

Questions

- 1) State the major characteristics of agriculture in India.
- 2) Name some millets grown in India.
- 3) Why Indian farming is called intensive subsistence farming?
- 4) Classify crops according to season.
- 5) Classify crops according to their mode of consumption or basis of uses.
- 6) Difference between Kharif and Rabi Crop.
- 7) Discuss the geographical conditions for the crop cultivation of rice/paddy.
- 8) Different form of sugarcane.
- 9) Research centre for crop - wheat & Rice.
- 10) What is plantation crop?
- 11) What is ratooning?
- 12) What is ginning?
- 13) Describe the favourable conditions for production of wheat in India.
- 14) Describe the favourable conditions for growth of sugarcane.
- 15) Describe the favourable conditions for production of cotton.
- 16) Describe the favourable conditions required for growth of tea.
- 17) Describe the favourable conditions req. for coffee.

- 18) Research centre for all crops.
- 19) Write short note on green revolution.
- 20) Define irrigation.
- 21) What are the traditional methods followed in Indian irrigation system.
- 22) Define MRVP. Give examples.
- 23) Difference between dams and barrages.

Agriculture of India

State the major characteristics of agriculture in India.

Indian agriculture is characterised by the following features.

Subsistence agriculture - As India is overpopulated, so most of the agricultural produce is used by the Indians and surplus is insignificant. This type of agriculture is known as subsistence agriculture.

Predominance of population force - In Indian agriculture, instead of using modern machineries like tractor, harvester traditional methods of cultivation using animate energy is still in practice.

Dependence on monsoon rain - In most parts of India single cropping is practised using monsoon rain on seasonal basis.

Use of irrigation water - In some places with the help of irrigation water multiple cropping is also practised in India.

Small size of land holding - In a labour intensive subsistence agriculture population pressure is responsible for divided and subdivided holdings added by hereditary inheritance. As a result, Indian agriculture is characterised by small holdings.

Predominance of food crops - About 66% of cultivated land is devoted to the production of rice and wheat.

Name some millets grown in India -

Jowar, bajra, ragi. They are of inferior quality.

Why Indian farming is called intensive subsistence farming.

As India is overpopulated, pressure is more on agriculture, so most of the agricultural produce is used by the Indians and surplus is insignificant. So for this reason Indian farming is called intensive subsistence farming.

Classify crops according to seasons.

According to seasons crops produced in India are of three types.

1) Kharif crop - Crops cultivated in the beginning of rainy season and harvested in the end of autumn are known as kharif crops. Eg: cotton, sugarcane etc.

2) Rabi crop - Crops cultivated in the beginning of winter and harvested in the beginning of summer are known as Rabi crops. Eg: wheat, potato.

3) Zaid crop - Crops cultivated in spring and harvested in the beginning of rainy season are known as zaid crops. Eg: watermelon, cucumber etc.

Classify crops according to their mode of consumption or geographical basis of uses.

According to consumption, crops are divided into four types.

1) Food crops - Crops which give nutrients in diet are known as food crops. These are of two types.

(a) cereals like rice, wheat (b) pulses like mung, moong etc.

2) Fibre crops - Crops from which yarn is produced are known as fibre crop such as cotton, jute etc.

3) Other crops - Other crops produced in India are sugarcane, potato

Difference between Kharif and Rabi crop.

Kharif crop

1) Crops are cultivated in the beginning of rainy season.

2) It's harvested in end of autumn.

Eg: cotton, sugarcane

Rabi crop

1) Crops are cultivated in the beginning of winter.

2) It's harvested in the ~~end~~ ^{beginning} of summer.

Eg: wheat, potato.

Discuss the geographical condition for the cultivation of rice/paddy.

Rice is the most important food grain in India. Rice is mainly cultivated in Ganga plains, coastal plains etc

The favourable geographical condition for cultivation of rice are -

(i) Physical condition

a) Climate - Rice is mainly tropical region crop thus hot and humid climate is best suited for rice cultivation.

b) Temperature - Moderate to high temperature is required for rice cultivation during sowing period 20 to 25°C require and during harvesting period 27°C temperature required for rice cultivation.

c) Rainfall - Rice require abundant rainfall ranging from 150-200cm in lower Ganga plain is best suited for rice cultivation because of heavy rainfall.

d) Soil - Rice is best cultivated in alluvial soil. Plain land with alluvial soil in the delta region. are ideal for rice cultivation.

c) Relief - Rice requires extensive plain and low lying regions and thus it is best suited in delta region and coastal plains.

(ii) Cultural Condition

a) Labour - Rice cultivation is labour intensive cultivation. Rice cultivation requires three times abandoned labourers. Thus this are mainly cultivated in dense populated state in India.

b) Fertilizer and pesticides - For better production chemical fertilizer are abundantly used in rice fields.

Different form of sugarcane.

Molasses and Bagasse.

Research centre for crops.

CROPS.	RESEACH CENTRE	
	National	International
Rice	Central Rice Research Institute (Cuttack, Odisha)	International Institute for Rice Research is located at (Manila, capital of Philippines)
Wheat	Wheat research centre (New Delhi)	Mexico. city, capital of Mexico.

What is plantation crop?

The perennial crops which are cultivated in a large estate with help of huge number of labourers, advance technology and huge capital investment is known as plantation crop.

Example - Tea, coffee and rubber.

What is ratooning?

Ratooning is the process which is related with sugarcane cultivation. The process in which the canes are cut 1 to 6 inches above the ground during harvestation, and the new shoot are allowed to come out is known as ratooning. By this process time and capital investment are little save because of second cropping. But the quality of new canes is deteriorated.

What is ginning?

The process by which the fibres are separated from cotton balls is known as ginning process.

Describe the favourable conditions for production of wheat in India.

Wheat is a rabi crop. It is sown in the month of Oct-Nov and harvested in the month of March-April. It is a principal food crop of North India. UP leads in wheat production

followed by Punjab, MP, Haryana etc

The favourable conditions required for the growth of wheat are as follows:

a) Physical factor - The climatic and relief features required for wheat cultivation are as follows.

(i) Climatic factor - Dry and cold weather is ideal for wheat cultivation. 100 frost free days are required for " " . The climatic conditions suitable for wheat cultivation are -

a) Temperature - It requires an average temp of $16^{\circ} - 20^{\circ}C$

b) Rainfall - It is not a water thirsty crop. Average rainfall 50-75 cm is ideal.

(ii) Soil - It requires soil with high water retentive capacity. Loamy soil and Black soil is ideal.

(iii) Relief features - Well drained gently sloping land favours its cultivation. It grows well in middle Ganga plain and Punjab plain.

b) Cultural factors - Apart from climatic and relief factors, there are some economical factors that favour its cultivation. The cultural factors are as follows.

a) Labour - It's a main machine in oriental cultivation. So less labour and more machines are required for sowing of seeds and harvesting of crops.

b) Capital - large capital is required to purchase the machines as well as HYV seeds to bring a hike in the production rate.

c) Fertilizers and Pesticides - Nitrogen, Phosphorus and Potash fertilizers are required to treat the soil. Some insecticides and pesticides are also used to protect the plants from the attack of pest.

Describe the favourable condition required for the growth of the sugar cane.

Sugarcane is a cash crop of India. It is mainly grown in the Ganga plain of India. UP leads in the production followed by Maharashtra, Karnataka, Bihar, Andhra Pradesh, Punjab etc.

The geographical condition required for Sugarcane are as follows -

a) Physical factors - The climatic and relief factors required for the cultivation of sugarcane are as follows.

i) Climatic factor - Its cultivation is favourable in torrid zone. Coastal maritime climate favours its cultivation. The climatic conditions required for the cultivation of sugarcane are as follows:-

a) Temp - It's a kharif crop. Average temp required is $30^{\circ} - 36^{\circ}C$

b) Rainfall - It is a water loving plant. Heavy average required about 150 cm for its growth

ii) Relief - It is grown in well drained sloping land. Ganga plain are ideal for its cultivation

iii) Soil - It grows well in bany and black soil

b) Cultural factor Apart from physical factors, cultivation of crop is also influenced by some economical factor

i) Labour - Abundant skilled labourers are required for clearing of land, sowing of seed, harvesting

of crop etc

ii) Modern transport system - well knit quick transport system is required for taking the sugarcane from the field to factory within 2 hours.

of its harvestation to retain its quality

iii) Fertilizers - Sugarcane is soil exhausting crop. Prolonged cultivation leads to the loss of fertility of soil. So regular use of fertilizers are required to retain the fertility of land.

Describe the favourable conditions required for the growth of cotton.

Cotton is an important fibre crop grown in India.

It is grown in Deccan Trap region of Maharashtra and Gujarat.

The geographical conditions favourable for

for the growth of cotton are followed.

a) Physical condition

1) Climatic factor - It's grown in tropical and sub tropical climate. Salty wind favours its cultivation. 200 frost free days are required for its maturity. Climatic factors required are:

a) Temp - It requires moderate temp of 20° - 25° C

b) Rainfall - Moderate rainfall for about 60-100 cm is favourable.

ii) Relief - Well drained plain land favours its cultivation. It's grown in Deccan trap region of Maharashtra and Gujarat

b) Cultural factor

i) Labour - It's a labour oriented work. Cheap labourers are required for sowing of seeds, collection of bolls etc.

ii) Capital - Some capital is required for the wages of labourers, purchase of HYV seeds, fertilizers etc to hike the production rate.

iii) Insecticides - Cotton bolls are often attacked by white fly, Boll worm etc. So spray of insecticides is necessary.

Describe the favourable conditions required for the cultivation of tea.

Tea is an imp beverage crop of India. Assam leads in its production followed by Darjeeling.

The geographical conditions required are

a) Physical factors -

i) Climate - It is grown in mountain slopes of monsoon climate. The climatic factors required are

a) Temp - It's a perennial crop. Avg ^{temp} rainfall required is 27°C . It can't tolerate direct heat of sun so cover cropping is necessary.

b) Rainfall - It's a water loving plant. So high avg rainfall is required of 150-250 cm ideal for its growth.

ii) Relief - It's grown in hilly regions. It requires hilly slope for easy drainage of water.

iii) Soil - It's grown in mountain soil. Fertile loamy soil rich in iron is ideal.

b) Cultural factors

i) Labour - It's labour oriented cultivation. So cheap skilled women labourers are employed for plucking two tender leaves and a bud from tea plant.

ii) Capital - It's a perennial crop which requires nourishing of 25 yrs before production. So it is grown in large estate by business ~~man~~ company that provide huge capital for its nourishment.

iii) Demand - Large amt of domestic and international demand favours its cultivation.

Describe the favourable condition req for growth of coffee

Coffee is a beverage crop cultivated mainly in the southern parts of India. Karnataka leads in coffee production followed by Kerala and Tamil Nadu.

The geographical conditions favouring are-

a) Physical condition

(i) Climatic factors - It grows well in equatorial as well as hot and humid tropical climate. The suitable climatic conditions are

a) Temp - Doesn't require high temperatures. Annual average temp of 20°C - 30°C favours.

b) Rainfall - It's a water loving plant. Annual high rainfall of 150-200cm is required for the plant.

(ii) Relief - It's grown in hilly region.

(iii) Soil - Laterite soil is ideal.

b) Cultural factors

i) Labour - large no. of cheap and skilled labourers are required for sowing of seeds, collecting pesticides etc

ii) Capital - It's a perennial crop that gives production atleast after 15 yrs of plantation. So big business groups provide capital for its cultivation in large estates

iii) Covering crop - It can't tolerate direct heat from sun. So cover cropping is required which is done by banana or palm trees.

Describe the characteristics of Indian Agriculture.

Indian Agriculture is characterised by the following features

1) Subsistence Agriculture - As India is overpopulated so most of the agricultural produce is used by the Indians and surplus is insignificant. This type of agriculture is known as subsistence agriculture and it is the main feature of Indian Agriculture.

2) Population pressure - Rapid growth of population is responsible for population pressure on agriculture. So Indian agriculture is labour intensive.

3) Predominance of population force - In India, agriculture ~~is~~ instead of using modern machineries like tractors, harvesters, traditional methods of cultivation using animate energy.

	RESEARCH CENTRE	
	National	International.
RICE	Central Rice Research Institute (Cuttack, Odisha)	International Institute for Rice Research is located (Manila, capital of Phillipinas)
Wheat	Wheat Research centre Pusa in New Delhi	Mexico city, capital of Mexico.
Cotton	Nagpur	
Tea	Tocklai Tea Research Inst, Jorhat in Assam.	
Coffee	Chikmagalur in Karnataka	
Sugar cane	Lucknow. Lucknow.	

Green revolution. The rapid changes in the cultivation of some particular crops like wheat during second five year plan period (1960-65) in the state like Punjab, Haryana etc is known as green revolution. By following some steps like (a) irrigation (b) using of chemical fertilizers. (c) by using HYV seeds. (d) using of pesticides and insecticides. The production of wheat increased tremendously.

The father of Indian green revolution was
M. S. Swaminathan

IRRIGATION

The artificial way of watering the land is known as irrigation.

What are the traditional methods followed in Indian irrigation systems.

Three main

- ① Canal irrigation.
- ② well and tubewell irrigation
- ③ Tank irrigation.

Define MRVP. Give examples.

When the dams and barrages are constructed across the river to provide water for multipurpose work like flood control, pisciculture, irrigation, hydel power, soil conservation, entertainment, drinking purpose is called MRVP. Eg: DVC.

Difference between dams and barrages.

Dams	Barrages.
1) Larger in size	1) Smaller in size
2) Dams provide water for multipurpose work like irrigation. Eg: Maithan Dam under DVC.	2) Barrages provide water only for irrigation. Eg: Durgapur barrage under DVC