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# GEOGRAPHY

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— R K JAIN —

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# ICSE GEOGRAPHY

**Class 10**

**Chapter 14: India-Agriculture  
(Crops I- Rice, Wheat and Millets)**

Agriculture forms the backbone of Indian economy and food crops form the backbone of Indian agriculture. Due to suitable relief, favourable climatic conditions, fertile soils and a long growing season, India can grow a variety of **food crops**, such as rice, wheat, maize, millets, pulses, etc.

## RICE

Rice is the most important food crop of India. It is the staple food for about half of India's population living in the eastern and southern parts of the country. At present, rice is grown on about 44 million hectares, which is about 25 per cent of the total cropped area of India.

## CONDITIONS FOR GROWTH OF RICE

Rice, a **kharif crop**, can be grown in India under varying conditions. It is a tropical plant which grows well in hot and humid climate. Out of about 10,000 varieties of rice grown in the world, India grows about 3,500 varieties.

## METHODS OF RICE CULTIVATION

The following methods of rice cultivation are practised in India:

1. In the **broadcasting method** the rice seeds are scattered in the field by hand and this is normally done before the onset of monsoons.
2. In the **drilling method** the rice seeds are sown in the furrows, which are dropped through a pipe attached to the plough.
3. In the **dibbling method** holes are made in the field and the rice seeds are dropped at regular intervals. A dibble is an instrument which is used for digging holes in the field.

4. In the **transplantation method** the rice seeds are first sown in a nursery bed. After about 4 to 6 weeks, the seedlings from the nursery are picked and planted in the main field.

5. In the **Japanese method** which is an improvement over the transplanting method, the farmers use high yielding varieties of seeds and sow them in raised nursery beds.

## PRODUCTION OF RICE IN INDIA

The production of rice in India is about 18 per cent of the world's total rice production. There has been considerable increase in area, yield per hectare and the total production of rice in the last sixty years.

## AREAS OF RICE PRODUCTION

Rice is grown in almost every part of India, except in the hot and dry deserts of Rajasthan, Kachchh-Saurashtra, Malwa and Marathwada regions.

The main rice producing areas include the lower and middle Gangetic Plains, the east and west coastal plains, the Brahmaputra valley and parts of peninsular plateau.



India – Rice producing areas



Punjab and Haryana became important producers of rice after the **Green Revolution**.

About half of the total production of rice comes from West Bengal, Uttar Pradesh, Punjab, Andhra Pradesh and Telangana. Other major producers of rice include Odisha, Bihar, Chhattisgarh, Assam, Tamil Nadu and Haryana.



Rice grain

## WHEAT

It is believed that farming began with the cultivation of wheat in the ancient times. Today, wheat is the second most important foodgrain in India, next only to rice. Wheat is the staple food for millions of people in the northern and northwestern parts of India. Two types of wheat, **spring wheat** and **winter wheat**, are mostly grown in the world. In India, spring wheat is not grown due to relatively high temperature during this season (above 20 °C). Thus, only **winter wheat** is grown in India as a tropical and subtropical crop.

## CONDITIONS FOR GROWTH OF WHEAT

Wheat is a **rabi crop** and is mostly grown in the subtropical and temperate regions. Wheat requires a cool climate with moderate rainfall.

- ❖ The temperature should be 10 to 15 °C at the time of sowing and about 25 to 30 °C at the time of harvesting. Sudden rise of temperature at the time of ripening is very harmful.
- ❖ Wheat grows well in areas having annual rainfall of less than 100 cm. In areas of very low rainfall, say less than 50 cm irrigation is needed.

- ❖ Light showers during the winter season can produce a bumper crop, but prolonged drought at the time of maturity of grain is very harmful.

## **SOWING AND HARVESTING**

Wheat, a rabi crop, is generally sown in the beginning of winter season and harvested in the beginning of summer season. Wheat is not sown and harvested at the same time in different states of India. This is due to varying climatic condition.



Wheat grain

## **METHODS OF WHEAT CULTIVATION**

- ❖ The work on the wheat fields begins after the rainy season when the land is soft and moist.
- ❖ The fields are ploughed several times with the help of a tractor or an ox-pulled plough.
- ❖ The wheat seeds are sown in rows either by broadcasting, dibbling or drilling methods.
- ❖ At the time of sowing the seeds, the soil should have enough moisture which is needed for the growth of plants.
- ❖ The grain starts appearing by the end of February and the harvesting begins before the hot summer month.
- ❖ At the time of harvesting, the grain is hard and stalk of the wheat plant is brittle.



## AREAS OF WHEAT PRODUCTION

India is the second largest producer of wheat in the world next only to China. Wheat is grown on 13 per cent of the total cropped area of India and produces about 12.4 per cent of the world's total production.

Wheat production is mainly confined to the northern and northwestern states of India, such as Punjab, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Madhya Pradesh and Bihar.

These seven states together account for more than 90 per cent of area under wheat cultivation. Wheat is also produced in Himachal Pradesh, Jammu and Kashmir, Uttarakhand, Maharashtra, Jharkhand, Karnataka, etc.



India – Wheat producing areas

## MILLETS

Millets are inferior and coarse cereals, which are mostly grown in those areas, where rice and wheat cannot be successfully grown. The millets provide food for the poor people and fodder for cattle. The millets are short duration, (3–4 months) warm weather crops. These are also known as '**dry crops**' and can grow in less fertile soils. In this chapter, we will study about jowar, bajra and ragi.

## JOWAR

Jowar is the third most important food crop in India, next only to rice and wheat. Jowar is grown as kharif and rabi crop in Deccan Plateau, but only as kharif crop in northern India. Jowar is originally from Africa



Jowar

### Conditions for Growth of Jowar

- ❖ Jowar grows well in those areas where the mean monthly temperature is about 30 °C.
- ❖ It needs more than 30 cm of annual rainfall during the growing period.
- ❖ Excessive moisture and prolonged droughts are harmful for the jowar crop.
- ❖ The clayey deep regur and alluvial soils are most suited for the farming of jowar.
- ❖ Jowar grows both as a dry and an irrigated crop.
- ❖ Most of the jowar is grown in the plain areas.

### Areas of Jowar Production

Jowar is mainly grown in Peninsular India. The three leading producing states are Maharashtra, Karnataka and Madhya Pradesh.



These three states together produce about 75 per cent of the total production of India. Maharashtra far exceeds all other states in jowar production. Jowar is the staple food of the people in Maharashtra plateau region. In north India, main jowar producing states are Uttar Pradesh, Rajasthan and Haryana. The jowar grain is also used as poultry feed.

## BAJRA

Bajra is originally from Africa and is the second most important millet, which is used as food in drier parts of the country. Bajra is also used as fodder and its stalks are fed to cattle. In some parts stalks are used for thatching purposes.



Bajra

## Areas of Bajra Production

About 90 per cent of total bajra production in India comes from Rajasthan, Uttar Pradesh, Gujarat, Haryana and Maharashtra. Though there is a decline in area under bajra cultivation but the production has increased due to HYV seeds and higher input facilities. Rajasthan is the largest producer of bajra in India.

The total production of India is about 10 million tonnes from 8 million hectares of land. Most of the bajra is consumed locally and only a small quantity enters the inter-state market. Bajra farming can be promoted in the dry farming areas.



India – Bajra producing areas

## RAGI

Ragi (originally from India) is another coarse grain which has high nutritional value. Ragi is used as staple food by poor people in South India. Ragi or **buckwheat**, a kharif crop, is mostly grown in the drier parts of India.

### Conditions for Growth of Ragi

- ❖ Ragi needs 20 to 30 °C temperature for its growth.
- ❖ It grows well in areas having 50 to 90 cm of rainfall.
- ❖ Ragi does not require much moisture in the soil.
- ❖ The suitable soils are sandy loams, red and light black.
- ❖ Ragi is sown during May to August and harvested during October to November.
- ❖ Ragi is a rain-fed kharif crop.
- ❖ The crop requires 3 to 5 months to mature.



India – Ragi producing areas

### Areas of Ragi Production

The main ragi producing states in India are Karnataka, Uttarakhand, Tamil Nadu, Maharashtra and Andhra Pradesh. Karnataka is the largest producer of ragi in India. The total production of ragi in India is about 2.5 million tonnes from about 1.6 million hectares of land.

THANK YOU