

1. Answer the following questions in details :

(1) Write notes on types of agriculture.

- The socio-economic condition of the people of India, administrative policy and entire Indian economy is associated with agriculture. Farming types are classified according to irrigation methods, farm outputs, economic return etc.

- (1) Subsistence Farming :
 - The farm production is just sufficient for his family which is consumed in the maintenance of the family. This is called subsistence farming.
 - Costly seeds, fertilizers and use of pesticides are not affordable in smaller farm holdings.
 - Many agricultural development projects are implemented, yet economic condition of Indian farmer is very weak even today.
 - So, even today Indian agriculture is considered to be an activity for life maintenance only.

- (2) Dry Farming :
 - Where the rainfall is inadequate, irrigation facilities are less there, farming is dependent only on rain, only one crop is taken through the humidity accumulated within the land. This is known as dry farming.
 - Crops like jowar, millet and pulses which require less water are grown here.
 - In Gujarat wheat and gram are grown in the humid soils after the monsoon is over.

- (3) Wet Farming :
 - Wet farming is carried out in the regions of heavy rain and adequate facilities for irrigation.
 - If there is no rainfall or if it is sufficient more than one crop is taken with the help of irrigation, wherein paddy, sugarcane, cotton, wheat and vegetables are grown.

- (4) Shifting (Jhum) Agriculture :
 - Here forests are burnt and cleared and farming is carried out there. The farming takes place

- for two or three years. When soil fertility is reduced that area is abandoned and the same method is applied to start farming at other place. This is called Jhoom cultivation.
- Cereals or vegetables are grown in this type of agriculture. The production is less in this type of agriculture.

- (5) Plantation Agriculture :
- This is a special type of agriculture. In that various crops are reared with great care. It is called plantation agriculture. For e.g. : Tea, Coffee, various fruits etc.
- It is necessary that there should be more capital investment, skill, technical knowledge, machines, fertilizers, protection on all sides, acquisition and transportation facilities.
- In plantation agriculture, rubber, tea, coffee, coco, coconut, apple, mango, oranges, grapes, amla, lemon, kharek etc. are reared with great care.

- (6) Intensive Farming :
- Intensive farming is the mechanized way of farming through utilization of increased irrigation, use of chemical fertilizers and other mechanical equipments.
- Cash crops are grown more in this type of farming.
- The per hectare production has increased very much here and the area sown under these crops has increased.
- As more importance is given to economic returns in this type of farming it is also known as commercial farming.

(2) State the institutional reforms made in agrarian field.

- The reforms connected with land ownership, crop subsidy and sale of farm produce are considered to be the institutional reforms in India.
- Government has discarded land lordism and stopped the exploitation of farmers.
- Under the law land to the tiller (Land Tenancy Act) the land tillers have been given their right to become the owner of the land.
- The disparity among the land owners has been removed by land ceiling act.
- Farmers are given financial help for crop subsidy by Kisan Credit Card and by nationalized and cooperative banks.

- Farmers are given full insurance protection of their crops through Prime Minister Crop Insurance Scheme.
- Government provides subsidy and financial help to buy seeds, fertilizers and insecticides.
- When the crops fail due to drought or through excessive rain, farmers are given financial help by Government.
- By providing legal support, an open auction process is made widespread for the sale of farm products in the marketing yards.
- Facilities like cooperative societies, market associations, cooperative warehouses, cold storages, transportation and communication etc. have been provided so that the farmers would get the minimum support price of the farm products.
- Following organizations are operating for the purchase of the farm products from the farmers at support prices.
- National Agricultural Cooperative Marketing Federation of India (NAFED), GROFED and NDDB.

(3) Write a note on "Global market and Indian agriculture".

- The policy of globalization has been implemented with the purpose that the Indian farmer can sell his farm products in world markets and earn profit.
- The process to export and import crop production is made very simple due to globalization.
- The costly genetically modified BT seeds sold by multinational companies are now available. The farming has become costly due to this. The production of cotton and maize has increased.
- With the import becoming smoother, the domestic farm products have to face tough competition.
- To face the competition in agricultural products in global markets, India will have to adopt new technology and concentrate on quality.
- A series of planned steps will have to be taken to increase the economic prosperity and solidarity of people.
- With increasing population, the probable future increase in the demand for agricultural products and to maintain the march to economic progress. It is necessary to arrange the strategy for second green revolution.

(4) Describe the "Wheat crop of India".

- Wheat is grown over one third arable land of our country.
- It is the substantial food of the people of North-West India.
- Wheat is a rabi crop of temperate zone.
- Wheat crop requires black or fertile loamy soil and more than 75" of annual rainfall. It can be grown in the regions of lesser rainfall with irrigation.
- Wheat cultivation carried out mostly in Punjab, Haryana and Western Uttar Pradesh. As there is irrigation facility in these states there is more per hectare production.
- Due to the canal water in Punjab there is abundant wheat production. That is why Punjab is also called as "Wheat Bowl of India".
- Wheat is also produced in the states of Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, West Bengal etc.
- Many items like rotli, bhakri, sev, shiro, lapshi, ladu, sukhadi, bread, puri, cake, biscuits etc.
- are prepared from. Wheat is the most nutritious among all.
- Among all food grains used in daily meals, wheat is the best so it is called king of grains.
- Less labour force is required as mechanization is introduced in wheat cultivation. After the green revolution the wheat production is almost doubled.

(5) State about the 'Oil seeds crops of India'.

- Groundnut, til, soyabean, castor, mustard, sunflower etc. are considered to be oil seeds.
- After edible oil is extracted from the oil seeds, the remaining oil cake is used as animal fodder and also as biotic manure.
- Groundnut holds an important position in oil seeds. Groundnut oil as edible oil is used more in Gujarat.
- (1) Groundnut :
 - Black, vital and mixture of loamy and sandy soil, land which would not retain water.
 - 20 °C to 25 °C temperature and 50 - 70 cm rainfall are the favourable conditions.
 - Groundnut is sown as kharif crop and wherever there is irrigation facility. It can be sown during summer also.
 - India ranks second after China in the world in groundnut production.

- Gujarat leads the country in the groundnut production. Gujarat, Andhra Pradesh, Tamil Nadu and Maharashtra are major producers of groundnut.
- Lunagadh, Gir, Somnath, Amreli, Rajkot, Bhavnagar etc. districts produce groundnut.

- (2) Sesam :
- Among all oil seeds til has more content of oil. In almost all parts of the world, it is used as an edible oil.
- In North India it is a rain based kharif crop. In South India it is sown as rabi crop and occasionally as zaid crop also.
- Almost all the states grow til major producers of til are Gujarat, Tamil Nadu, West Bengal, Karnataka and Madhya Pradesh states.
- Gujarat ranks first in India in terms of til production and the area sown. Banaskantha grows maximum til.

- (3) Mustard :
- This is a rabi crop and is an important crop of North India.
- Mustard seed and its oil are used for medicine and also as edible oil.
- Rajasthan, Uttar Pradesh, West Bengal, Gujarat and Madhya Pradesh are major producers of mustard.

- (4) Coconut :
- Coconut is a plantation crop of hot and humid coastal climate and saline land.
- In India coconut plantations are found in Karnataka, Kerala, Tamil Nadu, Andaman—Nicobar etc.
- In South India, coconut oil is extracted from the coconut kernel is used as edible oil. Besides the water is useful as a healthy drink.
- In Gujarat coconut is grown in coastal regions. A special type of coconut tree which is shorter and giving more yield is developed.

- (5) Castor :
- Castor is also known as Divela and it is both kharif as well as rabi crop.

- With 64% production India is the largest producer of castor in the world. China and Brazil come next chronologically.
- About 80 % of its production come from Gujarat. Andhra Pradesh and Rajasthan are other producers.
- In Gujarat the district of Banaskantha, Patan, Sabarkantha, Rajkot, Lunagadh, Amreli etc. produce in little quantities.
- The oil from cotton seeds, sun flower, paddy and maize also are used increasingly as edible oils.

2. Write to-the-point answers of the following questions :

(1) Why is there more inclination for organic farming ?

- The rate at which the chemical fertilizers and insecticides are used the destructive effects of these chemicals is also felt.
- Due to the presence of these chemicals and insecticides in grains, vegetables and fruits it has affected adversely the hygiene of the people.
- More damage is caused to environment. The productive capacity and fertility of the land has reduced due to which the crop production of the land and its quality were reduced over a long run.
- Organic farming is that method of farming in which urea or any other chemical fertilizers and insecticides are not used.
- For the nutrition of the crop dung, earthworm fertilizers, composite fertilizers etc. are used and cow urine, neem solvents, buttermilk etc. are used for the protection of crops.
- The organic products are full of nutrition. They contain natural taste, sweetness and fragrance. There are minerals, vitamins and life energizing elements in these crops.
- Now a days, organic farm products are more in demand so the farmers also get a good return.

(2) Give difference : Kharif crop - Rabi crop.

- Crops which are taken during rainy season are called kharif crops. Crops which are taken during winter are called rabi crops.
- Time for kharif crops is from June-July to October-November. Time for Rabi crops is from October-November to March-April.
- Paddy, maize, jowar, millet, cotton, til, groundnut and mung, math are kharif crops. Wheat, gram, barely, mustard, linseed etc. are rabi crops.

(3) Describe the contribution of agriculture in the economy of India.

- Agriculture provides employment to about one half of the population of the country.
- Agriculture holds about 17 % of the total gross domestic production (GDP).
- India ranks second in the world in agrarian production.
- Paddy, wheat, oil seeds, cotton, jute, sugarcane, tobacco, potatoes etc. are major agricultural products of India. Much foreign exchange is earned from their export.
- Industries like cotton textile, sugar, paper, oil etc. as well as the industries regarding the food agricultural products only.
- Thus, the Indian contribution is not consistent in the world agricultural market because of irregular and uncertain rain and inadequate facilities for irrigation.

(4) "Paddy" the most important crop of India. Explain.

- A large majority of the world and about half of the population of India uses rice.
- India stands second in the world after China in paddy production.
- Paddy is sown over one fourth of the total sown area.
- Paddy is a crop which requires more water. However, instead of keeping the paddy fields full under water, paddy is grown by irrigating through sprinklers using less water.
- Paddy is a crop of torrid zone.
- Hot and humid climate, minimum temperature of 20°C, fertile alluvial soil and more than 100 cm of rainfall are necessary for more production.
- More human labour is necessary for paddy cultivation. West Bengal, Tamil Nadu, Andhra Pradesh, Telangana, Bihar, Odisha are major producing states.
- In the regions of rainfall in Punjab, Haryana and Uttar Pradesh this crop is taken through irrigation.

- In Gujarat paddy is grown in Surat, Tapi, Panchmahal, Ahmedabad, Kheda, Anand, Valsad districts.
- Thus, paddy is an important crop.

3. Answer the following questions in brief:

(1) State the uses of maize.

- Maize is a cereal kharif crop. Maize is the most grown crop in the world after paddy and wheat. Maize is grown more in hilly areas and it is a staple food of these people.
- Maize contains starch, oil, protein, bio-fuel etc. so, it is used in industrial productions.
- Its usage is increasing as animal fodder, making popcorn and for edible oil.

(2) State the favourite conditions for the growth of coffee.

- Coffee is reared over the slopes of mountains in the shades of larger trees in such a way that no direct sunlight falls on the coffee leaves.
- The coffee crop needs 150 - 200 cm rainfall and 15 °C to 28 °C temperature and slopy mountain land. Coorg area of Karnataka is a well known region for coffee production.
- Coffee seeds are extracted out of the nuts, grinded and then it is used as a drink.
- Coffee is grown in abundance in Karnataka, Kerala and Tamil Nadu.

(3) Which type of farming is carried out in Bhal region and which crop is cultivated ?

- In Bhal region of Gujarat, wheat crop is grown in humid soil after monsoon gets over means dry farming is carried out.
- Bhal region is in Gujarat and wheat is grown there. Thus, wheat cultivation is carried out.

(4) What is meant by Green Revolution ?

- The extraordinary increase in the agricultural production because of improved seeds, increased use of chemical fertilizers, intense efforts of the farmers, widespread arrangement for electricity distribution, improved facilities in the irrigation etc. is known as Green Revolution.

(5) Name the institutions working on agricultural research at national level.

- NAFED : National Agricultural Cooperative Marketing Federation of India is working on agricultural research at national level.
- GROFED : Gujarat Co-operative Oil Seed Grower's Federation.
- NDDB : National Dairy Development Board.
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4. Select the correct option from the options given for each question and write the answer.

(1) Which of the following farming types has the lowest per hectare production ?

(A) Plantation (B) Jhoom cultivation (C) Intensive cultivation (D) Wet farming

(2) In which of the following farming types, the chemical fertilizers and insecticides are not used ?

(A) Organic farming (B) Mixed farming (C) Plantation (D) Sustainable farming

(3) Which state produces maximum groundnut ?

(A) Kerala (B) Tamil Nadu (C) Madhya Pradesh (D) Gujarat

(4) What is the chocolate made from ?

(A) Til (B) Cocoa (C) Rubber (D) Tea

(5) In the production of which of the following condiments is Gujarat first ?

(A) Isabgul (B) Fenugreek (C) Mustards (D) Corriander

(6) Which of the following pulses is a rabi crop ?

(A) Udad (B) Mung (C) Gram (D) Math