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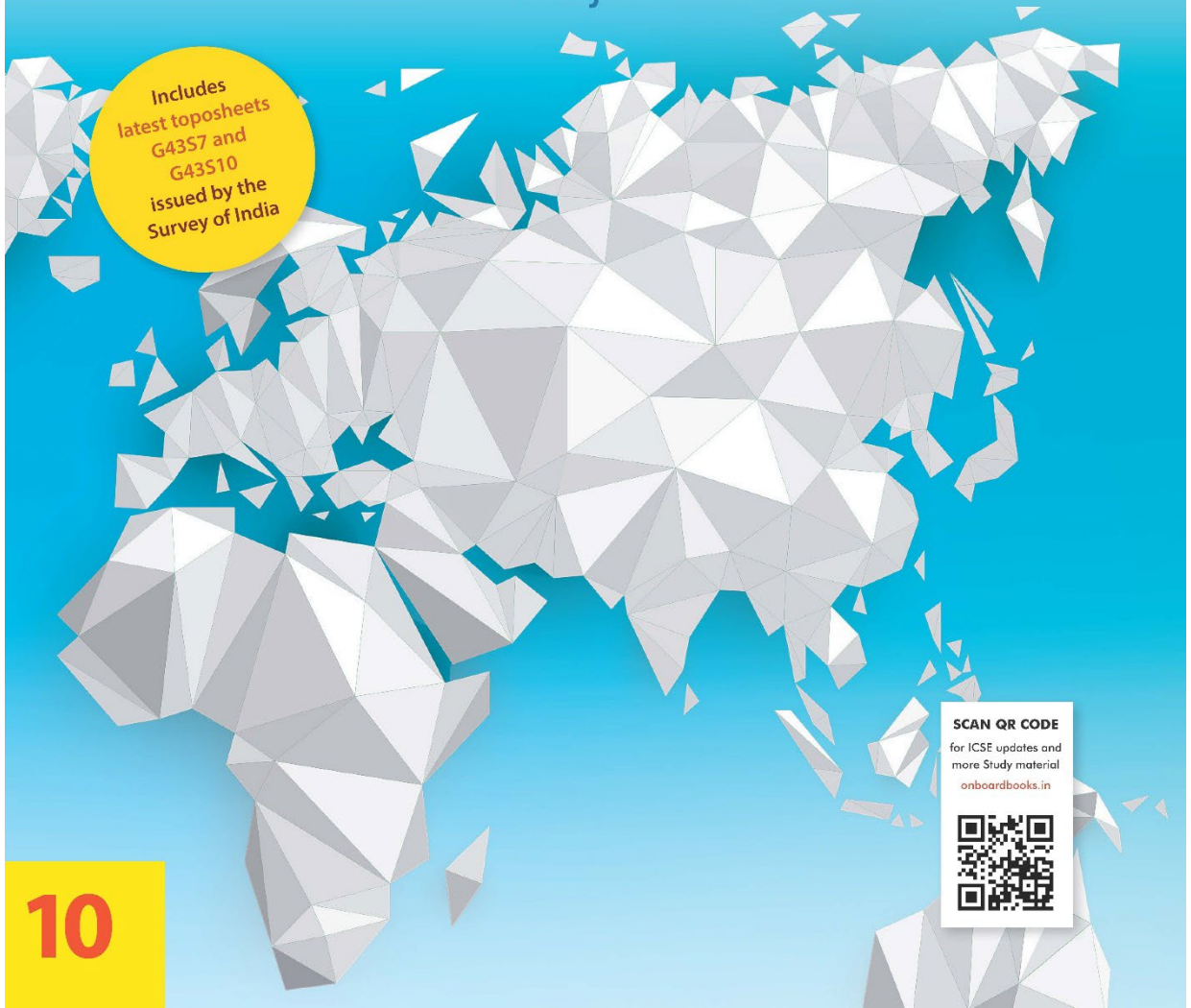
ICSE GEOGRAPHY

Based on the latest ICSE syllabus

R K JAIN



Includes latest toposheets G43S7 and G43S10 issued by the Survey of India

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ICSE GEOGRAPHY

Class 10

Chapter 13: India-Agriculture

Agriculture includes not only land cultivation for growing crops, but also horticulture, sericulture, livestock rearing, pisciculture, agroforestry, etc. In India, is the farmers can grow any crop due to the following reasons:

- **Suitable climatic conditions** prevail almost throughout the year.
- **Long growing season**, i.e., it lasts almost throughout the year.
- The land is levelledand the soils are fertile.
- **Enough water** is available for irrigating the farmland.

IMPORTANCE OF AGRICULTURE

Agriculture helped the early humans to lead a settled life. The basis for growth and development of ancient river valley civilisations was agriculture. Today, agriculture is one of the most important occupations in India. This is due to the following reasons:

- At the time of Independence in 1947, more than 75 per cent of India's population was directly or indirectly dependent on agriculture. Even in 2015, after more than 65 years of independence, about 60 per cent of India's population was still dependent on agriculture.
- Agriculture provides not only food for the rapidly growing population of India, but also a wide variety of raw materials for the agro-based industries, such as sugar, textiles (cotton, silk, jute, woollen), food processing, etc.
- The entire agricultural system creates demand for a large variety of manufactured goods, such as tractors, threshers, harvesters, chemical fertilizers, pesticides, herbicides, pumps, etc.

PROBLEMS OF INDIAN AGRICULTURE

The agriculture sector in India is facing many problems. Some of the problems are due to natural factors while many others are due to human activities. Some of them are as discussed subsequently.

Size of Landholdings

Of the total sown area of about 150 million hectares, most of the landholdings are either uneconomical or scattered. The small and fragmented landholdings are common in the densely populated and intensively cultivated states in India.

Good Quality Seeds

The availability of good quality and high-yielding varieties of seeds is necessary for higher crop yields and sustained growth in agricultural production. In India, the good quality seeds are expensive, and therefore, the small and marginal farmers cannot afford to use the high-yielding varieties of seeds.

Unreliable Rainfall

The rainy season in our country is limited to a few months, i.e., from June to September. A major part of rainfall during the monsoon season is not only irregular and uncertain, but also unreliable. The rainfall is also unevenly distributed. Thus, about 65 per cent of the net sown area in our country depends on the vagaries of seasonal rainfall.

Soil Erosion

Large areas of cultivable land with fertile soils are exposed to soil erosion by running water, wind, deforestation, overgrazing, occasional heavy rains, etc. The erosion of soils not only reduces its fertility, but also affects the yield of crops per hectare.

Faulty Land Use System

Most of the farmers in India want to grow the same crop, such as rice, wheat, sugar cane, cotton, jute, etc. year after year on the same piece of land.

Lack of Mechanization

Most of the farmers in India are poor and illiterate. They use old, primitive and outdated farming techniques. They use traditional tools and implements like wooden plough, sickle, etc.

Limited Use of Fertilizers

The average yield of almost each crop is among the lowest in the world. The poor and marginal farmers in India cannot afford to buy the expensive chemical fertilizers and biocides.

Lack of Irrigation Facilities

India, after China, is the second largest irrigated country in the world, still only one-third of the total cropped area has the facilities for irrigation.

Lack of Storage Facilities

The proper storage facilities for farm produce in the rural areas are either inadequate or completely absent. This forces the small farmers to sell the farm produce immediately after the harvest.

Inadequate Transport Facilities

Most of the villages in our country are not well connected with highways or market centres. The rural roads become useless during the rainy season.

REMEDIAL MEASURES

The central and state governments have taken several steps to improve the system of agriculture in India. It is necessary to increase the production of foodgrains and other cash crops. To achieve this aim, several remedial measures have been taken through the Five Year Plans.

The **Pradhan Mantri Gram Sadak Yojana** is an effort towards linking the rural areas with state and national highways. Huge amount of money has been allocated to complete this work.

GREEN REVOLUTION

Various measures taken by the state and central governments have resulted in increasing the agricultural production in many parts of India. A new package of agricultural practices was introduced in 1967, which is known as the **Green Revolution**. It owes its origin in the finding of new dwarf varieties of wheat seed by **Dr Norman Ernest Borlaug**.

Dr Norman Ernest Borlaug

The Green Revolution has the following components:

1. Large-scale use of high-yielding varieties of seeds
2. Development of various means of irrigation
3. Large-scale use of chemical fertilizers
4. Widespread use of biocides – pesticides, herbicides and insecticides
5. Consolidation of small and fragmented land-holdings
6. Land reforms to save the small farmers from exploitation
7. Supply of agricultural credits to buy farm inputs

8. Rural electrification to supply cheap power for farms and houses
9. Farm mechanisation with aid from the governments
10. Building rural roads to connect the villages with markets
11. Coordination between agricultural universities and farmers
12. The Command Area Development with irrigation projects

TYPES OF FARMING IN INDIA

India is a big country and has great diversity in physical features, climatic conditions, soil fertility, etc. Many types of farming have developed in India due to highly variable environmental conditions. Some of the important types of farming practised in different parts of India are as follows:

SHIFTING AGRICULTURE

This type of primitive agriculture is mostly practised in the backward forested hilly areas of northeastern states, Odisha, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Telangana and parts of Kerala.

Shifting agriculture is known by different names in different parts of India, such as **Jhum** in Assam, **Podu** in Odisha and Telangana, **Bewar** in Madhya Pradesh, **Masha** in Chhattisgarh, **Ponam** in Kerala, etc.

Forests being cleared for shifting cultivation.

- The shifting agriculture is mostly practised by the tribals living in the forested area.
- They clear the forests by cutting trees and burning the stumps to prepare land for farming.

SUBSISTENCE AGRICULTURE

Most of the farmers in India practise subsistence agriculture, especially in the tribal areas of Assam and in the Himalayan mountains. Rice is the main crop grown in such areas. The subsistence farming has the following features:

- Subsistence farming is mostly practised for the maintenance of the farmer's family.
- The total production is just enough to meet the requirements of the farmer's family.
- The landholdings are small and scattered.
- Farmers use primitive tools and traditional techniques

COMMERCIAL FARMING

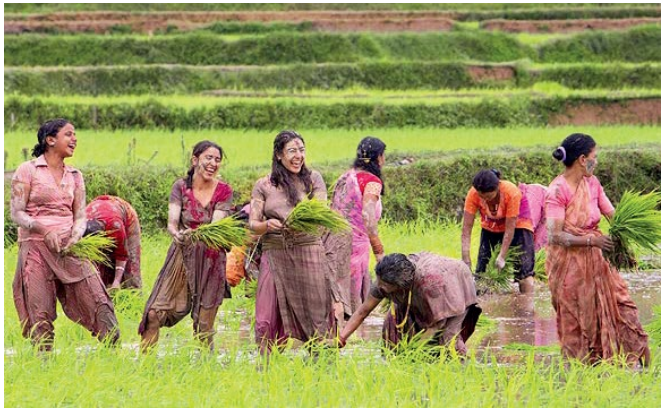
The main aim of commercial farming is to produce only those crops that can be easily sold in the market. These are called **cash crops**, examples are sugar cane, oilseeds, pulses, tobacco, cotton, jute, spices, etc. The commercial farming can be intensive or extensive and is mainly practised in the areas of sparse population. The commercial farming has the following features:

Commercial farming

- Commercial farming is not successful in those states where the landholdings are small, fragmented and scattered.
- The landholdings are medium or large-sized.
- The cash crops are grown for sale in the market.

INTENSIVE FARMING

The intensive type of farming is mostly practised in those regions where the cultivable land is limited and the density of population is high. The farmers make sincere efforts to get the maximum possible production from the limited land. It is mostly practised in the irrigated areas in the Northern Plains and the Coastal Plains of India. Intensive farming has the following features:



Intensive farming

- The landholdings are small, but intensively cultivated.
- The farmers raise more than one crop in a year from the same field. Thus, the land is under some crop almost throughout the year.
- The water supply to the fields is ensured through irrigation.

EXTENSIVE FARMING

The extensive type of farming is practised in those areas where the cultivable land is abundant and the density of population is low. The farmer specialises in the production of one or two commercial crops, such as rice, wheat, sugar cane, etc. The extensive farming has the following features:

Extensive farming

- The landholding or the size of farms is very large.
- Machines are widely used for various farm operations.

PLANTATION FARMING

This type of farming was introduced in the tropical and subtropical regions by the Europeans. The plantations are generally large landholdings and follow the system of **monoculture**, i.e., production of one crop on perennial basis. Some of the crops produced on plantations in India are tea, coffee, rubber, spices, etc.

Plantation farming

The success of plantation farming depends on accessibility, large capital investments, availability of skilled labour, enough and cheap means of transport, etc.

The plantation farming has the following features:

- Landholdings are large and owned by companies.
- The perennial crops are more popular than annual crops. Only one crop is cultivated with the help of special machines.
- Chemical fertilizers, pesticides, insecticides, etc. are extensively used on plantations.
- Cheap and skilled labour is required.
- Scientific methods are used not only to improve yield per hectare, but also to improve quality.

MIXED FARMING

In mixed farming, the rearing of cattle is done along with cultivation of crops. In some cases, fruits and vegetables or poultry farming is also practised. This is a market-oriented farming system and practised in thickly populated areas or near towns and cities. The mixed farming has the following features:

- Two or more crops having different maturing periods are grown at the same time.
- Rotation of crops is necessary and the yields per hectare are generally high.
- Mixed farming provides steady income to the farmer even during the adverse climatic conditions.
- Efficient methods of farming, quick means of transport and ready market in the nearby areas are helpful.

AGRICULTURAL SEASONS

India is the land of endless growing season. In India, the cultivation of land is possible almost throughout the year due to suitable climatic conditions. In our country, the agricultural activities begin with the **onset of southwest monsoons** in the month of June. India has three main agricultural seasons – **kharif**, **rabi** and **zaid (zayad)**.

The Kharif Season largely coincides with the onset of southwest monsoons and continues up to the beginning of winter season. The kharif crops are generally sown in the month of June or July and harvested in the month of October or November. The main kharif crops are **rice**, **maize**, **millets**, **sugar cane**, **cotton**, **jute**, **groundnuts**, **pulses**, etc.

The Rabi Season begins with the end of rainy season, i.e. the start of winter season and continues up to the end of winter season or the beginning of summer season. The rabi crops are generally sown in the month of November and December and harvested in the month of April or May.

The low temperature during the early winter season helps in producing subtropical and temperate crops such as **wheat**, **mustard**, **gram**, **jowar**, **peas**, **oilseeds**, etc.

The Zaid Season is in between the kharif and rabi seasons. This is a **short season** during the summer months. The crops are generally sown in early summer and harvesting is done in early autumn season. Some varieties of cereals and pulses have been developed, which can be successfully grown with the help of irrigation during the dry summer season. Some of them are early maturing varieties of **maize**, **jowar**, **pulses**, **watermelons**, **cucumber**, **vegetables**, **fodder crops**, etc

Thus, in **Peninsular India**, same crop can be grown thrice in a year. The three crops of paddy are called **aus**, **aman** and **boro**.

THANK YOU