India, Bangladesh and Pakistan are crushed to produce vegetable oil and meal. The blend includes about 30% mustard seed

Year	Seed Production (tonnes)	Mustard Oil Production (tonnes)	Mustard Oil Import (tonnes)
2008	227,930	78,160	26,840
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Figure 3: Production and Import of Mustard Oil in Bangladesh

GROWTH DRIVERS

- High dependency on import of palm and soybean oil can be substituted with local production of Rice Bran Oil
- Comparatively healthy product attributes of Rice Bran Oil
- Shifting consumer preference towards healthy products
- Abundance of raw materials
- Lower cost than other competing edible oil products
- Growing number of private sector market actors entering the market leading to market growth, innovation and acceptance

Product Overview – Rice Bran Oil

Rice bran oil is the oil extracted from the hard outer brown layer of rice after chaff (rice husk) is removed. It has a wide range of health benefits.

Health benefits:

- Rice bran oil contains anti-oxidants, vitamins and is highly nutritious
- Reduces Cholesterol,
- Reduces risk of intestinal cancer and osteoporosis,
- Provides relief in menopause



Raw Material Analysis

Domestic production of Rice Bran Oil	110,000 tonnes annually
Projected production capacity	2.6 million tonnes annually
Rice Bran Availability	12 million tonnes
Price of rice bran	Taka 12000/MT
Requirement of Rice Bran for rice bran oil/tonne	4.5 tonne (22%)

Global Market Overview

Rice bran oil is gaining popularity across the world as it is rich in mono-unsaturated fatty acids and has a higher cholesterol reducing power. In many countries it is being regarded as a healthy food item and both production and export of rice bran oil has increased significantly over the last few years.

Largest producer of Rice Bran Oil	India (900,000 tonnes annually)
Export selling Price of Rice Bran Oil	USD 1,400 – 1,500 per tonne



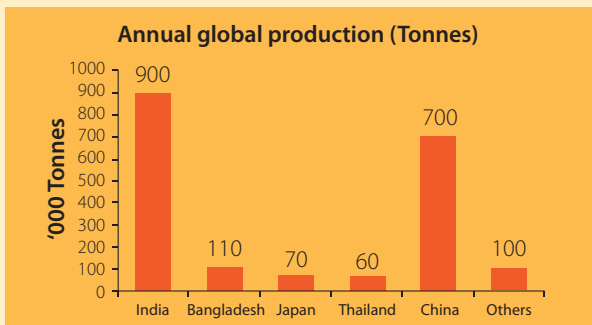


Figure 5: Annual Global Production of Rice Bran Oil

Potential Export Destinations

Japan, Thailand, India, North America, European Union

Competing Countries for Global Market

India, Japan, Thailand, China

Edible Oil Consumption in Bangladesh

Edible oil consumption per Capita (Kg)

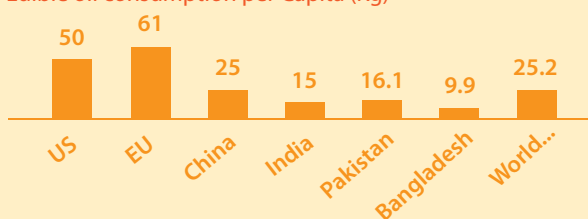


Figure 6: Global edible oil consumption

Edible oil consumption in Bangladesh is way below the world average thus signifying substantial growth potential for the edible oils industry. The growth of branded edible oils is expected to remain favourable on the back of the development of the retail sector and rising income levels.

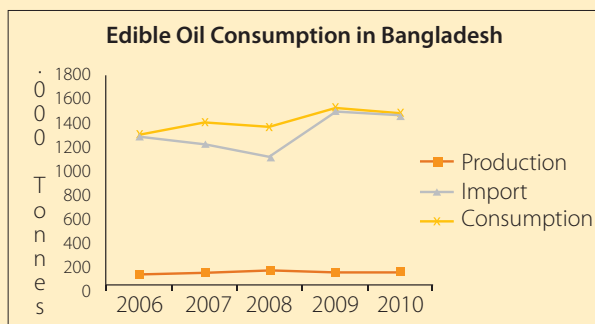


Figure7: Edible Oil Consumption in Bangladesh



Bangladesh is the one of the largest consumer and importer of edible oil in the world. Bangladesh imports palm oil mainly from Malaysia and Indonesia and soybean oil from Argentina and Brazil.

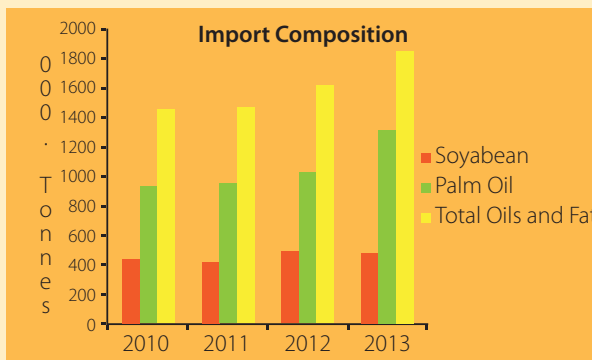


Figure 8: Import Composition of Edible Oil in Bangladesh

Local production of Edible Oil can substitute the edible oil import. As demand in domestic market grows, there are great opportunities for investment in the production of edible oil, in particularly rice bran oil.

Rice Bran, Palm Oil & Mustard Oil processing

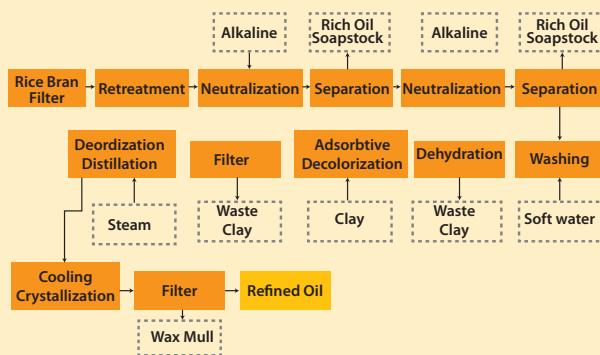


Figure 9: Rice Bran Oil Processing

Profitable By-Products
 Due to high protein content (19-20%) and other nutritional value, De-oiled rice bran (DRB) is used as an important raw material for feed manufacturers. DRB accounts for 30-40% of total sales for rice bran oil producers

Annual Demand of De-oiled rice bran in our country	1, 50,000 MT
Price of De-oiled rice bran	Taka 8000 per MT

Figure10: Demand of De-oiled Rice Bran

Moreover the fatty acid is used in the manufacture of soaps and toiletries. The residue materials are used in the manufacture of 'Agarbati' and are primarily exported to India.

Palm Oil Fractionation Processing Line Chart

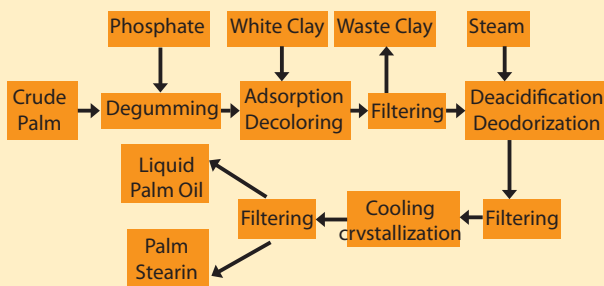


Figure11: Palm Oil Processing Line

Mustard Oil Processing

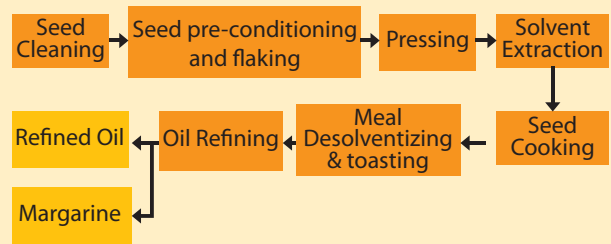


Figure 12: Mustard Oil Processing Line

INVESTMENT INSIGHTS – RICE BRAN OIL

Financial figures

Financial Estimates for the below Production Capacity	
Extraction Capacity	100 tonnes per day
Refine Capacity	30 tonnes per day

Project Cost

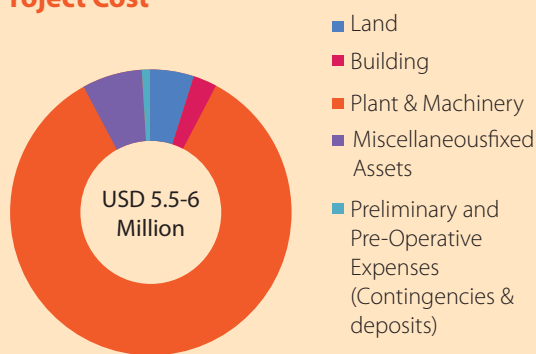


Figure 13: Estimated Project Cost for Edible Oil Processing Plant

BUSINESS INCENTIVES

- Research support on post-harvest handling and processing of rice by BRRl
- No FDI cap: 100% foreign equity is allowed (Except 4 reserved sectors - Military, Forestry, Nuclear energy, Currency printing)
- Tax incentives
 - Tax holidays: For 5-7 years (Location and industry dependent)
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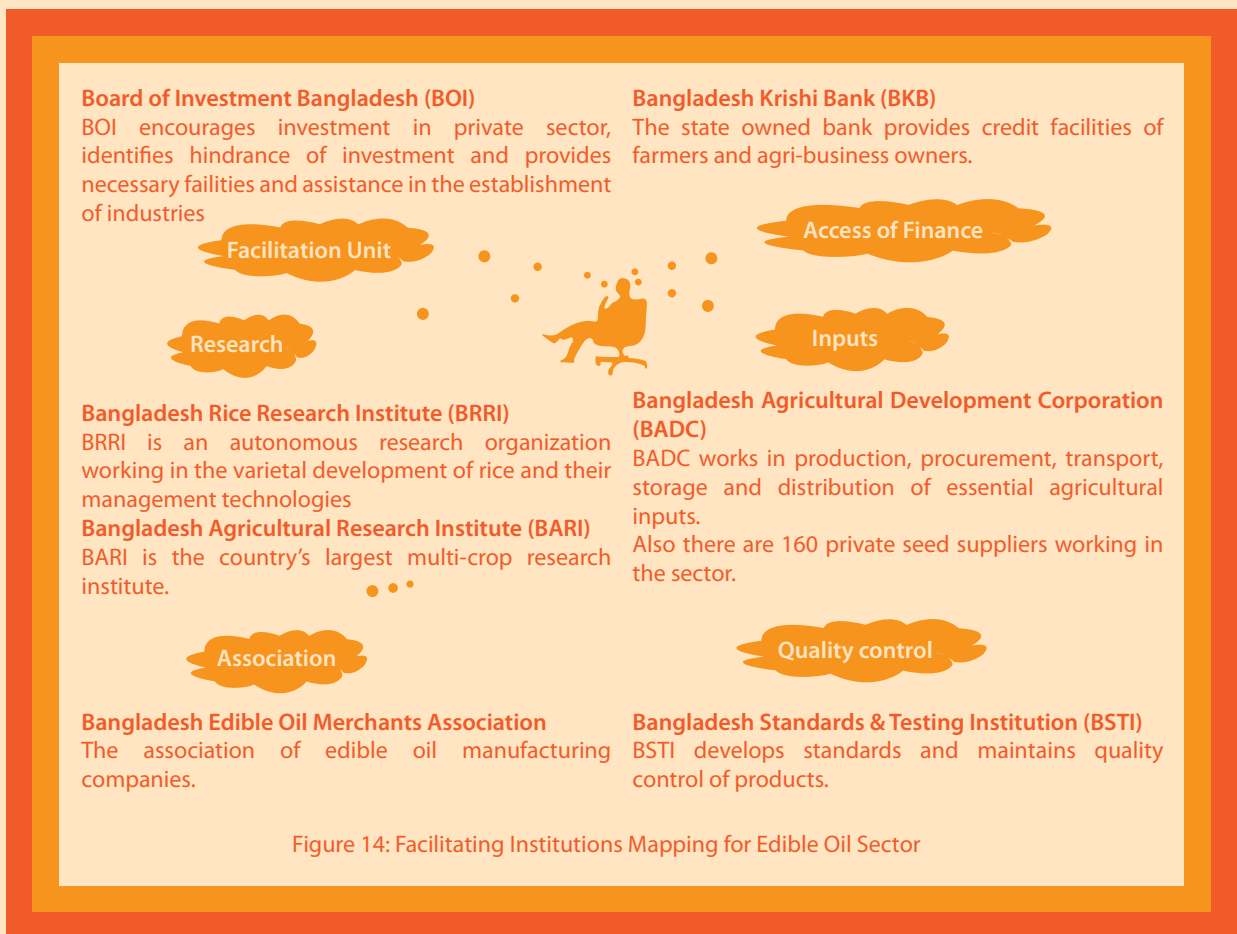


Figure 14: Facilitating Institutions Mapping for Edible Oil Sector

SOCIAL IMPACT

Bangladesh offers a very prospective market for production of edible oil, particularly in the production of rice bran oil. Investment in the rice bran oil sector can potentially create employment, alleviate poverty and enhance social security. Market linkages can lead to other support industries and more employment. Moreover, rice bran oil is a great source of vitamins and minerals and can be instrumental in improving overall health and nutrition in Bangladesh.

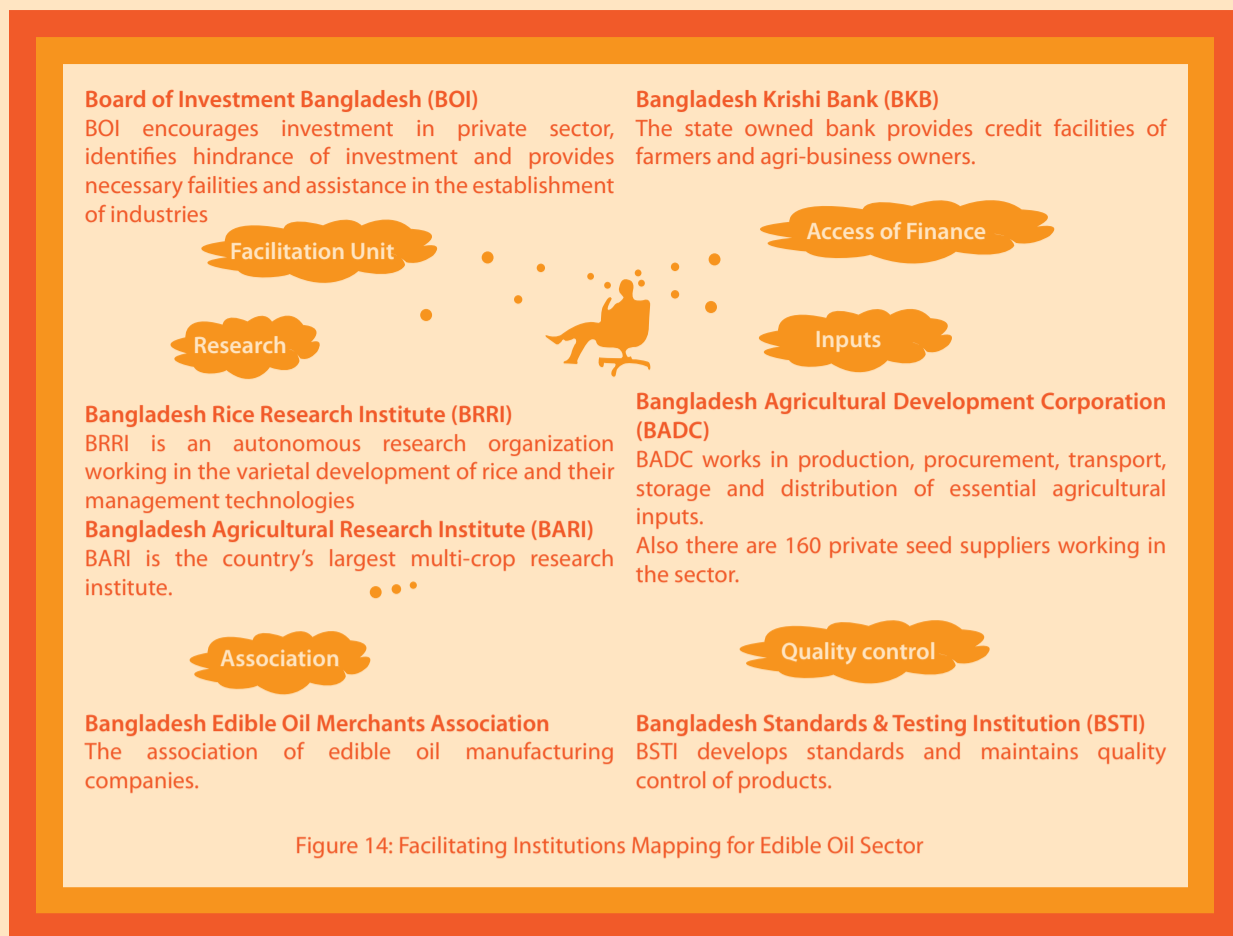


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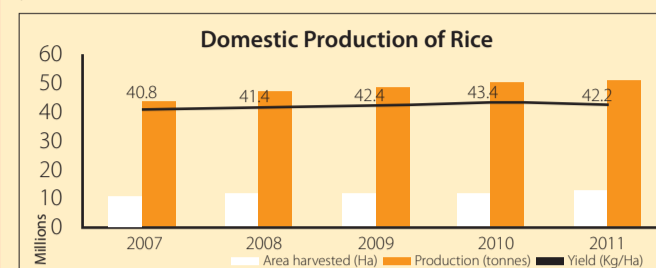


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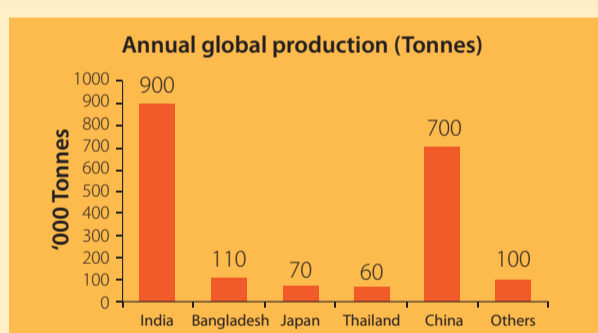


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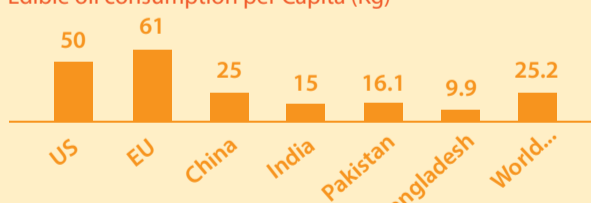


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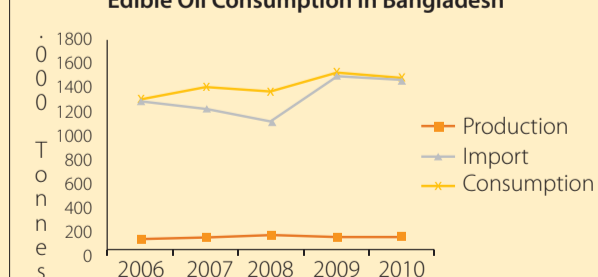


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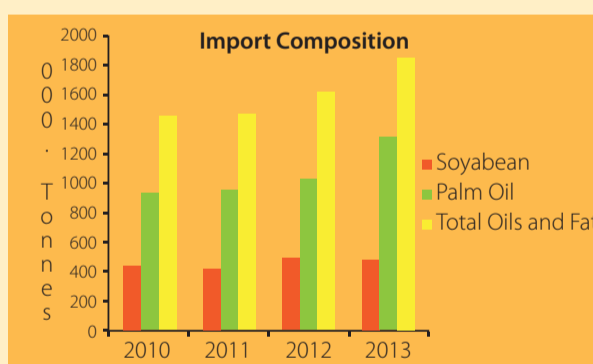


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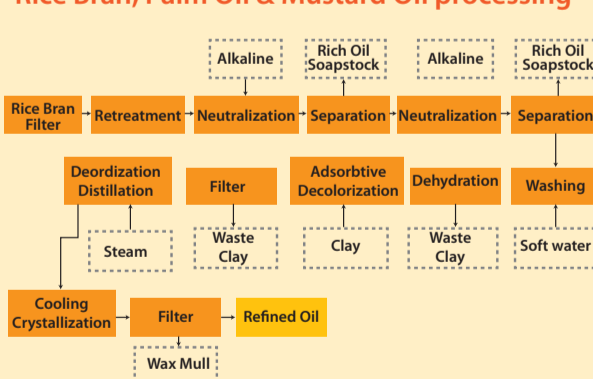


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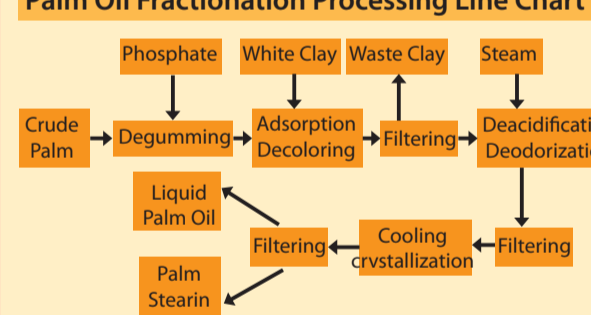


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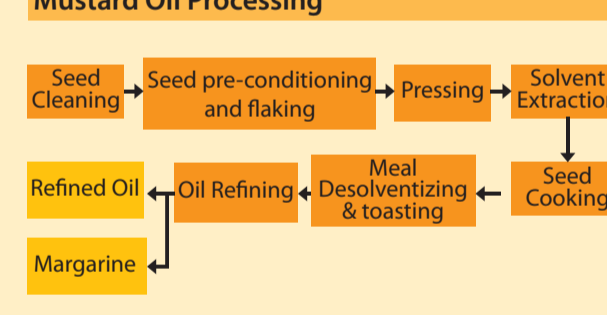


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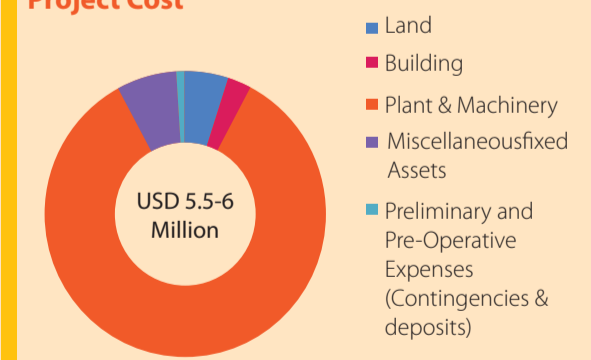


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