



CHAPTER - 4

AGRICULTURE

TYPES OF FARMING

① Primitive Subsistence Farming

It is based on Primitive Method like Tools, Monsoon, Natural fertility eg.

- Slash and burn
- Jhuming in north-east

② Intensive Subsistence farming

- High population → More food for them → Limited land
- It is labour intensive.
- Heavy doses of biochemical input and irrigation.

This situation occurred due to

- Right of inheritance
- Creating enormous Pressure on agricultural land.

③ Commercial farming

- It include Modern inputs like HYV seeds, chemical, fertilizers Insecticides for higher productivity
- Commercialization vary from one region to another.
Ex wheat and rice

Features

- Single crop is grown on a large area.
- Interface of agriculture and Industry.
- Capital Intensive, migrant labourous, Produce raw material.
- Connectivity to market and Processing Industries.



Cropping Pattern

Three main type of cropping seasons are →

Name	Kharif	Rabi	Zaid
Sowing Period	Onset of monsoon [June - July]	In winter (Oct-Nov)	March - April
Harvesting Period	In September - October	Summer [March-April]	May - June
Crops	Paddy, Maize, Grams, bajra, tur, moong, urad, Groundnut.	wheat, barley, Peas, grams, and Mustard	watermelon, Musk-Melon, cucumber, Vegetable and fodder crop
Irrigation	Rainfall	Western temperate cyclone and canals	Tubewells, Lakes and well.

Note: Three types of Paddy crops Aus, aman and Boro.

Major Crops

- Rice
- Kharif crop, required 25°C , Above 100cm Rainfall
 - Sowed mostly in North Plains, North-east and Deltaic region.
 - Most important cereal crops.
 - Mostly Orissa, West Bengal and T.N.

- Wheat
- Rabi crops, required cool growing season and Bright sunshine during harvest
 - Required 50 to 75°Cm , mostly grown in Ganga-Sutlej Plain and Black soil region of Deccan.
 - Mostly grown in Punjab, Haryana, UP, H.P
 - It is second most imp cereal crop.

- Maize
- It is Kharif crop, required 60-110 cm of rainfall
 - Grown in alluvial tracts and in UP, Bihar, H.P
 - It is used as both food and fodder.



Pulses → Depend on crop, required 25°C to 30°C , required 45cm rainfall.
→ Evenly distribution all over the country, in H.P, R.J, U.P, K.N

Millets → Have high nutritional value

↳ Jowar → 3rd most important crop, Rainfed crop, Maharashtra is largest Producer.

↳ Bajra → Grows well on sandy and black soil, Rajasthan is the largest Producer.

↳ Ragi → crops of dry region, grows well on Red, Black, Sandy and loamy soil. Karnataka is largest Producer.

Sugarcane

- * required 21°C to 27°C and 75cm to 100cm of rainfall.
- * Tropical as well as sub-tropical crop.
- * Need manual labour.
- * India is second largest Producer.
- * Uttar Pradesh is largest Producer.
- * it is raw material for Jaggery, Khandsari, sugar and Molasses.

Oil Seeds

- * Groundnut, Mustard, coconut, Sesamum, Soyabean, Caster seed
- * used in production of soap, cosmetics and ointments
- * Andhra Pradesh is largest Producer.

Horticulture Crops

- India is largest Producer of fruits and vegetables.
- Mangoes of Maharashtra, A.P. and U.P, Oranges of Nagpur and Cherapunjee, Banana of Kerala, Lichi and Guava of U.P and Bihar etc
- India produces 13% of world's vegetable.



Tea

- Tropical as well as subtropical crops.
- Plantation crops
- Beverage crops.
- Grow well on deep and fertile well drained soil.
- Requires warm and moist, frost-free climate.
- Frequent and evenly distributed Rainfall, labour intensive Industry.
- Processed within tea garden to restore freshness.
- Assam, Darjeeling Hills, Jalpaiguri, District of W.B.

Coffee

- India coffee is known for its quality, Arabic variety brought from Yemen.
- India produced initially in Baba Budan Hills. Now also its. Production is confined to Nilgiri in K.N and T.N.

Non-Food Crops

Rubber

- Equitorial crop, but can be grown in tropical and sub-tropical area.
- It requires moist and humid climate.
- Rainfall more than 200cm
- Major areas → Kerala, T.N, Meghalaya, Andaman and Nicobar.

Fiber Crops

Cotton

- * Raw material for cotton textile Industry.
- * it grows well on Black soil, required high temp, low rainfall, and 210 frost free days and Bright Sunshine.
- * Maharashtra is largest Producer.



Jute

- * Known as Golden fibre.
- * High temperature and well drained fertile soil of flood plains.
- * used for making variety of Products. ex Mats, Ropes, carpets.
- * losing market due to High cost and synthetic fiber (nylon)

Technological and Institutional Reforms

Institutional Reforms

- Collectivisation, consolidation of holdings, cooperation and abolition of zamindari'
- Land Reforms was focus of first year plan.
- Provision for crop Insurance against drought, flood, cyclone, fire and disease.
- Establishment of Gramen banks and Cooperative Societies for providing loans at low interest rate.
- KCC, PAIS, MSP etc.

Technological Reforms

- Green revolution and white revolution [Operation flood]
- Weather bulletins, Agriculture Programmes for farmers on National Television and Radio
- Subsidy on Agricultural Products.

Bhoodan - Gramdan Movement (Bloodless Revolution)

- Lead by Vinoba Bhave [he was spiritual heir of M.K.gandhi]
- Idea of Gramswaraj and Padyatra.
- Incident in Pochampalli, A.P

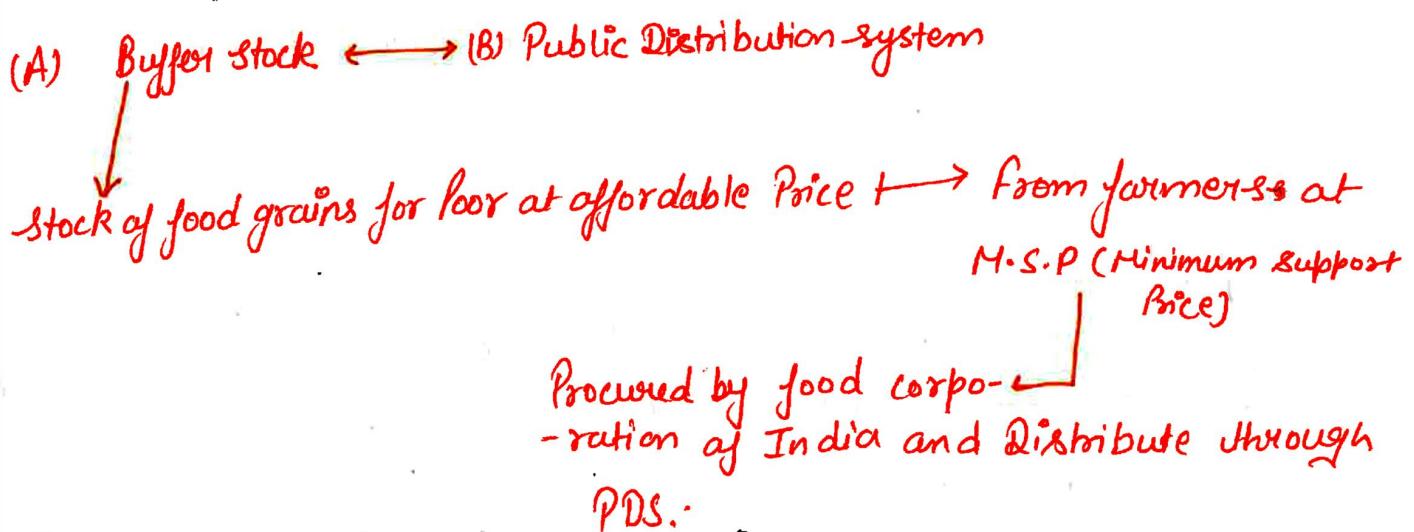


- Announcement of Shri Ram Chandra Reddy to give 80 acres of land to 80 land-less villagers
- As the Idea Gramswarajya spread, Zamindars offered the villages owned by them to be distributed among landless.

Contribution of agriculture to the National Economy

- Share in GDP(\downarrow) \Rightarrow Share in Employment (\uparrow)
- it was 63% in 2001
- steps taken to improve the situation like Establishment of Indian Council of Agriculture Research [ICAR] Agricultural university, Veterinary services and animal breeding centers etc.

Food security - I



Problems related to food security

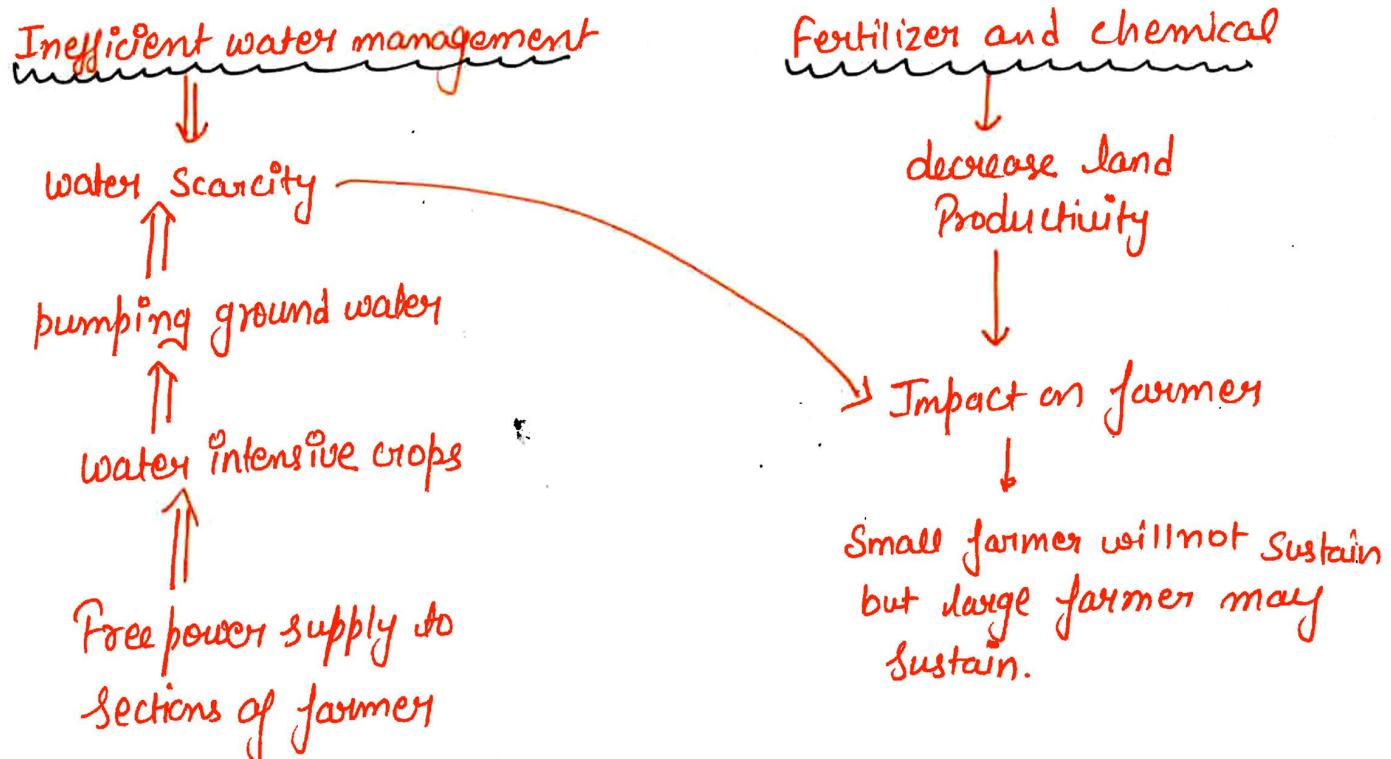
M.S.P \Rightarrow Higher cultivation of wheat and rice \Rightarrow Distorting Cropping Pattern \Rightarrow Imbalance in Inter-crop in Punjab and Haryana.

Subsidies \Rightarrow Excessive and Imprudent use \Rightarrow water logging, Salinity and depletion of Essential Micro nutrients



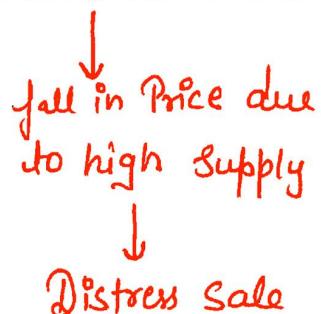
- Administrative difficulty with APL and BPL
- Shift in cultivation
- competition between land use due to this Net Sown Area decrease of cereals and pulse but population is increasing hence food security in danger.

Food Security - III



Problem of Double Disadvantage

it increase cost of Production because High Production reaches Market
[HYV seeds, fertilizer]





Food Security - IV

What can be done to overcome these challenges?

- Proper Agricultural Infrastructure.
- Credit linkage.
- Proper dissemination of Information about Market, Government Schemes.
- Use of latest techniques and collaboration of Foreign countries.
- Lower leakage in Public distribution system.
- Diversified the distribution and declaration of minimum Support Price of crops.
- Promote organic farming.

Impact of Globalisation on Agriculture

- Increase International competition due to open trade.
- Indian farmers do not able to compete due to highly mechanised agriculture in countries like USA.
- Diversification of labour to other field.
- Increasing use of fertilizer and chemical this decreasing the productivity and pressure on land.

Alternatives

- Green revolution, organic farming, Diversification of cropping pattern.
- State support in increasing use of technological equipments.