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MUSTARD OIL: A HOMEGROWN ALTERNATIVE TO REDUCE EDIBLE OIL IMPORT BILL

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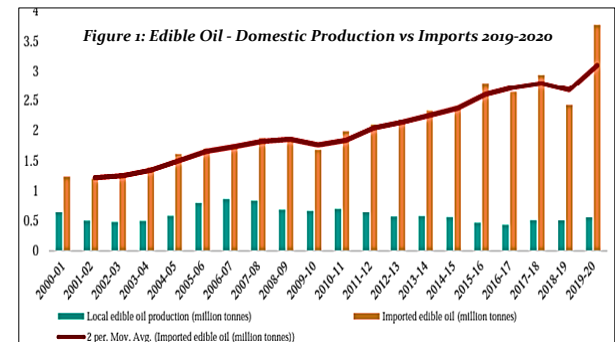
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Despite being an agricultural country, Pakistan has become the world's fourth-largest edible oil importer, with an import bill of \$4.5 billion in the fiscal year 2021-22. This import increase is mainly due to rising domestic consumption and price fluctuations in the international edible oil market. Over the past two decades, Pakistan's edible oil imports have grown at an annual rate of 12.3%, resulting in a staggering 398.7% increase in the import bill by 2020. In 2006, the import bill was \$615 million, but it rose to \$3.068 billion in 2020.¹ The State Bank of Pakistan also reported a 47% increase in the import bill year-on-year in FY 2021.²

Palm and Soybean oil are the major imports for Pakistan, along with some oilseeds such as Soybean, Canola and Sunflower. Palm oil imports dominated the import bill in 2021, costing \$2.44 billion.³ In terms of quantity, oilseed and related products have surpassed 7 million metric tons in the same fiscal year, with 87% of Palm and Soybean oil and the remaining 13% comprising Rapeseed, Sunflower, Groundnut, and other related seeds.⁴

In Pakistan, the food industry consumes 96% of edible oil commercially and domestically. The per capita consumption in Pakistan is around 24 kg, higher than in India and Sri Lanka, which is responsive mainly to rising GDP. It is worth noting that transformation in dietary practices has decreased the use of hydrogenated products but starkly increased oil usage, 87% of which is imported Palm and Soybean oil.

Pakistan imports 75% of its Palm oil from Indonesia and 25% from Malaysia under the Preferential Trade Agreement and Free Trade Agreement, respectively.⁵ According to the trade map, the global average per ton cost of Palm oil is \$1050, making it the cheapest edible oil. Figure 2 (given below) illustrates a sudden surge in import bills in 2011 and onwards, mainly due to Indonesia's crude oil export discouragement policy and imposing a \$20-25 per ton export duty. Similarly, the US-China rivalry also impacted the international



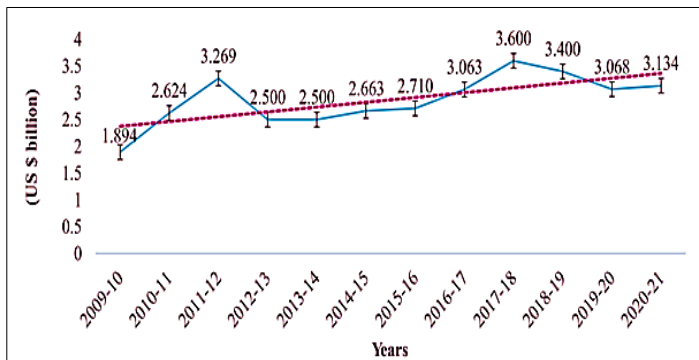
Palm oil market, where the US reduced the trade of Soybean oil with China, eventually opening space for Indonesian Palm oil to fill in, resulting in increased demand and subsequent price hikes.⁶ Therefore, Pakistan must utilise its domestic edible oil production potential to avoid the uncertain international edible oil market, related hiked import bill, and widening balance of payment gap.

Over the past two decades, Pakistan has witnessed a gradual decline in domestic production of edible oils, where it was 0.642 MT in 2000-01 and 0.431 MT in 2017, but positive changes have been observed since the initiation of the Punjab Oilseed Promotion Initiative in 2017-18. Mustard and its varieties have replaced imported Palm oil and are the second-largest source, contributing approximately 38% of the country's edible oil production. Mustard is known for its high oil content, ranging from 40% to 44%, making it an attractive option. Cottonseed, the primary contributor at 52%, is often blended with other oils due to its low oil content and higher saturated fats. Currently, Pakistan has 585.50 hectares of Mustard cultivated land, with a production of 17.16 mund per acre in most parts of Pakistan.⁷ Mustard and Rapeseed contribute 32% of total domestic oil produced.⁸ Although Mustard/Rapeseed contain higher Euric content, with the introduction of Canola varieties of the crop, the health profile of the crop has been enhanced. Despite the positives mentioned earlier, the crop still experiences multiple bottlenecks in increasing production.

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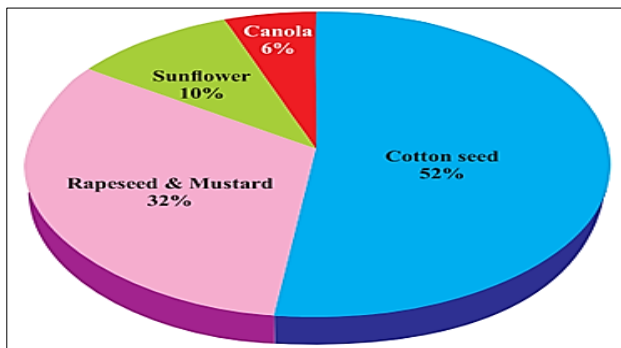
A predominant challenge to Mustard cultivation in Pakistan is competition with Wheat over land. Wheat is a staple and highly demanded cash crop and is preferred over Mustard, given their overlapping sowing time, between September and October. Around 40% of cultivated land in Pakistan is consumed by Wheat, i.e., about 9 million hectares, whereas Mustard is generally grown over marginal lands, with lower availability of water and fertility.



(Figure 2: Edible Oil Import Bill)

Oil seed crops are undervalued due to their non-cash crop status; in the year 2023, the prices ranged from PKR 9000 to 11000 in Chakwal, Faisalabad, Attock and other regions of Punjab (Chakwal Mustard/ Rapeseed and Canola are of high yield, and such seed type is provided to farmers for better yield across Pakistan).⁹

A significant bottleneck is the absence of organised processing and crushing facilities. The existing crushing facilities in Pakistan primarily comprise local *kohloos* in villages. In contrast, high solvent extractors employ advanced extraction technologies, with a production capacity of approx. 4 - 4.5 MT oil. Pakistan Oilseed Development Board (PODB) indicated that 46.5% of oil production is through *kohloos*, with a minimum yield of 0.10 MT.¹⁰ Moreover, the gap between farmers and extractors hinders oilseed production, indicating that improved extraction methods and a more substantial market presence for oil products can yield greater efficiency.



(Figure 3: Share from Local Produce)

On the demand side, the presence of a strong Sulphur smell and Euric acid associated with cardiovascular diseases, Mustard is not preferred. To address this, imported Canola varieties were introduced in 2005-2006. Initially, Canola production remained low, but since Pakistan's first indigenous Canola variety was introduced in 2016, AARI Canola yield has substantially increased.¹¹ Canola being GE Mustard, holds health benefits and similar production costs and can serve as a low-cost alternative to expensive imported oils.

Retail competition is another impediment in mainstreaming Canola as there exists a price difference of approx. PKR 100 between Palm and Canola oil.¹² Consequently, market dynamics prioritise price considerations over the health benefits associated with the product.

With such decreased production and prospects of increasing demands, a large-scale initiative is needed, drawing its roots in Pakistani households to a policy captivating growers. Following practices can help discourage imported edible oils and route self-sufficiency in edible oils.

- Given the minor household usage, a mass awareness campaign through electronic and print media is necessary, including dieticians and cooking experts inducing the benefits of Mustard and Canola oils. Mustard/ Canola oil branding should be undertaken, and a retail policy should be devised over percentage allocation to different oils in the consumer market.
- At stage two, Mustard/ Rapeseed and Canola farming should be encouraged by introducing farmer-friendly policies. Centred on sustainable and longer-term Mustard production since the subsidies provided on crops prove fugacious. Therefore, to increase the cultivating land, the concept of Zoning be adopted, where Zones specify the geographically proximal region specified for growing selected crops. In addition, a cluster-based approach be adopted to analyse climatic, soil and marketing contingencies needed before consideration of any agriculture-supportive policy.
- Shaving some land off the Wheat cultivated areas can also be considered. Given the per acre yield of Mustard to be 17.16, an impactful contribution can be expected from 0.5 million hectares. In this regard, intercropping with Wheat and Sugarcane should be deliberated to enhance production. There exists a possibility of increasing oilseed production up to 34.41% of domestic needs using additional area from Wheat and Sugarcane.
- The government should promote value-added agriculture in oilseeds to incentivise farmers and attract Mustard/ Canola cultivation.

- Furthermore, farmers' confidence in their crops should be increased by introducing a market-friendly Minimum Support Price (MSP) for Mustard/ Canola.
- Additional attention should be paid to Research and Development (R&D), hybrid and genetically engineered GE Rapeseed/ Mustard, specifically Canola seeds with greater yield, health benefits, and climate resistance. Furthermore, seed provision be strictly monitored, and high-yield seeds be made available through government and private research institutes.
- Import of low-quality edible oil should be tariffed 5-10% more. Similarly, policy interventions conditioning importers to develop and procure equal or substantial quantities of locally produced edible oil or oil seed should be undertaken.
- Government should establish efficient extraction facilities near the farm areas, thereby decreasing reliance on production-deficient *Kohloos*.
- Additionally, projects of Soya bean, Sunflower and good Palm oil should be undertaken (as a pilot project of Palm oil in Thatta – 2016) as a step towards self-sufficiency in edible oils. Corporate farming can also incentivise regular and sustainable Mustard/ Rapeseed/ Canola oil production.

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