Palm Oil Cultivation

1) Introduction

- Oil palm crop is one of the highest oil yielding crops among all perennial crops.
- This oil palm is considered as golden palm due to its high yielding capacity.
- In India, oil palm crop provides the excellent substitute of importing the oil.
- In India, oil palm is cultivated in more than 15 states by covering about 50,000 hectares under irrigated conditions and this crop also cultivated under rain fed conditions.
- Major Oil Palm Production States in India:- Andhra Pradesh, Karnataka, Assam, Kerala, Gujarat, Goa, Tamilnadu, Maharashtra, Tripura, West Bengal and some areas of Andaman.
- Indonesia and Malaysia are the two major palm oil producers globally, producing nearly 85 per cent of the global output.

2) Advantages of Oil Palm Cultivation

- Oil palm yields highest edible oil among the other oil crops.
- Farmers can get extra income by intercropping in pre-bearing period of oil palms.
- There is no risk of theft and provides local employment.
- This crop assures monthly income and good market price throughout the year.
- Farmers can expect high returns which results in uplift of economic status.
- Palm oil substitutes import of edible oil by saving valuable foreign exchange.
- Palm is generally the cheapest commodity vegetable oil and also the cheapest oil to produce and refine globally.
- Oil palm is among the most productive and profitable of tropical crops for bio fuel production.

3) India's Scenario

- India spends over $10 billion on imports of edible oil every year, and this bill is only next to the one incurred on crude oil and gold imports.
- Attempts to increase the area under oilseeds in India have not been very successful, but demand has been rising perennially.
- Imports will continue to rise, going by the current Indian crop scenario.
- Palm oil imports constitute nearly 75 per cent of the total edible oil imports.
- The Government of India has been trying to reduce its dependence on imported edible oils, by encouraging farmers to take up palm cultivation.

- In 1992, the Oil Palm Development Programme (OPDP) was launched.
- This was followed by an "Oil Palm Area Expansion" (OPAE) programme in 2011-12
- The government also allowed 100 per cent FDI in palm oil plantations
- **Expansion not easy**
  a) lack of large land tracts is a major constraint
  b) A second limitation is the weather. Palm requires humid weather throughout the year.
  c) The harsh Indian summer impacts both crop development and yield.
  d) A third constraint is the lack of infrastructure.
  e) there's the lack of trained and experienced farmers who can successfully make money out of this crop

4) Oil palm in India's northeast

- India is pushing for palm cultivation in the north-eastern states of Assam, Mizoram and Arunachal Pradesh to increase production of oil, a commodity that costs the country millions in imports annually.
- While expanding oil palm in India's northeast will serve the larger purpose of oil security, experts fear that organised plantations may harm biodiversity in the region.
- To reduce its import bill on edible oils, government of India is building capacity for local production.
- **Ecology at stake**
  a) Oil palm is a long-term monoculture crop, replacing shifting cultivation landscapes with oil palm will definitely be detrimental to biodiversity.
  b) oil palm requires major chemical inputs, that will increase pollution, especially water pollution
  c) oil palm will destroy forests, and is likely to alter social structure and dynamics on tribal communities, enhancing socio-economic inequalities

5) Impacts of the palm oil industry

- **Impact on Environment**
  a) More and more environmentalists are opposing the rapid expansion of palm plantations at the cost of rainforests
  b) a third of all mammal species in Indonesia are considered to be critically endangered as a consequence of this unsustainable development
  c) Deforestation for palm oil production also contributes significantly to climate change.
  d) The removal of the native forests often involves the burning of invaluable timber and remaining forest undergrowth, emitting immense quantities of smoke into the atmosphere

e) Fertilisers and pesticides pollute groundwater and soils.

f) Large areas of tropical forests and other ecosystems have been cleared to make room for vast monoculture oil palm plantations – destroying critical habitat for many endangered species, including rhinos, elephants and tigers

- **Social impacts**

a) Conflict can occur between communities and companies over rights to land.

b) Displacement of rural farmers can lead them to move on to new areas of untouched forest to clear land for farming.

c) Culturally important sites can often be lost due to the development of plantations.

d) Deforestation destroys essential ecosystem services like the provision of clean water and fertile soils, leading to the loss of farming and other livelihood opportunities, such as fishing and hunting for food.

e) Uncontrolled burning for plantation expansion can have widespread health and socio-economic impacts.

f) The expansion of plantations has lead to the eviction of forest-dwelling peoples.

- unsustainable production also has potentially negative economic consequences at local and global levels

6) <u>Towards sustainability</u>

- Mapping and monitoring, supported by an appropriate regulatory framework are necessary to achieve sustainable management of oil palm production.
- Analysis of spatial data, including from remote sensing, is a key tool to improve monitoring of legal and sustainable plantations
- protect the tropical forests by designing new strategies that connect forest carbon and bio fuel markets in order to reduce GHG emissions, conserve biodiversity and promote economic growth