

Gujarat Board Textbook Solutions Class 12 Economics

Chapter 8 Agriculture Sector

1. Choose the correct option for the following questions :

Question 1. How much percent population lives in rural area as per 2011 census?

- (A) 68.8%
- (B) 72%
- (C) 60%
- (D) 74%

Answer:

- (A) 68.8%

Question 2. How much was the contribution of agriculture in national income of 2011-12?

- (A) 53.1%
- (B) 42.3%
- (C) 13.9%
- (D) 59.9%

Answer:

- (C) 13.9%

Question 3. How much employment was provided by agriculture in the year 2014-15?

- (A) 72%
- (B) 49%
- (C) 26%
- (D) 24%

Answer:

- (B) 49%

Question 4. When was NABARD established?

- (A) 1947
- (B) 1969
- (C) 1975
- (D) 1982

Answer:

- (D) 1982

Question 5. When was the utilization of green revolution applied on overall India?

- (A) 1961
- (B) 1966
- (C) 1969
- (D) 1991

Answer:

(B) 1966

Question 6. How much is the use of pesticides per hectare in India?

(A) 0.5 kg

(B) 2.5 kg

(C) 6.6 kg

(D) 7 kg

Answer:

(A) 0.5 kg

Question 7. Which is the institute of agriculture research?

(A) ICAR

(B) CIBRC

(C) Regional rural banks

(D) RBI

Answer:

(A) ICAR

2. Answer the following questions in one line :

Question 1. When was the second five year plan started?

Answer:

1956

Question 2. How much is the export income of agriculture?

Answer:

188 INR billion in the year 2017.

Question 3. Give names of methods to collect land revenue under British rule.

Answer:

Zamindari system, Mahalwari system, Ryotwari system are Land Revenue Collection Systems.

Question 4. Give examples of cash crops.

Answer:

Cotton, jute, groundnut, oil seeds, sugarcane, etc.

Question 5. Which corporation was made to store agriculture product?

Answer:

National warehouse corporation and state warehouse corporation were made to store agriculture product.

3. Answer the following questions in brief :

Question 1. Explain about factor of population pressure on low productivity of agriculture.

Answer:

- India's large population demands agricultural products for survival.
- Our large population puts high pressure on the agriculture sector.
- Very high employment in agriculture is a proof of the pressure that population puts on agriculture.
- At the time of independence, 72% population was engaged in agriculture. This reduced to 58% in 2001-02 and 49% in 2013-14.
- As per these figures, the burden on population for employment has reduced considerably but still it is quite high compared to other sectors.

Question 2. Explain about agriculture credit to improve agriculture productivity.

Answer:

The government took the following steps to increase the agricultural productivity:

(I) Institutional measures:

The government has taken several institutional measures under its five-year plans. These are:

1. Land reforms:

- Government framed laws to abolish Zamindari system. This has helped to protect tillers from getting exploited and to help them obtain ownership of land.
- These reforms help farmers to keep a major share of the crops with themselves for selling purpose unlike in the Zamindari system.
- As a result, the farmers have become motivated to increase the agricultural productivity and overall production.

2. Availability of institutional credit:

- India set-up nationalized banks so that it could provide credit and other monetary facilities to the farmers.
- In 1982, India established 'National Bank for Agriculture and Rural Development (NABARD)', under the RBI with the sole aim of financing agriculture sector.
- Regional Rural Banks (RRBs) and Land Development Banks (LDBs) were also set-up under the NABARD,
- All these institutions provide cheap credit that to in sufficient amount to Indian farmers. This has helped to boost the agricultural productivity.



Question 3. Why is India known as agriculture oriented economy?

Answer:

- India has been an agriculture nation since ancient times.
- Even today, India is highly dependent on its agriculture for producing food for its people, providing them employment and also earning export income.
- India is densely and largely populated country. So, agricultural products are used extensively to feed the large population as well as raw materials in agro based industries.
- Moreover, 68.8% i.e. almost 70% of Indian population still resides in rural areas. This population is mainly dependent on agriculture.
- So, we can say that agriculture is the life-line of India and that Indian economy is agriculture oriented.

Question 4. Explain role of agriculture to improve life standard of people.

Answer:

- India basically produces two types of crops:
 1. Food grains and
 2. Cash crops.
- India is also engaged in producing vegetables, fruits, flowers, etc.
- All these agricultural products have increased the usage as well as the incomes of people involved in production, processing and consumption.
- Today, people are using several agricultural products then ever. All these things have improved the standard of living of people.
- In the year 1951, on an average an Indian used to consume 395 grams of food grains. This increased to 511 grams in the year 2013.

Question 5. State different names of Green Revolution.

Answer:

‘High Yielding Varieties Program (HYVP)’, ‘Modern agricultural technology program’ and ‘Programme of seeds, fertilizer and water technology’ are the other names of Green Revolution.

4. Give answers to the point for the following questions :

Question 1. Explain crop rotation.

Answer:

Crop protection:

1. Pesticides protect the crops from various diseases, weeds, insects and even cattle and birds.
2. So, it is important to spray pesticides that too in required quantity to save the crops and increase agricultural productivity.



3. Compared to other nations, India uses very less amount of pesticides per hectare.
4. As per the economic survey of 2015-16, India uses 0.5 kg pesticide per hectare. On the other hand, countries like America uses 7.0 kg, Europe uses 2.5 kg, Japan uses 12 kg and Korea uses 6.6 kg pesticides.
5. Less use of pesticides is the reason for 15 to 25% spoilage of crops in India.
6. Indian farmers are not aware about proper use of pesticides. Some farmers put very less pesticides and some very large quantities. Also, they use poor quality of pesticides which affect the crop health and productivity.
7. Improper and unregulated use of pesticides in India is posing great danger to health of people as well as danger to environment. '
8. To tackle this problem, the government has appointed 'Central Insecticide Board and Registration Committee (CIBRC)' to provide information to the Indian farmers about various types of pesticides and their level of poison.
9. CIBRS also publishes different booklets to guide farmers. These booklets explain about quantity of pesticides, time of usage and level of poison.
10. It is extremely important to see that pesticides are environment friendly. Although pesticides should be effective, they should also be less poisonous and cheaper. Cheap but good quality pesticide will encourage small and marginal farmers to use them and hence increase agriculture productivity.

Question 2. What is Green Revolution?

Answer:

- India implemented 'High Yielding Varieties Program (HYVP)' to make Indian farming modern. This programme was also known as 'Green Revolution'.
- Other names of Green Revolution are 'Modern agricultural technology programme' and even 'Programme of seeds, fertilizer and water technology'.

Question 3. Discuss about agricultural research.

Answer:

- Indian Council of Agricultural Research (ICAR) is the only institute which undertakes agricultural research at India level.
- ICAR also provides platform for research and gives adequate help for conducting research.



- Over and above agriculture, ICAR is also spreading awareness for allied agriculture activities such as horticulture, fisheries, cattle rearing and dairy science.
- ICAR has made a major contribution in the success of Green Revolution.
- It has also made several efforts so that proper food and nutrition is available to Indians.
- Apart from ICAR, NABARD also undertakes several programmes and events and funds researches for agriculture and rural development.
- NABARD does many researches and based on the outcomes it provides knowledge and training to the farmers to increase and improve their crops.

Question 4. Discuss any three factors/matters/points to prove importance of agriculture.

Answer:

Present scenario of agricultural sector in India:

- Agriculture is one of the most important occupations of India.
- After independence, India ignored agriculture sector and gave importance only to the industrial sector. As a result, agriculture suffered and we can see the effects till date.
- Presently, agriculture contributes in extensive employment, production and export income compared to past. However, again this scenario is changing.
- Although agriculture sector is the most useful sector for providing employment, it contributes least in total revenue (National Income) compared to other sectors of economy.

1. Contribution in national income:

- As per economic survey of 2011 -12, in 1950-51, the contribution of agriculture sector in national income (GDP) was 53.1%.
- This has constantly decreased because of more focus on industries and less on agriculture.
- In the year 2011-12 it decreased to as low as 13.9% (at constant prices).
- Fast rise of other sectors namely, industry and service is one of the key reasons for reduced contribution of agriculture to such a great extent.

2. Employment generation:

- Although the contribution of agriculture is less in GDP, it provides maximum employment to people compared to other sectors.
- At the time of independence, 72% population was engaged in agriculture and allied agricultural activities. After independence, industry and service sectors developed quite fast and so people's dependency on agriculture for employment reduced.
- For example, in the year 2001-02, agriculture provided employment to 58% people which then reduced to 49% in the year 2014-15.

3. Export income:

- We export our agricultural products to various countries. This earns us foreign exchange.
- The foreign exchange earned helps to buy such goods which India does not produce but needs for its economic development.

4. Standard of living:

- India produces a variety of agricultural products.
- All these agricultural products have increased the usage as well as the incomes of people involved in production, processing and consumption.
- Today, people are using several agricultural products then ever. All these things have improved the standard of living of people.
- In the year 1951, on an average, an Indian used to consume 395 grams of food grains. This increased to 511 grams in the year 2013.

5. Growth of agriculture production:

Sr. No.	Crop	1950-51	2013-14	Growth
1.	Food gains (in metric ton)	51.0	264.4	2.5 times
2.	Pulses (in metric ton)	8.4	19.6	2.3 times
3.	Sugarcane (in metric ton)	69.0	348.0	5 times
4.	oilseeds (in metric ton)	5.1	32.4	6.23 times
5.	Cotton (in metric bale)	2.1	36.5	17 times

Source: Ministry of Agriculture, Government of India-2015

- Our total agricultural production has increased tremendously. This can be seen in the table.
- On comparing the production of 1950-51 with 2013-14 we can see that the production has increased several folds.
- Although population has also increased in all these years but, it must be noted that rise in production has become possible due to rise in land under cultivation as well as rise in per-hectare productivity.

6. Base for industrial development:

- Industries provide raw material to industries so that industries can further process, produce and contribute to national economy.
- These industries also sell produced goods in rural areas because almost 69-70% people live in villages.
- Agriculture is the source of income and employment for such a huge rural population.



- With rise in agricultural and other sectors these rural dwellers are today even demanding products such as television, refrigerators, motorcycle, mobile phones, air conditioners, etc.
- This has boosted industrial production, consumption and also economy.

Question 5. Explain any three reasons for low productivity of agriculture in India.

Answer:

- Although India is an agriculture based country, it has several agriculture related problems.
- The productivity of agriculture per hectare is called agricultural productivity. We can also know about agricultural productivity by finding the income earned per hectare of agricultural produce.

Reasons for low agriculture productivity can be classified into three major types:

- (I) Institutional factors,
- (II) Technological factors and
- (III) Other factors

(I) Institutional factors for low agricultural productivity:

- The physical, social, economic and legal factors that affect agriculture are known as institutional factors.
- These factors are not in much favour of farmers. As a result, the agricultural development and productivity is low in India.
- The institutional factors remained negative for farming and hence agriculture productivity remained low. These factors are discussed below.

1. Land Revenue Collection Systems:

- Even after India became independent, three Land Revenue Collection Systems namely, Zamindari system, Mahalwari system and Ryotwari system existed in India.
- The land tenants and landless labourers used to cultivate land under these systems.
- Under these systems, the landlords used to forcibly take most of the produced crops from the labourers or tenants as rent. As a result, the farmers had no motivation to increase production.
- So, neither individual productivity nor national productivity increased.

2. Agriculture finance:

- Majority of Indian farmers are poor. They take finance to buy fertilizer, seeds, pesticides, etc.
- After independence, private money lenders were one of the easiest and major sources of obtaining agricultural finance. But, these lenders used to charge very heavy rate of interest on the money lent.

- As per a source, In 1951, about 71.6% agriculture finance business was controlled by money lenders.
This problem was somewhat solved when the government established nationalized banks, regional rural banks in 1975 and National Bank for Agriculture and Rural Development (NABARD) in 1982.
- Due to all these efforts only 27% finance remained in the hands of money lenders and remaining was taken care by agriculture credit institutes.

3. Lack of agriculture marketing:

- Infrastructural facilities such as proper roads and bridges are not well developed in remote Indian villages. So, produce of these villages cannot reach the agricultural markets easily.
- In any case, the majority of the profit goes in the hands of agents, traders and hoarders and not the farmers. The local money lenders and brokers force the indebted farmers to sell their crops at cheap rates before they grow fully.
- Moreover, farmers are illiterate and ignorant about knowledge of market, market rates, selling procedure, etc.

4. Rural social structure:

- Indian farmers are fatalist and possess least information about the government policies, framework, benefits, market, etc.
- Indian rural society is bound with old traditions and orthodox structure.
- These people believe that God has given them life full of problems and so they have to live with it.
- So, they do minimal farming and do not have any motivation to increase cultivation and income.

(II) Technology factors:

- In India, majority of the farming is still done with old traditional technology.
- Obsolete and worn out equipment, old ideologies, lesser mechanization, etc. all reduces agricultural productivity.
- Farmers also use traditional seeds instead of modern hybrid seeds which can give higher productivity.
- Many farmers use traditional manure such as cow dung instead of chemical fertilizers. This also reduces the productivity.
- Indian farmers do not use pesticides in sufficient quantity. As a result, the crops catch disease and the productivity suffers.



(III) Other factors:

1. Population pressure:

- Our large population puts high pressure on the agriculture sector.
- Very high employment in agriculture is a proof of the pressure that population puts on agriculture.
- At the time of independence, 72% population was engaged in agriculture. This reduced to 58% in 2001-02 and 49% in 2013-14.
- As per these figures, the burden on population for employment has reduced considerably but still it is quite high compared to other sectors.

2. Lack of economic planning:

- India gave greater emphasis on agriculture during the first five year plan. But, second five year plan onwards, India started focusing on industries rather than agriculture.
- India did not put same efforts, time and money in agriculture sector as it did in industries. In other words, the economic planning ignored agriculture. Hence, agriculture suffered tremendously.

5. Answer the following questions in detail :

Question 1. Explain about agriculture pattern.

Answer:

Present scenario of agricultural sector in India:

- Agriculture is one of the most important occupations of India.
- After independence, India ignored agriculture sector and gave importance only to the industrial sector. As a result, agriculture suffered and we can see the effects till date.
- Presently, agriculture contributes in extensive employment, production and export income compared to past. However, again this scenario is changing.
- Although agriculture sector is the most useful sector for providing employment, it contributes least in total revenue (National Income) compared to other sectors of economy.

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- As per economic survey of 2011 -12, in 1950-51, the contribution of agriculture sector in national income (GDP) was 53.1%.
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- In the year 2011-12 it decreased to as low as 13.9% (at constant prices).
- Fast rise of other sectors namely, industry and service is one of the key reasons for reduced contribution of agriculture to such a great extent.



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- Although the contribution of agriculture is less in GDP, it provides maximum employment to people compared to other sectors.
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- Agriculture is the source of income and employment for such a huge rural population.
- With rise in agricultural and other sectors these rural dwellers are today even demanding products such as television, refrigerators, motorcycle, mobile phones, air conditioners, etc.
- This has boosted industrial production, consumption and also economy.

Question 2. Discuss the reasons for low productivity in Indian agriculture.

Answer:

- Although India is an agriculture based country, it has several agriculture related problems.
- The productivity of agriculture per hectare is called agricultural productivity.

We can also know about agricultural productivity by finding the income earned per hectare of agricultural produce.

Reasons for low agriculture productivity can be classified into three major types:

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- As per a source, In 1951, about 71.6% agriculture finance business was controlled by money lenders.
This problem was somewhat solved when the government established nationalized banks, regional rural banks in 1975 and National Bank for Agriculture and Rural Development (NABARD) in 1982.
- Due to all these efforts only 27% finance remained in the hands of money lenders and remaining was taken care by agriculture credit institutes.

3. Lack of agriculture marketing:

- Infrastructural facilities such as proper roads and bridges are not well developed in remote Indian villages. So, produce of these villages cannot reach the agricultural markets easily.
- In any case, the majority of the profit goes in the hands of agents, traders and hoarders and not the farmers. The local money lenders and brokers force the indebted farmers to sell their crops at cheap rates before they grow fully.
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- Indian rural society is bound with old traditions and orthodox structure.
- These people believe that God has given them life full of problems and so they have to live with it.
- So, they do minimal farming and do not have any motivation to increase cultivation and income.

(II) Technology factors:

- In India, majority of the farming is still done with old traditional technology.
- Obsolete and worn out equipment, old ideologies, lesser mechanization, etc. all reduces agricultural productivity.

- Farmers also use traditional seeds instead of modern hybrid seeds which can give higher productivity.
- Many farmers use traditional manure such as cow dung instead of chemical fertilizers. This also reduces the productivity.
- Indian farmers do not use pesticides in sufficient quantity. As a result, the crops catch disease and the productivity suffers.

(III) Other factors:

1. Population pressure:

- Our large population puts high pressure on the agriculture sector.
- Very high employment in agriculture is a proof of the pressure that population puts on agriculture.
- At the time of independence, 72% population was engaged in agriculture. This reduced to 58% in 2001-02 and 49% in 2013-14.
- As per these figures, the burden on population for employment has reduced considerably but still it is quite high compared to other sectors.

2. Lack of economic planning:

- India gave greater emphasis on agriculture during the first five year plan. But, second five year plan onwards, India started focusing on industries rather than agriculture.
- India did not put same efforts, time and money in agriculture sector as it did in industries. In other words, the economic planning ignored agriculture. Hence, agriculture suffered tremendously.

Question 3. State measures to improve productivity in agriculture.

Answer:

The government took the following steps to increase the agricultural productivity:

(I) Institutional measures:

The government has taken several institutional measures under its five year plans. **These are:**

1. Land reforms:

- Government framed laws to abolish Zamindari system. This has helped to protect tillers from getting exploited and to help them obtain ownership of land.
- These reforms help farmers to keep a major share of the crops with themselves for selling purpose unlike in the Zamindari system.
- As a result, the farmers have become motivated to increase the agricultural productivity and overall production.



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- India set-up nationalized banks so that it could provide credit and other monetary facilities to the farmers.
- In 1982, India established the 'National Bank for Agriculture and Rural Development (NABARD)', under the RBI with the sole aim of financing agriculture sector.
- Regional Rural Banks (RRBs) and Land Development Banks (LDBs) were also set-up under the NABARD,
- All these institutions provide cheap credit that to in sufficient amount to Indian farmers. This has helped to boost the agricultural productivity.

3. Improvement m structure of agriculture marketing:

The government has taken following steps to improve the structure of agriculture marketing:

- Regulated markets have been set up.
- 'AGMARK (AGMARK = Agriculture Marketing)' has been introduced to classify the agriculture produce on the basis of its quality.
- National warehouse corporation and state warehouse corporation have been set-up to store agricultural produce of farmers.
- System has been developed so that the farmer can be provided information about prices of agriculture produce.
- To protect farmer from changes that take place in market prices, the government announces bottom prices below which the produce cannot be sold.

4. Agriculture research:

- Indian farmers are mostly uneducated and do not have sufficient capital to conduct experiments and research in their fields. So, NABARD has taken up this task.
- Although NABARD is an apex financial institution for providing credit to agricultural sector, it also undertakes several programmes and events and funds researches for agriculture and rural development.
- NABARD does .many researches and based on the outcomes it provides knowledge and training to the farmers to increase and improve their crops.
- This helps farmer to leave their traditional ways of farming and adopt new scientific methods. The farmers thus earn higher income and are also able to fulfill the rising demand of the nation.
- Moreover, to make farmers a part of agricultural reforms, collective rural development programs, Panchayati Raj, Integrated Rural Development Programs, Jandhan Yojana, etc. have been started. By becoming a part of these programmes the farmers are able to modernize the agriculture and increase their agricultural productivity.



(II) Technological measures:

Institutional measures require major structural changes as compared to technological measures. So, it is easier to implement technological measures.

Following technical measures have been taken by the government:

1. Improved seeds:

- Seeds developed with the help of scientific research are called improved seeds (hybrid seeds).
- These scientifically developed seeds give more and faster production and also protect the crops against diseases.
- India has been able to tremendously increase its production using these seeds.
- Due to this extraordinary growth in food grains, the 'Agriculture Revolution' is also known as 'Seed Revolution'.
- National Agriculture Research Committee, National Seed Corporation and agriculture universities gave utmost importance and top priority for developing hybrid seeds as a means to increase agriculture productivity.

2. Use of chemical fertilizers:

- Use of chemical fertilizer increased with the use of improved seeds in India.
- Chemical based fertilizers give required nutrition to plants and help them to grow fast. So, chemical fertilizers have proved highly beneficial for increasing agriculture productivity.
- Nitrogen, phosphate, potash and other chemicals used as per crop.
- India has also set-up public sector units such as IFFCO to produce chemical fertilizers.
- The government also imports and distributes fertilizers at subsidized rates.

3. Increase in irrigation facility:

- Rain is the main source of irrigation for Indian agriculture. However, rains are quite uncertain in India and so agriculture production and productivity gets affected badly.
- A systematic and well 'established irrigation facility is the key to solve this problem.
- A well-established irrigation system can help to regularize the production and also increase the productivity. Hence, government has undertaken various developmental programmes in irrigation sector. The government has also set-up 'Infrastructural development fund' for this purpose.
- NABARD has been assigned the responsibility to finish the incomplete irrigation projects and to develop other irrigational facilities.

4. Use of machines:

- Government has encouraged use of various types of machines which can increase the speed of agriculture production.



- With development of engineering and automobile sector, equipment and vehicles such as tractor, trailer, thresher, electric pump set, oil engines, pesticides sprinkler pump, etc. have been developed. These machines are extremely helpful for raising more than one crop a year, saving the crops, increasing the production speed and increasing productivity.

5. Pesticides:

- The government encourages using pesticides to protect the crops from various diseases.
- The use of pesticides helps in reducing the loss and wastage that occurs due to diseased crops.
- Their use thus helps in improving agricultural productivity. ‘.

6. Soil testing:

- By testing the soil, the farmer can find out about the properties of the soil and whether the soil is suitable for a particular crop or not. It also helps in knowing which minerals does the soil lack and which type of fertilizer will it need.
- Thus soil testing is an effective means to improve and maintain productivity. Government helps the farmers in getting their soil tested. It also guides them about the care they will have to take to retain the, soil quality.

(III) Other measures:

- To improve agriculture productivity farmers should be educated. They should be well informed about the new technologies in agriculture.
- They should also be made aware about the evil customs of the villages so that they become optimistic about agriculture.
- Agricultural fairs and events should be arranged to guide farmers about increasing agriculture productivity,
- Farmers should be made aware about agriculture allied activities such as cattle rearing, poultry farming, food processing, jungle farming, etc. so that they do not remain solely dependent on agriculture for livelihood.
- Small scale agro industries should be expanded to rural areas so that such industries can become a support to agriculture.

