

# INDIA'S DEPENDENCE ON VEGETABLE OIL IMPORTS- CURRENT STATUS AND FUTURE LINE OF WORK

Prathibha M.D.<sup>1</sup> and Lalit Krishan Meena<sup>2</sup>

<sup>1</sup>Indian Institute of Horticultural Research, Bengaluru, Karnataka

<sup>2</sup>Directorate of Rapeseed Mustard Research, Bharatpur, Rajasthan

Vegetable oils are key in Indian cuisine and play a key role in the human diet and nutrition. However, it may come as a surprise that India is the world's largest importer of edible oil. With palm oil accounting for roughly 80% of the total vegetable oil import and others are sunflower oil, palm oil, safflower oil, soybean oil, peanut oil, and olive oil. Over the last decade, India's vegetable oil imports have increased at an annual rate of 8.4%. India is the world's largest importer of vegetable oils, despite being the world's fifth-largest producer of oilseed crops. Indian annual vegetable oil import bill is around Rs. 70,000 crores! It's the easiest way for the government to boost our foreign exchange reserves.

## VEGETABLE OIL AND HEALTH

Oilseeds are the key source of fat and protein after cereals in the Indian diet. The extraction of oil from plant components, mostly seeds, is the first step in the extraction of vegetable oil. Mechanical extraction from an oil mill or chemical extraction with a solvent is both options. The extracted oil may then be purified, refined, or chemically changed if necessary. Vegetable oil contains polyunsaturated and monounsaturated fats, along with saturated fats in different proportions which helps in cholesterol management. Polyunsaturated and monounsaturated fats are the most frequent fats found in vegetable oils. They assist in the reduction of bad cholesterol (LDL) levels and the risk of cardiovascular disease while enhancing cardio defensive properties.

Oils provide energy which is essential for performing our daily activities. Apart from being an energy source, oils are also essential for cell defense, anti-oxidant, immune response, growth, and proper functioning of the nervous system. As a result, oils and fats are essential components of a safe & sound body and mind. Though excess oil is considered the culprit for many lifestyle diseases, the correct quality and quantity of fat are necessary for the proper functioning of our body. Excessive consumption and the wrong types of oils have an impact on cholesterol levels, which are related to heart disease. The quality of oil should be prioritized over quantities.



# INDIA'S VEGETABLE OIL REQUIREMENT

The availability of edible oil was mostly sufficient to meet India's domestic consumption demand until the mid-1960s. However, due to a shortage of oilseeds and rising demand for vegetable oils in the 1970s and 1980s, India's vegetable oil imports grew. Edible oil imports climbed from 2.19 percent in the 1960s to 10.50 percent in the 1970s and 26.06 percent in the 1980s as a proportion of total edible oil availability (domestic output + imports).

Recent numbers indicate that each Indian consumed an average of 19.5 kg of vegetable oil/year in 2015-16, up from 15.8 kg in 2012-13. This equates to a total market for edible oils of about 26 million tonnes per year. In 2018-19, Oilseeds were grown on 25 million hectares of land in India, yielding 32 million tonnes of oilseeds, with soybean, rapeseed, mustard, and groundnut accounting for over 90% of the acreage under oilseed crops. If the country's average oil recovery is 28 percent, 32 million tonnes of oilseeds will yield 8.4 million tonnes of edible oil. Domestic production can only cover about 30% of the total demand for edible oils, necessitating imports. India imported around 15 million tonnes of edible oils worth around Rs 73,000 crore in 2019, accounting for 40% of agricultural imports and 3% of the country's total import bill. Vegetable oils are India's most important import after crude oil, gold, and diamonds. Vegetable oils currently hold a 50% market share (in terms of volume), of the country's total imports and a large drain in the amount of money paid to overseas nations (Fig.1). Palm oil (62%) accounted for the majority of total imports, followed by soya oil and sunflower oil (21 % and 16 %,

respectively). The import basket now contains a large amount of soya and sunflower oil. In addition to putting a strain on the government's finances, relying on the international market for edible oils causes price unpredictability, which both consumers and producers dislike. In this context, it's worth noticing that India has a huge potential to increase domestic oilseed production, reducing import dependency while also benefiting farmers.

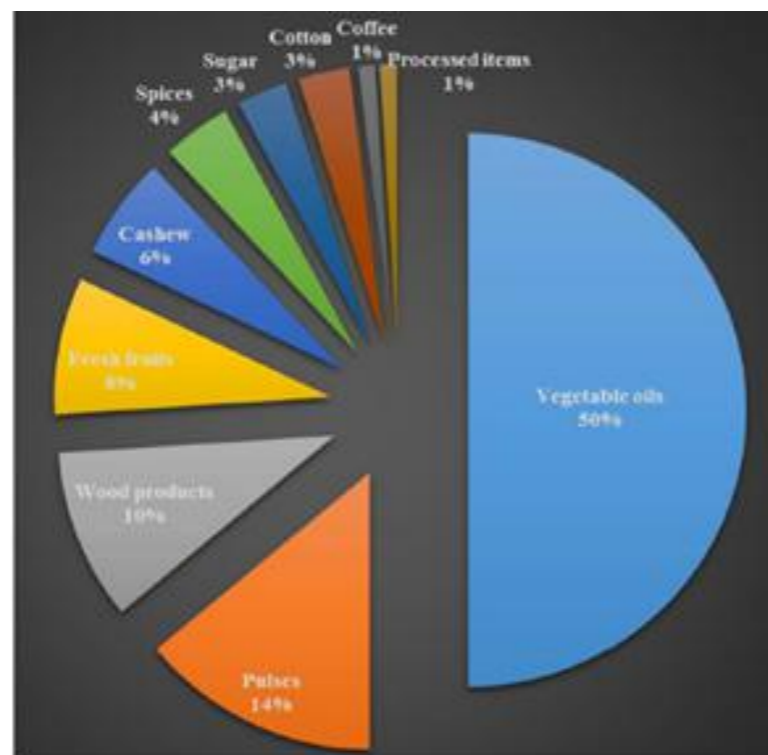


Fig.1. Vegetable oil total import share (in terms of value) in India.

# CONSTRAINTS IN VEGETABLE OILSEED PRODUCTION

Because of the decreased production and productivity of oilseeds, there is a demand-supply imbalance in vegetable oil availability in India. Oilseed progress has been slow because food grains have received top priority in research and development. The constraints in oilseed production start at the farm level extending up to its procurement and storage. Here are the major constraints for oilseed production.

1. The majority of oilseed crops are cultivated on marginal and sub-marginal lands with low fertility and rainfed condition.
2. Lack of suitable seed material (hybrids and varieties) with higher oil content.
3. Lack of awareness about suitable technologies for the farmers.
4. Scarcity of high-yielding input responsive drought/insect/pest-resistant crop varieties.
5. In comparison to cereals, there is an insufficient supply of quality seeds available to farmers.
6. Lack of implements and machinery for sowing and post-harvest processing.
7. Lack of appropriate post-harvest technology to eliminate post-harvest losses as well as degradation of oilseed quality.
8. Price fluctuation and support price in the market.
9. Lack of storage, grading, and marketing amenities in rural areas mainly due to future trading.
10. Poor efficiency of oil extraction or expeller units

Oilseed farmers in India face several challenges. These issues must be solved to improve oilseed productivity and production. India must find ways to improve domestic edible oil availability to decrease its reliance on imported edible oils.



# INCREASING PRODUCTION, PRODUCTIVITY AND OIL QUALITY OF OILSEEDS: WAYS FOR YELLOW REVOLUTION

With the increasing vegetable oil demand, India must find ways to improve domestic vegetable oil availability to decrease its reliance on importing. This goal can be accomplished in different ways. Listed here are some approaches to achieve the goal.

1. Bringing more area under irrigation, good quality, and input responsive varieties/hybrids.
2. Oil extraction from other sources such as cottonseed, rice bran, and corn apart from other flora underutilized plants of the forest
3. Extending oilseed cultivation i.e. safflower, sunflower, sesame, etc., to underutilized situations like rice fallows.
4. Improved research and extension facilities-
  - a. Development of new varieties resistant to biotic stress
  - b. Development of varieties resistant to other abiotic stresses
  - c. Development of cultivars with improved nutrient use efficiency
  - d. Development of climate-resilient cultivars
  - e. Moving from varieties to hybrids
  - f. New high-throughput technologies combined with new genomic-based breeding strategies
  - g. Increasing the oil content
  - h. Improvement of quality of oil and seed meal
5. Strengthening processing equipment such as crushing, solvent extraction, oil refining, and hydrogenation to bring value to products. Development of efficient new oil expelling machines.
6. Government policies, such as pricing and credit policies. Strengthening of farmers' support system through the supply of all inputs.

## CONCLUSION

India's domestic consumption of edible oils has been outstripping production, resulting in a considerable gap that is being filled by imports. India is a net food exporter, but it is heavily reliant on imported edible oils. This two-decade-old angst now requires a creative jolt. Following a huge success in pulse cultivation and reducing reliance on pulse imports, the government plans to repeat the feat in vegetable oils to reduce the country's reliance on imports. To achieve this, vegetable oils will necessitate a stronger commitment from a variety of stakeholders (farmers, scientists, policymakers, NGOs, private sector industry, and so on). Farmers encounter a series of constraints such as poor access to high-quality inputs, high input prices, irrigation facilities, lack of structured markets, insufficient storage infrastructure, and price inadequacy confusion, are among them. Increased availability of Projected demand of oil by 2050, represents a 3-fold increase in production and a two-fold increase in yield, while soil, water, labor, and energy savings have to be achieved. To achieve increased oilseed production, a proper mix of technologies, techniques, and policies must be implemented.

