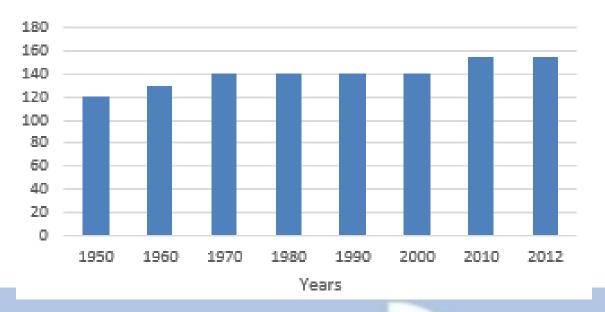
### Let's Discuss Pg-3

Q. 1. The following table 1.1 shows the land under cultivation in India in units of million hectares. Plot this on the graph, provided. What does the graph show? Discuss in the class.

 Table 1.1: Cultivated area over the years

Year	Cultivated Area	
1950	120	
1960	130	
1970	140	
1980	140	
1990	140	
2000	140	
2010	155	
2012	155	



The graph shows that the cultivated area increased regularly till 1970 and became constant for the next four decades. There was some increase between 2000 and 2010 but then again stagnated.

#### Q. 2. Is it important to increase the area under irrigation? Why?

**Answer :** Yes, it is important to increase the area under irrigation because the increase in area under irrigation will be helpful for more and more production which will help to feed the rising population of India.

# Q. 3. You have read about the crops grown in Palampur. Fill the following table based on information on the crops grown in your region.

Name of Crop	Month Sown	Month Harvested	Source of irrigation (Rain, tanks, tube wells, canals, etc.)

#### Answer :

Answer:

Name of Crop	Month of sowing the seeds	Month of harvesting the crops	Source of irrigation (Rain, tanks, tube wells, canals, etc.)
1. Wheat	NovDec.	March-April	Tube wells, tanks
2. Potatoes	OctDec.	FebMarch	Rain, tanks
3. Rice	June-July	NovDec.	Rain, Tube wells

### Let's Discuss Pg-5

## Q. 1. What is the difference between multiple cropping and modern farming methods?

**Answer :** Difference between multiple cropping and modern farming methods:

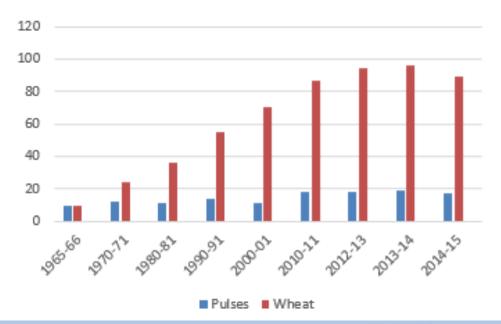
Ī	Multiple Cropping	Modern Farming Methods
	1. During the year more than one crop are grown on the only one piece of land.	1. During the year only one kind of crop is grown in bulk.
	2. Animal excreta is used as manure and fertilizers for better output.	2. Chemical fertilizers which are prepared in industries are used for better results.
	3. Traditional seeds are used.	3. HYV seeds are used.

Q. 2. The following table shows the production of wheat and pulses in India after the Green Revolution in units of million tones. Plot this on a graph. Was the Green Revolution equally successful for both the crops? Discuss.

Production of pulses and wheat

Year	Production of Pulses	Production of Wheat	
1965-66	10	10	
1970-71	11	24	
1980-81	12	36	
1990-91	14	55	
2000-01	11	70	
2010-11	<sup>18</sup> ya	87 Cho	amp
2012-13	18	94	
2013-14	19	96	
2014-15	17	89	

#### Answer :



For both crops, Green Revolution was not equally successful. We can look at the graph and analyse that in 1965-66, the production of both crops was 10 million tonnes, but after a long gap of 35 years in 2000-01, production of pulses raised to 11 million tonnes and the other crop wheat's production raised to 70 million tonnes. So it can be said that Green revolution has seen more success in the production of wheat.

### Q. 3. What is the working capital required by the farmer using modern farming methods?

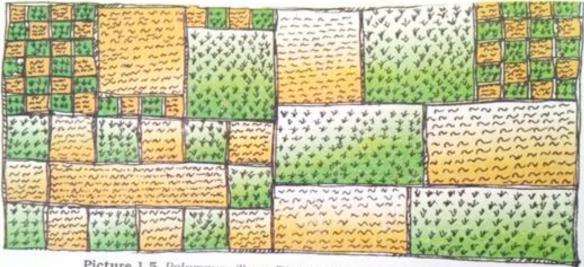
**Answer :** HYV seeds, chemical fertilizers, diesel, insecticides and pesticides are required working capital by the farmer using modern farming methods.

### Q. 4. Modern farming methods require the farmer to start with more cash than before. Why?

**Answer :** The working capital is more in case of modern farming because one needs to employ costly farming techniques and the costs of the modern fertilizers, other chemicals and seeds are also higher than the conventional equipments.

### Let's Discuss Pg-7

Q. 1. In the picture 1.5 given below, can you shade the land cultivated by the small farmers?



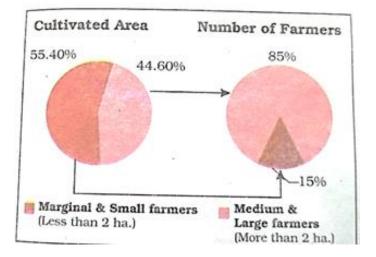
Picture 1.5 Palampur village: Distribution of cultivated land

**Answer :** We all know that land is very important for farming. But the sad truth is that not all the people engaged in agriculture have sufficient land for cultivation. In Palampur village about one third of the 450 families are landless, i.e. 150 families, most of them Dalits, have no land for cultivation. Remaining families who own land, 240 families cultivate small plots of land less than 2 hectares in size. This small plot doesn't bring sufficient income to the farmer family. So, when we look at the picture, it can be seen that around 50 families cultivate on the land which is less than 2 hectares in size.

#### Q. 2. Why do so many families of farmers cultivate such small plots of land?

**Answer :** So many families cultivate such small plots of land because of the division and sub-division of the same land. Existing land is divided among family members continuously and as a result each member of the family gets smaller plot of the land.

Q. 3. The distribution of farmers in India and the amount of land they cultivate is given in the following graph. Discuss in the class-room.

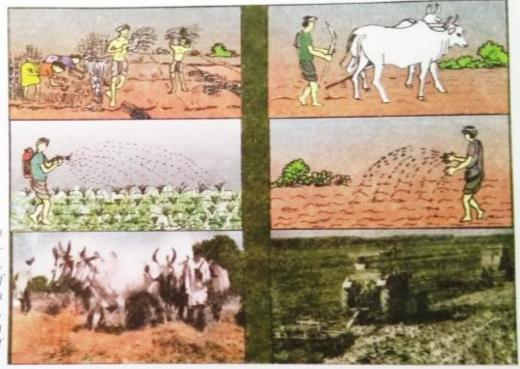


**Answer :** On looking at pie chart, we can observe that in India there are 15 % farmers who have farms less than 2 hectares, these farmers cultivate 55.4% of total cultivated area. On the other side 85% of the total farmers have farms of more than 2 hectares and they cultivate only 44.6% of total cultivated area.

# Q. 4. Would you agree that the distribution of cultivated land is unequal in Palampur? Do you find a similar situation for India? Explain.

**Answer :** Yes, we do agree that the distribution is unequal of cultivated lands in Palampur. In Palampur 240 families cultivate small plots of land which is less than 2 hectares in size and on the side there are 60 families who cultivate more than 2 hectares of land. There are few farmers who have land extending over 10 hectares or more. The number of the big farmers is very less while their lands are about half of the total available. This disparity is in accordance with the trends shown at the national level.

Q. 5. Identify the work being done on the field in the pictures (given below) and arrange them in a proper sequence.



Picture 1.6 Work on the fields: Wheat crop ploughing by bullocks, sowing, spraying of insecticides, cultivation by traditional method, cultivation by modern method, and cutting of crops.

- 1. Cutting of crops
- 2. Spraying of insecticides
- 3. Cultivation by traditional method
- 4. Ploughing the field by bullock.
- 5. Sowing
- 6. Cultivation by modern method.

Answer : Arranging the work being done on the field:

- 1. Traditional method of cultivation.
- 2. Modern method of cultivation.
- 3. Field ploughing with the help of bullocks.
- 4. Sowing
- 5. Spraying of chemical fertilizers and insecticides.
- 6. Harvesting.

### Let's Discuss Pg-9

#### Q. 1. Why are farm labourers like Dala and Ramkali poor?

**Answer :** Dala and Ramkali are poor farm labourers because, they don't own any piece of land for farming, and just work on daily wages. Also, they get far less wages than the minimum daily wages decided by the government. The government has decided the minimum wages for a farm labourer Rs. 60 per day, but they only get Rs. 35-40. People tend to work for lower wages to earn their livelihood, which makes the competition heavy for work among farm labourers.

Q. 2. Gosaipur and Majauli are two villages in north Bihar. Out of a total of 850 households in the two villages, there are more than 250 men, who are employed in rural Punjab and Haryana or in Delhi, Mumbai, Surat, Hyderabad or Nagpur. Such migration is common in most villages across India. Why do people migrate? Can you describe (based on your imagination) the work that the migrants of Gosaipur and Majauli might do at the place of destination.

**Answer :** 1. People tend to shift to cities from villages because of lack of work in the rural areas. Urban areas have greater employment opportunities than the villages. Most of the migrants are landless laborers or small farmers who need to constantly search for work when they do not get work in the agricultural sector.

**2. (i)** Those men who are employed in rural area might be working as household servants in the house od big Zamindaars.

- (ii) They might be working as farm labourers.
- (iii) In Delhi and other big cities they may be:
- (a) Working in small factories.
- (b) Working in hotels, grocery stores or garment stores etc.
- (c) Rickshaw pulling.

(d) Helping the plumbers, electricians etc.

### Let's Discuss Pg-11

Q. 1. Let us take three farmers. Each has grown wheat on his field, though the production is different (see Column 2). The consumption of wheat by each farmer family is the same (Column 3). The whole of surplus of wheat this year is used as capital for next year's production. Also suppose production is twice the capital used in production.

Complete the tables.

#### Farmer 1

	Production	Consumption		Capital for the next year
Year 1	100	40	60	60
Year 2		40		-
Year 3	120	40	-	-

Farmer 2

					and the second
V	Production	Consumption		Capital for the next year	P
Year 1	80	40	-	-	1
Year 2	-	40	-	-	
Year 3	-	40	-	-	

Farmer 3

	Production	Consumption	Surplus = Production - Consumption	Capital for the next year
Year 1	60	40	-	-
Year 2	-	40	-	-
Year 3	-	40	-	-

#### Answer :

Farmer 1

		Production	Consumption	Surplus = Production - Consumption	Capital for the next year	
	Year 1	100	40	60	60	
	Year 2	120	40	80	80	
	Year 3	160	40	120	120	
F	armer 2	QV			am	

	Production	Consumption	Surplus =	Capital for the
			Production - Consumption	next year
Year 1	80	40	40	40
Year 2	80	40	40	40
Year 3	80	40	40	40

Farmer 3

	Production	Consumption		Capital for the
			Production - Consumption	next year
Veen 1	60	40		20
Year 1	60	40	20	20
Year 2	40	40	0	0
Year 3	0	40	-40	-40

#### Q. 2. Compare the production of wheat by the three farmers over 3 years.

**Answer :** On comparing the production of wheat by the three farmers over 3 years, we observe that:

(i)The continuous increase in all the three years in the production of wheat of the farmer-1.

(ii) The production of wheat of farmer-2 has been constant in three years. It neither increased nor decreased.

(iii) The continuous decrease in the all the three years in the production of farmer-3.

## Q. 3. What happens to farmer-3 in year 3? Can he continue production? What will he have to do to continue production?

**Answer : (i)** In 3<sup>rd</sup> year, farmer 3 could not produce wheat anymore in accordance with the trends of the three years.

(ii) Yes, production can be continued by him but it would require additional capital input from the farmer's end.

(iii) The farmer will have to arrange for working capital by borrowing money from the moneylender, banks or some other source, if he wishes to continue production.

### Let's Discuss Pg-12

Q. 1. Read the following descriptions and answer the questions that follow:

Mishrilal has purchased a mechanical sugarcane crushing machine run on electricity and has set it up on his field. Sugarcane crushing was earlier done with the help of bullocks but people prefer to do it by machines these days. Mishrilal also buys sugarcane from other farmers and processes it into jaggery. The jaggery is then sold to traders at Shahpur. In the process, Mishrilal makes a small profit.

1) What capital did Mishrilal need to set up his jaggery manufacturing unit?

2) Who provides the labour in this case?

3) Can you guess why Mishrilal is unable to increase his profit?

4) Could you think of any reasons when he might face a loss?

#### 5) Why does Mishrilal sell his jaggery to traders in Shahpur and not in his village?

**Answer : 1)** Sugarcane crushing machine is needed by Mishrilal to set up his jaggery manufacturing unit.

2) His family members and he himself provides the labour in this case.

**3)** Because of the limited production of sugarcane in his village, he is unable to raise his profit.

4) He might face losses when the price of jaggery falls.

**5)** Mishrilal sells his jaggery to traders in Shahpur and not in his village because he can earn more in Shahpur comparatively because of the big market of jaggery over there.

#### Q. 2. Read the following descriptions and answer the questions that follow:

Kareem has opened a computer class centre in the village. In recent years, a large number of students have been attending college in Shahpur town. Kareem found that a number of students from the village are also attending computer classes in the town. There were two women in the village having a degree in computer applications. He decided to employ them. He bought computers and set up the classes in the front room of their house overlooking the market. High class students have started attending them in good numbers.

1) In what ways is Kareem's capital and labour different from Mishrilal's?

2) Why didn't someone start a computer centre earlier? Discuss the possible reasons.

**Answer : 1)** Kareem's capital is computer which is fixed capital when on the other side Mishrilal's capital is sugarcane crushing machine which is his fixed capital. Kareem has hired two women as labourer where Mishrilal's labour is his own family members, he didn't need to hire any labour, and he is self-employed.

**2)** Someone didn't start a computer centre earlier because of the lack of education and electricity facilities. The other possible reasons could be non-availability of persons of having a degree especially in computer education, less students etc.

### Let's Discuss Pg-13

Q. 3. Read the following descriptions and answer the questions that follow:

Kishora is a farm labourer. Like other such labourers, Kishora found it difficult to meet his family's needs from the wages that he received. A few years back,

Kishora took a loan from the bank. This was under a government programme which was giving cheap loans to poor landless households. Kishora bought a buffalo with this money. He now sells the buffalo's milk. Further he has attached a wooden cart to his buffalo and uses it to transport various items. Once a week he goes to the river Ganga to bring back clay for the potter. Or sometimes he goes to Shahpur with a load of jaggery or other commodities. Every month he gets some work in transport. As a result, Kishora is able to earn more than what he used to do some years back.

1) What is Kishora's fixed capital?

2) What do you think would be his working capital?

3) In how many production activities is Kishora involved?

4). Would you say that Kishora has benefited from better roads in Palampur?

Answer : 1) Buffalo and wooden cart is Kishora's fixed capital.

**2)** Money that is being spent on the maintenance of the bullock and the cart is his working capital.

3) Kishora's involvement is now in three production activities.

**4)** Yes, Kishora has benefitted from better roads because of better roads in Palampur; he is able to transport different items which will increase his income.

### Exercise

Q. 1. Every village in India is surveyed once in ten years during the Census some of details are presented in the following format. Fill up the following based on information on Palampur.

(a) Location

(b) Total Area of the Village.

(c) Land Use (In Hectares)

Cultivated land		
Irrigated	Unirrigated	Land not available for cultivation (Area covering dwellings, roads, ponds, grazing grounds),
		26 hectares

### (d) FACILITIES

Edu	cational				
Med	lical				
Mar	rket				
Elec	ctricity				
Con	nmunication				
Nea	rest Town	va Champ			
Answe	Answer : (a) Location : Palampur				
(b) Total area of village: 800 hectares					

(c) Land used (in hectares): 700

Cultivated land		
Irrigated	Unirrigated	Land not available for cultivation (Area covering dwellings, roads, ponds, grazing grounds),
200	100	26 hectares

#### (d) FACILITIES

	Educational :	Two Primary schools and one high school	
	Medical :	Primary Health Centre	
	Market :	Narrow market	
	Electricity :	Yes	
	Communication :	Nominal	
7	Nearest Town :	Shahpur	

# Q. 2. Modern farming methods require more inputs which are manufactured in industry. Do you agree?

**Answer :** Yes, we do agree that modern farming methods require more inputs which are manufactured in industries. The types of tools and inputs required for agriculture are:

1) Machines used in farming, 2) Motors used in tube wells, 3) Electricity, 4) Chemical Fertilizers, 5) Pesticides, 6) petrol and diesel, 7) Tractors, etc.

#### Q. 3. How did the spread of electricity help farmers in Palampur?

**Answer :** The spread of electricity has been helpful for the farmers of Palampur in various ways:

(i) Now irrigation of lands can be done in far more better ways. Before Persian wheels were used for the irrigation which was a prolonged process and was not so effective. So, irrigation with the help of electricity will be useful for much larger areas of land and too quite quickly and effectively.

(ii) Because of the better irrigation facilities more and more crops can be grown for one year.

(iii) Electric connection not only helped in improving agriculture but also in running small businesses.

#### Q. 4. Is it important to increase the area under irrigation? Why?

Answer : Yes, it is important to increase the area under irrigation.

Increasing the area under cultivation is important for following reasons:

- **1.** Because the rainfall is neither certain nor adequate.
- 2. Crops such as rice, wheat, sugarcane require adequate and regular supply of water.

**3.** Plenty of water is needed for HYV seeds.

**4.** Increase in irrigation facilities will increase the productivity as it will be helpful in growing multiple crops.

# Q. 5. Construct a table on the distribution of land among 450 families of Palampur.

No. of families	Area of land	
150	Landless	
240	Less than 2 hectare	
60	More than 2 hectares	

**Answer :** Distribution of land among 450 families of Palampur:

# Q. 6. Why are the wages for farm labourers in Palampur less than minimum wages?

**Answer :** The wages of the farm labourers are less than minimum wages because the land is fixed and population is increasing day by day which leads to increase in labour

force. As more labour is available, there is an apparent sense of competition amongst the laborers which leads to many of them accepting even the low wages if it guarantees them continued employment.

# Q. 7. In your region, talk to two labourers. Choose either farm labourers or labourers working at construction sites. What wages do they get? Are they paid in cash or kind? Do they get work regularly? Are they in debt?

**Answer :** After having communication with two labourers working at construction sites, we got following information:

1. Their per day earning as wages is Rs. 90.

2. They get their payment in cash.

3. No. their work is not permanent; they don't have work for every day.

**4.** They have debts as they take loans from moneylenders in case of any emergencies like illness of family members.

## **Q. 8. What are the different ways of increasing production on the same piece of land? Use examples to explain.**

**Answer :** There are two different ways of increasing production on the same piece of land. E.g.

**1.** Multiple Cropping Method: This method refers to the cropping method in which more than two crops are grown on a piece of land during a year. This is the most common way of raising production. This method of cropping is possible if there are good facilities for irrigation are available.

**2.** Modern Farming Methods: This method refers that farming method HYV (high yielding variety) seeds are used instead of traditional seeds. Chemical fertilizers are used instead of animal excreta as manure and other natural fertilizers. In this method irrigation is done with the help of tube wells, tractors are used for ploughing, threshers are also used. At last before harvesting, pesticides and insecticides are sprayed once.

#### Q. 9. Describe the work of a farmer with 1 hectare of land.

**Answer :** Owning a land of 1 hectare and doing agriculture on it is not enough for the sustenance of the farmer and the family, which makes it mandatory for him/her to try and find extra sources of income. Generally, this stratum of farmers work on their own plot of land and when they are finished with it, they work as labourers on construction sites or fields of the bigger farmers in order to supplement their meagre income from farming own fields.

# **Q. 10.** How do the medium and large farmers obtain capital for farming? How is it different from the Small farmers?

**Answer :** Medium and large farmers obtain capital for farming from their past savings. The production of medium and large farmers is usually more than their consumption; this is how they save for their next round of farming. They sell the extra output in the market and earn money. However, small farmers do not have savings because in the very first round of farming, they do not have sufficient land to cultivate, thus extra yielding and savings are not quite possible for them. Their arrangement of capital is done by taking loans from moneylenders or large farmers at a very high-interest rate.

# Q. 11. On what terms did Savita get a loan from Tejpal Singh? Would Savita's condition would be different if she could get a loan from the bank at a low rate of interest?

Answer : Savita got a loan from Tejpal Singh on the following terms:

1. Rate of interest is 24% on the loan for four months.

**2.** She will have to work as a farm labourer during the harvest season at Rs. 35 per day in Tejpal Singh's field.

Yes, if she applies for the loan from bank then her condition may differ, she could get loan from the bank at a low rate of interest and no other conditions like extra labor on low wages. This could help in improving her financial condition.

# Q. 12. Talk to some old residents in your region and write a short report on the changes in irrigation and changes in production methods during the last 30 years.

**Answer :** I talked to two old residents in my region related to irrigation and method of farming 30 years back. Many changes in irrigation and production methods can be found.

**1.** Irrigation: The method of irrigation was a very laborious work 30 years back, because Persian wheels were used by the farmers to draw water from the wells and irrigate small fields. But now after 30 years, the tube wells run by electricity could irrigate much larger areas of land and too effectively and quickly. Tube wells were first set up by government, but now farmers have started setting up their private tube wells.

**2.** Production Method: 30 years back, production activities like sugarcane crushing was done with the help of bullock, but now people prefer to do it by mechanical sugarcane crushing machine which is run on electricity. This has not only increased the efficiency of the process but also helped the farmers in making more profits out of the process.

# Q. 13. What are the non-farm production activities taking place in your region? Make a short list.

Answer : The list of non-farm production activities in our region:

1. Small scale manufacturing of shoes

- 2. Readymade garments
- 3. Some grocery shops are there
- 4. Cyber café has recently inaugurated
- 5. People also sells vegetables in market.

## Q. 14. What can be done so that more non-farm production activities can be started in villages?

**Answer :** Following are the steps which can be taken to start non-farm activities in villages:

1. Villagers must be made aware of various non-farm production activities.2. Loans should be provided by the government at a low rate of interest to start or expand non-farm production activities.3. Transport facilities which are provided in villages should be cheap so that people can easily carry goods to and from the nearby markets.4. Providing education and skills to the young population can also help to increase the non-farm activities.