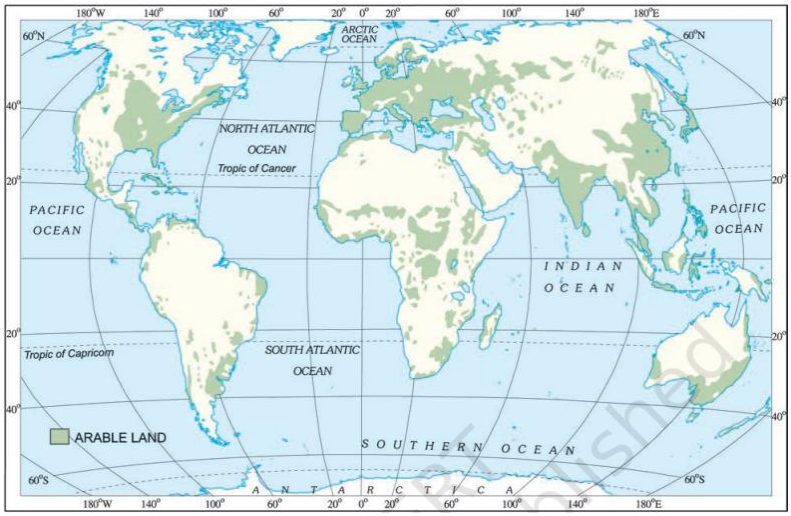
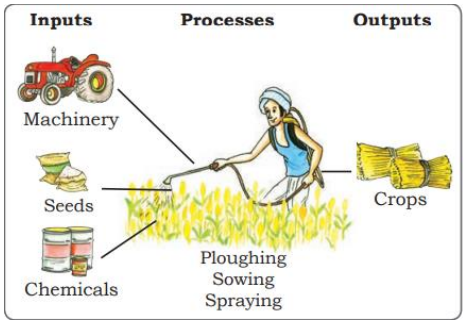
Chapter – 3: Agriculture

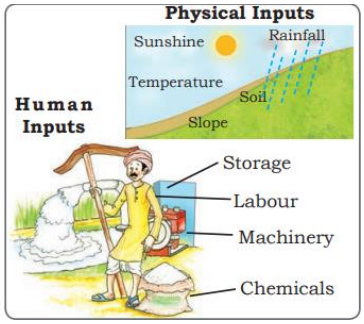
- Gurpreet, Madho, Tina – walking through village – saw a farmer – tilling land
- Farmer explained – growing wheat – added manure – soil more fertile
- Wheat – sold at mandi – good price – taken to factories – make bread and biscuits
- This transformation – plant to finished product – involves 3 activities – primary, secondary, tertiary
- Primary – connected with production of natural resources – agriculture, fishing, etc
- Secondary – processing of these resources – manufacturing steel, baking bread, etc
- Tertiary – provides support – primary and secondary sectors – transport, trade, banking, advertising, etc
- Agriculture – primary activity – growing crops, fruits, vegetables, flowers, rearing of livestock
- World – 50 % population – agriculture – India 2/3rd population – agriculture
- Favourable topography – soil, climate – imp. for agriculture
- Land – crops can be grown – arable land
- Map – agriculture – concentrated – those regions – suitable factors – growing crops – exist



Farm System

- Agriculture – seen as a system
- Imp. inputs – seeds, fertilisers, machinery, labour
- Some operations – ploughing, sowing, irrigation, weeding, harvesting
- Outputs – crops, wool, dairy and poultry products





Types of Farming

- Farming various ways – depend on geographical conditions, demands, labour, technology

- Classified into 2 main types – subsistence and commercial

Subsistence farming

- Farming – done – meet farmer's own needs
- Low level technology, household labour – produce – small output
- Further classified – intensive and primitive
- Intensive –
    - Farmer – cultivates small land – simple tools, some labour
    - Climate – lots of sunshine – fertile soil – multiple crops per year
    - Rice – main crop – other crops – wheat, maize, pulses, oilseeds
    - Famous in thickly populated areas – monsoon regions – south, southeast, east Asia
- Primitive –
    - Shifting cultivation –
        - Practiced – thickly forested areas – Amazon basin, tropical Africa, southeast Asia, Northeast India
        - These areas – heavy rainfall – quick regeneration
        - Area – cleared by – cutting trees and burning them
        - Ashes – mixed with soil – crops grown – maize, yam, potatoes, cassava
        - Once soil losses fertility – land is abandoned – farmers move to new areas
    - Nomadic herding –
        - Practiced – arid (very dry) or semi-arid regions – Sahara, Central Asia, some parts of India – Rajasthan, Jammu Kashmir
        - Herdsmen (group of men) – move from place to place – with animals – search fodder and water
        - This movement – reason – climatic conditions, terrain, etc
        - Sheep, camel, yak, goats – reared – provide – meat, milk, wool, hides (skins), etc

Commercial farming

- Crops grown – animals reared – sold in market
- Area cultivated – capital (finance) used – large
- Most work – done by machines
- Divided into – commercial grain farming, mixed farming, plantation agriculture
- Commercial grain farming –
    - Crops grown – commercial (profit) purpose
    - Common crops – wheat, maize
    - Major areas – temperate grasslands – North America, Europe, Asia
    - These areas – less population – large farms – hundreds of hectares
    - Too much winter – restrict growing season – single crop can be grown
- Mixed farming –
    - Land – used for – growing food and fodder crops – rearing livestock
    - Practiced in – Europe, eastern USA, Argentina, southeast Australia, New Zealand, South Africa
- Plantations –
    - Commercial farming – single crop grown – coffee, tea, sugarcane, cashew, rubber, banana, cotton
    - Lots of labour, capital (investment) required

  - Produce – processed at farms or factories – transport network – required
  - Found in tropical regions –
    - Malaysia – rubber
    - Brazil – coffee
    - India, Sri Lanka – tea

Major crops

- Large variety of crops – grown – meet requirement – increasing population
- Crops – raw material – agro based industries
- Rice –
  - Major food crop – staple (main) diet – tropical, sub-tropical regions
  - Requires – high temperature, humidity, rainfall – alluvial clayey soil – retains water
  - China, India, Japan, Sri Lanka, Egypt – leading producers
  - Favourable climatic conditions – West Bengal, Bangladesh – 2 or 3 crops – every year
- Wheat –
  - Requires – moderate temperature, rainfall – growing season – bright sunshine – harvesting
  - Well-drained loamy soil
  - Grown in – USA, Canada, Argentina, Russia, Ukraine, Australia, India
- Millets –
  - Also known as – coarse grains – grown on less fertile and sandy soil
  - Requires – low rainfall, medium to high temperature
  - Jowar, bajra, ragi – grown in India
  - Other countries – Nigeria, China, Niger
- Maize –
  - Requires – moderate temperature, rainfall, lots of sunshine – well-drained fertile soil
  - Grown in – North America, Brazil, China, Russia, Canada, India, Mexico
- Cotton –
  - Requires – high temperature, light rainfall, 210 frost (ice) free days, bright sunshine – black and alluvial soil
  - China, USA, India, Pakistan, Brazil, Egypt – leading producers
  - Main raw material – cotton textile industries
- Jute –
  - Also known as – golden fibre
  - Requires – high temperature, heavy rainfall, humid climate – alluvial soil
  - Tropical regions – India, Bangladesh – leading producers
- Coffee –
  - Requires – warm, wet climate – well-drained loamy soil
  - Hill slopes – more suitable
  - Brazil, Columbia, India – leading producers
- Tea –
  - Beverage crop – plantations
  - Requires – cool climate, high rainfall – throughout the year – well-drained loamy soil – gentle slopes
  - Labour – large quantities – required – pick leaves
  - Kenya, India, China, Sri Lanka – leading producers – best quality tea

Agricultural Development

- Agricultural development – efforts – increase farm produce – meet the increasing demands
- Achieved in many ways –
    - Increase – cropping area – number of crops
    - Improve – irrigation facility – use of fertilisers – high yield (produce) seeds
    - Increased use – machines
- Ultimate (final) aim – increase food security
- Agriculture – developed – different places – different parts of world
- Developing countries – high population – intensive agriculture
- Developed countries – commercial agriculture – USA, Canada, Australia

A farm in India

- Small village – Adilabad – Ghazipur district – Uttar Pradesh
- Munna Lal – small farmer – farmland – 1.5 hectares
- He purchases – high yielding seeds – every alternate year
- His house – nearby town
- Land – fertile – 2 crops per year – wheat and pulses – OR – rice and pulses
- Takes advice from – friends, family, govt. officials – farming practices
- Rents a tractor – ploughing a field – some friends – traditional method – bullocks
- Tube well – nearby field – rents it – irrigate field
- Munna Lal – 2 buffaloes – few hens – sells milk – nearby cooperative store
- Member of co-operative society – advises him – type of fodder, safety measures, artificial insemination
- All members – help him in farm activities
- Sometimes – loans from bank or co-operative society – buy HYV seeds and tools
- Sells produce – mandi – nearby town
- Most farmers – no storage facilities – forced to sell – low rates
- Recent years – govt. – took some steps – develop storage facilities

A farm in the USA

- Avg. size – farm in USA – much greater than – farm in India
- Typical farm size – 250 hectares
- Farmer – lives in the farm
- Major crops – corn, soyabean, wheat, cotton, sugar beet
- Joe Horan – farmer – Midwest USA – Iowa state – 300 hectares
- Grows corn – after ensuring – enough soil and water available
- Appropriate measures – taken – control pests
- Time to time – send soil samples – testing – nutrients sufficient or not
- Results – helps in planning – scientific fertiliser programme
- His comp. – linked to satellite – helps to use – chemical fertilisers and pesticides
- Use – seed, drills, tractors, leveler, combined harvester, etc – perform agricultural operations
- Grains – stored in grain storage – OR – sold to market agencies
- Farmer in USA – works as a businessman