

Oilseed Production and Associated Issues

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Attributed by high oil content along with moderate levels of fiber, several vitamins, minerals and fatty acids (both saturated and unsaturated), oilseeds are energy dense foods. Apart from being an essential component of human diet, these oils and fats carry industrial significance that is essential for the production of a large number of products such as soaps, hair oils, pharmaceuticals, textiles, paints and varnishes, etc. Oil Cakes and meals obtained after the extraction of oils from these crops are the important sources of animal feeds and manures. But it might be surprising to many that India imports most of the oil it consumes, unlike most other agricultural products which are produced locally.

In news: The state of agriculture in India

Placing it in syllabus: Agriculture

Dimensions:

- Consumption of oilseeds in India
- Import scenario
- Domestic Production Trends of major oilseeds
- Incentive Schemes by the government

Content:

Consumption of oilseeds in India:

- Indian Vegetable oil economy is the world's fourth largest after the USA, China and Brazil.
- The Oilseeds sector has been one of the most dynamic components of world agriculture in the past three decades growing at 4.1% per annum surpassing the growth of agriculture and livestock products.

- India is a key player in the world edible oils market accounting for around 7% share of production, 12% share of consumption and 20% share of world edible oils imports during 2016-17 (USDA 2018)
- The compound growth rates of nine oilseeds during 2000-01 to 2010-11 vis-a-vis 1990-91 to 1999-2000 have provided a fillip for consolidation and revitalization of the Oilseed economy.
- However, the annual growth rates of area (2.44%), production (5.4%) and yield (2.96%) of Oilseed crops during 1999-2009 have declined as compared to that of 1986-98 (Area: 3.05%, Production: 6.36% and Yield: 3.73%).
- During the last two decades, the domestic consumption of vegetable oils increased at CAGR of 4.3% and is expected to continue increasing with the growing population, changing demographic pattern and rising per capita consumption due to increased GDP growth.
- India is the typical price elastic market where lower prices encourage higher per capita consumption.
- The per capita consumption of vegetable oils is rising continuously surpassing 14 kg / year during 2010-11.
- This is almost 40% more than the recommended fat intake by ICMR to meet the nutritional needs of India's population.

Important Producing Areas:

- India is the largest producer of oilseeds in the world. About 20% of the world's oilseed producing area is in India.
- Different oilseeds are grown covering approximately 14% of the total cropped area of the country.
- India has diverse agro-ecological conditions which are favourable for 9 annual oilseed crops.
- These include 7 edible oilseeds such as groundnut, rapeseed & mustard, soyabean, sunflower, sesame,

safflower and niger. Moreover, there are 2 non-edible oilseeds like castor and linseed.

- Major oilseed producing areas are the plateau of Malwa, Marathwara, Gujarat, dry areas of Rajasthan, Telangana and Rayalseema regions of Andhra Pradesh.
- Madhya Pradesh ranks first (31%) in the total oilseeds production and is followed by Rajasthan and Gujarat.
- The smaller oilseeds are grown mainly in the north (Gujarat, MP, Rajasthan, Punjab and Haryana) and the larger seeds in the south mainly Kerala, Tamil Nadu, Andhra Pradesh and Karnataka.

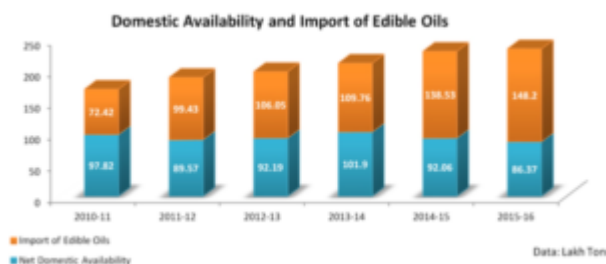
A list of particular oilseeds and their producing states:

- Coconuts – The southern coastal region in the states of Kerala, Tamil Nadu and Andhra Pradesh.
- Castor seed – Gujarat
- Linseed – Chhattisgarh
- Soya beans – Madhya Pradesh
- Mustard and rapeseeds – Rajasthan
- Sunflower – Karnataka, Maharashtra and Andhra Pradesh

Import Scenario:

- The country recorded the highest ever production of 324.79 lakh tonnes of oilseeds during 2010-11 with record productivity level of 1193 kg/ha due to favourable weather conditions and support given by the Govt of India to the Oilseeds production/developmental programmes and policies.
- Despite impressive progress in the vegetable oil sector in the last two decades, the import has been rising for the last 7-8 years.
- India is the world's largest importer of edible oil. As much as 70 per cent of India's domestic demand for edible oil is met through imports, of which palm oil constitutes around 80 per cent.

- Palm oil accounted for the lion's share of the total imports (62 per cent), followed by soya oil and sunflower oil (21 per cent and 16 per cent, respectively). There is a considerable increase in the share of soya oil and sunflower oil in the import basket.
- The palm oil is primarily sourced from Indonesia and Malaysia, soya oil from Argentina and Brazil, whereas Ukraine and Argentina are the major suppliers of sunflower oils to India.
- In 2019, India imported around 15 million tons of edible oils worth approximately Rs 7,300 crore, which accounted for 40 per cent of the agricultural imports bill and three per cent of the overall import bill of the country.
- After crude oil, gold, and diamonds, edible oils is India's largest import item.
- Until the mid-1960s, availability of edible oil was largely sufficient to meet India's domestic consumption demand.
- However, in the 1970s and 1980s due to shortfall in oilseeds output and growing demand for edible oils, India's edible oil imports surged.
- As a percentage of total edible oil availability (domestic production plus imports), edible oil imports increased from a meagre 2.19 per cent in 1960s to 10.50 per cent in 1970s to 26.06 per cent in 1980s.



Domestic Production Trends of Major Oilseeds:

The domestic sources of vegetable oil are of two types viz. primary and secondary.

- **Primary sources** include Groundnut, Rapeseed (Mustard), Soyabean, Sunflower, Sesamum, Niger seeds, Safflower, Castor and Linseed.
- **Secondary sources** include Coconut, Cottonseed, Rivebran, Solvent Extracted Oils and oils from Tree and forest origin.

Groundnut:

- Groundnut is most important oil seeds of India accounting for half of the major oilseeds produced in the country.
- Groundnut is predominantly a Kharif crop but is also sown as a Rabi crop. 90-95% of the total area is devoted to the kharif crop.
- It is a legume which thrives best in tropical climate and requires 20°C to 30°C temperature; 50-75 cm rainfall.
- The crop is highly susceptible to frost, drought, continuous rain and stagnant water.
- It needs a dry winter at the time of ripening.
- Well drained light sandy loams, red, yellow and black soils are well suited for its cultivation.
- In 2015-16, the top three states producing groundnut were Gujarat, Rajasthan and Tamil Nadu.

Rapeseed / Mustard:

- Mustard is the second most important oil seed crop of India after Groundnut.
- This plant belongs to cabbage family (Brassica) and farmers in India mainly grow three species of Mustard as follows:
 - **India Mustard** (Rai / Mohr locally) (Botanical name – *Brassica juncea*) has small and reddish brown seeds and accounts for around 70% of total mustard production in India.
 - **Mustard or Peeli (Yellow) Sarson** (*Brassica*

campestris) has thicker pods and yellowish brown seeds with thin seed coats.

- Rapeseed or Toria (*Brassica napus*) has reddish seeds and is mainly grown in Punjab.
- Mustard seeds have 25-45% oil content and its oil cake makes an important cattle feed and manure. The plant thrives in north and west India, mainly Satluj-Ganga plain.
- It's generally grown as a Rabi crop either purely or as mixed cropping with wheat or gram or barley.
- India has the largest area and highest production of mustard.
- Currently, Rajasthan is the top Mustard producing state of India, followed by Haryana and MP.

Sesamum (Til)

- The Sesamum seed comprises 45 to 50 percent oil used for cooking purposes and for manufacturing perfumery and medicines.
- India has the world's largest area under Sesamum and is also the largest producer of this crop accounting for one-third of the world production.
- It's mainly a Rainfed crop in India.

Linseed:

- Linseed (Alsi in Hindi) has a unique drying property and is suitable for manufacturing of paints, varnishes, printing ink etc. A small part is used as edible oil also.

Castor Seed

- Castor seed comprises 50 per cent oil. It is mostly used in industries.

Palm Oil:

- India produces a very small fraction of palm oil but is

one of the largest consumers. Most of India's palm oil requirement is met by imports from Indonesia and Malaysia.

Incentive Schemes by the government:

- Oil palm crop provides the excellent substitute of importing the oil. In India, oil palm is being cultivated in 13 states by covering about 3,15,000 hectares by 2017-18 under irrigated conditions. Potential states are Andhra Pradesh, Gujarat, Karnataka, Tamil Nadu and Bihar.
- The government of India is also taking many measures to increase the domestic production of edible oil seeds.
- In view of the importance and significance of oil palm cultivation, the Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) had taken up **Technology Mission on Oilseeds & Pulses (TMOP)** in 1991 – 92 in the potential states.
- A comprehensive **Centrally Sponsored Scheme Oil Palm Development Programme (OPDP)** was taken up during the Eighth & Ninth Plan.
- During the Tenth and Eleventh Plan, Government of India had provided support for oil palm cultivation under Centrally Sponsored **Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM)**.
- To boost oil palm cultivation, Government of India had implemented a **Special Programme on Oil Palm Area Expansion (OPAE) under RKVY** from the year 2011-12 to 2014-15.

National Mission on Oilseeds and Oil Palm (NMOOP)

- During the 12th Five Year Plan, a new **National Mission on Oilseeds and Oil Palm (NMOOP)** was launched under which **Mini Mission – II (MM – II)** was dedicated to oil palm area expansion and productivity increases.
- MM – II of NMOOP was implemented in 12 States viz;

Andhra Pradesh, Telangana, Chhattisgarh, Tamil Nadu, Kerala, Gujarat, Karnataka, Odisha, Mizoram, Nagaland, Assam and Arunachal Pradesh w.e.f. 01.04.2014.

- The strategy to implement the proposed Mission includes:
 - increasing Seed Replacement Ratio (SRR) with focus on Varietal Replacement;
 - increasing irrigation coverage under oilseeds from 26% to 36%;
 - diversification of area from low yielding cereals crops to oil seeds crops and intercropping of oilseeds with cereals/ pulses/sugarcane.

Tilhan Mission

- In Feb 2020, the Union Agriculture Minister announced that the government will launch Tilhan Mission to make the country self-reliant in oilseed production.
- The main objective of National Tilhan Mission 2021 is to encourage local farmers to produce oilseeds and thereby reducing import of edible oils
- However, the exact contours of the mission have not been announced till date.

Mould your thought: Even after having a diverse agro-climatic conditions, abundant land and large sections of population depending on agriculture, why does India have to import edible oils? Suggest measures to reverse this situation.

Approach to the answer:

- Introduction
- Discuss the production of oilseeds in India
- Discuss the rising consumption Demand in India
- Discuss the policy problems
- Discuss the solutions to these problems
- Conclusion