

## 2. Crops

### Exercise

#### 1 A. Question

Fill in the blanks.

\_\_\_\_\_ form the basic diet of mankind.

#### Answer

Cereals form the basic diet of mankind.

Explanation. Cereals are the plants of the grass family that is cultivated for their edible components. Their starchy edible seeds form the major source of diet for more than half of the world's population. They form the staple diet for a large number of people. Rice, wheat, barley, millets, oats, and maize are the major cereal crops grown throughout the world.

#### 1 B. Question

Fill in the blanks.

The world's best \_\_\_\_\_ comes from the temperate grasslands.

#### Answer

The world's best wheat comes from the temperate grasslands.

Explanation.

Wheat is an important cereal crop that is grown mainly in the temperate areas of the world. It forms the major component of food in the temperate regions. Since wheat requires warm and moist conditions in its early stages and dry, sunny conditions in the later stages of its growth, temperate areas provide the ideal prerequisites for its cultivation. Loamy soil is the composition of the sand, silt and smaller amount of clay. It is rich in minerals. The loamy soils and its organic and biological components in the temperate areas also add to its high production in the region.

#### 1 C. Question

Fill in the blanks.

Maharashtra, Gujarat and Tamil Nadu are important \_\_\_\_\_ producing states in India.

#### Answer

Maharashtra, Gujarat and Tamil Nadu are important cotton producing states in India.

Explanation. Cotton is an important fiber crop that grows in the tropical and the sub-tropical region. It is an important component of the textile industry throughout the world, and cotton fabrics are always in high demand. A hot, humid and moist condition is required for the excellent growth of the crop. It gives the best yield in the black and alluvial soil that contains a high composition of phosphorus, ammonia and other components as a result of the constant deposition and settlement of soil. Cotton cultivation is mainly found in Maharashtra, Gujarat, Tamil Nadu, Karnataka, Madhya Pradesh, Andhra Pradesh, Punjab, Haryana, and parts of Rajasthan.

### **1 D. Question**

Fill in the blanks.

Rice is a \_\_\_\_\_ crop.

#### **Answer**

Rice is a tropical crop.

Explanation. Rice is the staple diet crop especially for the regions surrounding the tropical areas of the world. A hot, humid and moist condition is required for the excellent growth of the crop. It gives the best yield in the alluvial soil that has rich nutrients because of the deposition by the flow of rivers and water bodies over time. It results in the formation of river beds and ensures the development of smooth and fertile soil where water can be held stagnant making it ideal for cultivation. Since it requires an average temperature of 24° and an average rainfall of 150cm, it can be considered as a tropical crop grown in the kharif season between July and October.

### **2 A. Question**

Choose the correct answer:

Asia accounts for \_\_\_\_\_ of the world's rice production.

A) 98%

B) 80%

C) 75%

#### **Answer**

Rice is the staple diet crop especially for the regions surrounding the tropical areas of the world. A hot, humid and moist condition is required for the excellent growth of the crop. It gives the best yield in the alluvial soil that has rich nutrients because of the deposition by the flow of rivers and water bodies over time. It results in the formation of river beds and ensures the development of smooth and fertile soil ideal for cultivation. Since it requires an average temperature of 24° and an average rainfall of 150cm, it can be

considered as a tropical crop. Asia, being in the tropical zone is the largest producer of rice that accounts for 98% of the global production. The main centres of production are China, India, Bangladesh and Indonesia.

## **2 B. Question**

Choose the correct answer:

In India, U.P, Punjab, and Haryana are the major \_\_\_\_\_ producing states.

- A) Rice
- B) Sugarcane
- C) Wheat

### **Answer**

Wheat is an important cereal crop that is grown mainly in the temperate areas of the world. It forms the major component of food in the temperate regions. Since wheat requires warm and moist conditions in its early stages and dry, sunny conditions in the later stages of its growth, temperate areas provide the ideal prerequisites for its cultivation. Loamy soil is the composition of the sand, silt and smaller amount of clay. It is rich in minerals. The loamy soils and its organic and biological components in the temperate areas also add to its high production in the region. In India wheat is a rabi crop grown between October and March in the northern states of Punjab, Uttar Pradesh, and Haryana.

## **2 C. Question**

Choose the correct answer:

Tea is a \_\_\_\_\_ shrub.

- A) Temperate
- B) Tropical
- C) Equatorial

### **Answer**

Tea is an important cash crop that is grown both in the tropical and the sub-tropical regions. It is a perennial shrub whose leaves are used for the production of tea dust and tea. A hot, humid and moist condition is required for the excellent growth of the crop. It requires a temperature of 21° and an average rainfall of 150 cm. Since the shrub requires a cooler, rainy and tropical climate for its growth, it is majorly cultivated in the hilly regions. It is extensively grown in the hilly regions of China, India and Sri Lanka.

## **2 D. Question**

Choose the correct answer:

Cotton grows well in \_\_\_\_\_ soil.

- A) Black
- B) Alluvial
- C) Desert

### Answer

Cotton is an important fibre crop that grows in the tropical and the sub-tropical region. It is an important component of the textile industry throughout the world, and cotton fabrics are always in high demand. A hot, humid and moist condition is required for the excellent growth of the crop. It gives the best yield in the black soil that contains a high composition of phosphorus, ammonia and other components as a result of the constant deposition and settlement of soil. Cotton cultivation is mainly found in Maharashtra, Gujarat, Tamil Nadu, Karnataka, Madhya Pradesh, Andhra Pradesh, Punjab, Haryana, and parts of Rajasthan.

### 2 E. Question

Choose the correct answer:

India and Bangladesh are the leading producers of \_\_\_\_\_.

- A) Cotton
- B) Jute
- C) Wheat

### Answer

Jute is an important fibre crop that is grown in the tropical regions of the world. It is also known as the golden fibre. It is an important component of the textile industry throughout the world. The cultivation of jute requires a high temperature, high rainfall, and fertile, alluvial soil. Thus the tropical zone of the world is ideal for its production. It is majorly cultivated in the floodplains of West Bengal and Bangladesh where the soil is highly rich and fertile. It gives the best yield in the alluvial soil that has rich nutrients because of the deposition by the flow of rivers and water bodies over time. It results in the formation of river beds and ensures the development of smooth and fertile soil ideal for cultivation. Almost two-thirds of the jute production is carried out in India and Bangladesh.

### 3. Question

Match the following:

1. Ginning	a. Wheat
2. Retting	b. Sugarcane
3. Loamy Soil	c. Cotton
4. Alluvial soil	d. Jute
5. Tall tropical grass	e. Rice

## Answer

1. Ginning	Cotton
2. Retting	Jute
3. Loamy Soil	Wheat
4. Alluvial soil	Rice
5. Tall tropical grass	Sugarcane

## Explanation

1. Ginning is the process used to separate the cotton fibres from the cotton seeds. Perfect ginning operation would be performed if the separation of fibres from the seed was done without the slightest injury to either seeds or the fibre.

2. Retting is the process that involves the action of the microorganisms and moisture on plants to dissolve or rot away the cellular tissues so that it facilitates the separation of the fibre from the stem. This is mostly used in the jute to separate the fibres from the woody tissues.

3. Loamy soil is the composition of the sand, silt and smaller amount of clay. It is rich in minerals. Therefore this soil makes ideal for growing wheat. Other than wheat there are much more crops grown in loamy soil, they are cotton, jute, sugarcane, pulses, and oilseeds.

4. Alluvial soil is fertile soil rich in potassium. It is the best fit soil for agriculture. The crops which are grown in alluvial soil are paddy, sugarcane, and plantain. Paddy is the most used crop in alluvial soil field.

5. Sugarcane is species of tall perennial grass native of warm temperature to tropical regions. The plant is two to six metre tall. This makes them as tall tropical grass which is most suitably grown in the tropical region.

## 4 A. Question

Give short answers:

What are the requirements for the cultivation of wheat?

## Answer

Cereals are the plants of the grass family that is cultivated for their edible components. Their starchy edible seeds form the major source of diet for more than half of the world's population. They form the staple diet for a large number of people. Rice, wheat, barley, millets, oats, and maize are the major cereal crops grown throughout the world.

Wheat is an important cereal crop that is grown mainly in the temperate areas of the world. It forms the major component of food in the temperate regions. Since wheat requires warm and moist conditions in its early stages and dry, sunny conditions in the later stages of its growth, temperate areas provide the ideal prerequisites for its cultivation. It requires a temperature of

15° - 20° and rainfall of 50-60 cm. Loamy soil is the composition of the sand, silt and smaller amount of clay. It is rich in minerals. The loamy soils and its organic and biological components in the temperate areas also add to its high production in the region. Wheat requires highly mechanised and automated cultivation. It is mainly grown in the open, undulating areas in the world.

The highest producers of wheat in the world is USA, China, Ukraine, Canada, Argentina, Australia, India, and Pakistan. In India wheat is a rabi crop grown between October and March in the northern states of Punjab, Uttar Pradesh, and Haryana.

#### **4 B. Question**

Give short answers:

What is ginning?

#### **Answer**

Ginning is the process of separating the soft and fluffy ball of cotton fibre from its seeds. Ginning is the process used to separate the cotton fibres from the cotton seeds. Perfect ginning operation would be performed if the separation of fibres from the seed was done without the slightest injury to either seeds or the fibre. Before ginning, the cotton seeds are first dried in the sunlight to remove any moisture content from them. Any organisms, leaves, stems and other particles are removed from them before ginning.

Before the invention of gins, cotton ginning was done by hand. It was highly labour intensive and required many days to separate the fibre and the seeds. But after the invention of gins, the process was highly mechanised. It also helps to prevent wastage to some extent and ensures the collection of seed and seedless cotton separately.

#### **4 C. Question**

Give short answers:

Name the countries that produce cotton on a large scale.

#### **Answer**

The crops grown for the extraction of fibres from them are the fibre crops. Before the introduction of synthetic fibres, they were highly used for many purposes. The large quantities of cellulose found in them give them the strength, thus making them ideal for their use in making paper, clothes, and ropes. Cotton, jute, and bamboo are some fibre crops.

Cotton is an important fibre crop that grows in the tropical and the sub-tropical region. Cotton is predominantly a shrub. It is an important component of the textile industry throughout the world, and cotton fabrics are always in high demand. A hot, humid and moist condition is required for the excellent growth of the crop. It requires in the regions having temperatures ranging between 20° - 30° and an excellent rainfall of 50-100 cm. It gives the best yield in the black and alluvial soil that contains a high

composition of phosphorus, ammonia and other components as a result of the constant deposition and settlement of soil.

The important producers of cotton in the world are USA, Uzbekistan, Brazil, and Pakistan. Cotton cultivation is mainly found in Maharashtra, Gujarat, Tamil Nadu, Karnataka, Madhya Pradesh, Andhra Pradesh, Punjab, Haryana, and parts of Rajasthan of India.

#### **4 D. Question**

Give short answers:

What is retting?

#### **Answer**

Retting is the process that involves the action of the microorganisms and moisture on plants to dissolve or rot away the cellular tissues so that it facilitates the separation of the fibre from the stem. This is mostly used in the jute to separate the fibres from the woody tissues.

The traditional methods of retting involve the soaking of the stem in water and dew and exposing the stem to moisture for 14 to 28 days. This will allow the stem to soften by the action of the microorganisms and the moisture content and helps the extraction of the fibre from the barks. But it is a labour intensive method involving long duration and requiring large quantities of fresh water. The developments in technology have led to the introduction of many modern means of separating the fibre through heat, chemicals, and enzymatic treatments.

#### **4 E. Question**

Give short answers:

Which countries lead in sugarcane cultivation?

#### **Answer**

Cash crops are agricultural crops produced for their market value. They are commercially valuable crops mainly cultivated for its sale in the market. It is mainly cultivated and grown with the objective of making profits. Tea, pepper, rubber, sugarcane, and spices are some important cash crops.

Sugarcane is an important cash crop grown in the tropical regions of the world. It forms part of the grass family cultivated in the tropical and sub-tropical zone of the world. A hot, humid and moist condition is required for the excellent growth of the crop. It requires a hot, dry climate throughout the year with an average temperature of 24° and a very good rainfall of 130 cm. It gives the best yield in the well-drained fertile soil that has rich nutrients because of the deposition by the flow of rivers and water bodies over time. It results in the formation of river beds and ensures the development of smooth and fertile soil ideal for cultivation.

The regions of Latin America, Southern, and Eastern Asia are the leading producers of sugarcane in the world. India, Pakistan, Brazil, and Indonesia are the important countries involved in the production of the crop.

### 5 A. Question

Answer in a paragraph each:

Compare and contrast the condition or requirements for the cultivation of rice and wheat.

### Answer

Cereals are the plants of the grass family that is cultivated for their edible components. Their starchy edible seeds form the major source of diet for more than half of the world's population. They form the staple diet for a large number of people. Rice, wheat, barley, millets, oats, and maize are the major cereal crops grown throughout the world.

<b>BASIS</b>	<b>RICE</b>	<b>WHEAT</b>
Region	<ul style="list-style-type: none"> <li>Rice is the staple diet crop especially for the regions surrounding the tropical areas of the world.</li> </ul>	<ul style="list-style-type: none"> <li>Wheat is an important cereal crop that is grown mainly in the temperate areas of the world.</li> </ul>
Climatic conditions	<ul style="list-style-type: none"> <li>A hot, humid and moist condition is required for the excellent growth of the crop. It requires an average temperature of 24 ° and an average rainfall of 150cm.</li> </ul>	<ul style="list-style-type: none"> <li>Wheat requires warm and moist conditions in its early stages and dry, sunny conditions in the later stages of its growth. It requires a temperature of 15 ° - 20 ° and rainfall of 50-60 cm.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>It gives the best yield in the alluvial soil that has rich nutrients because of the deposition by the flow of rivers and water bodies over time. It results in the formation of river beds and ensures the development of smooth and fertile soil where water can be held stagnant making it ideal for cultivation.</li> </ul>	<ul style="list-style-type: none"> <li>The loamy soils and its organic and biological components in the temperate areas add to the high production of wheat in the temperate region. Loamy soil is the composition of the sand, silt and smaller amount of clay. It is rich in minerals.</li> </ul>
Season	<ul style="list-style-type: none"> <li>It is grown in the kharif season between July and October.</li> </ul>	<ul style="list-style-type: none"> <li>Wheat is a rabi crop grown between October and March</li> </ul>
Major producers	<ul style="list-style-type: none"> <li>Asia, being in the tropical zone is the largest producer of rice that accounts for 98% of the global production. The main centres of production are China, India, Bangladesh, and Indonesia.</li> </ul>	<ul style="list-style-type: none"> <li>The highest producers of wheat in the world is USA, China, Ukraine, Canada, Argentina, Australia, India, and Pakistan.</li> </ul>

### 5 B. Question

Answer in a paragraph each:

Write a paragraph on the condition required for the cultivation of tea.



## Answer

Cash crops are agricultural crops produced for their market value. They are commercially valuable crops mainly cultivated for its sale in the market. It is mainly cultivated and grown with the objective of making profits. Tea, pepper, rubber, sugarcane, and spices are some important cash crops.

Tea is an important cash crop that is grown both in the tropical and the sub-tropical regions. It is a perennial shrub whose leaves are used for the production of tea dust and tea. The cultivation of tea involves the constant trimming and maintenance of the shrub to facilitate the growth of new, fresh leaves ideal for making tea dust. A hot, humid and moist condition is required for the excellent growth of the crop. It requires a temperature of 21° and an average rainfall of 150 cm. Since the shrub requires a cooler, rainy and tropical climate for its growth, it is majorly cultivated in the hilly regions. It gives the best yield in the well-drained fertile soil that is rich in nutrients.

It is extensively grown in the hilly regions of China, India and Sri Lanka. In India, Assam, West Bengal, Kerala and Tamil Nadu have extensive tea estates and is involved in the production and export of the crop.

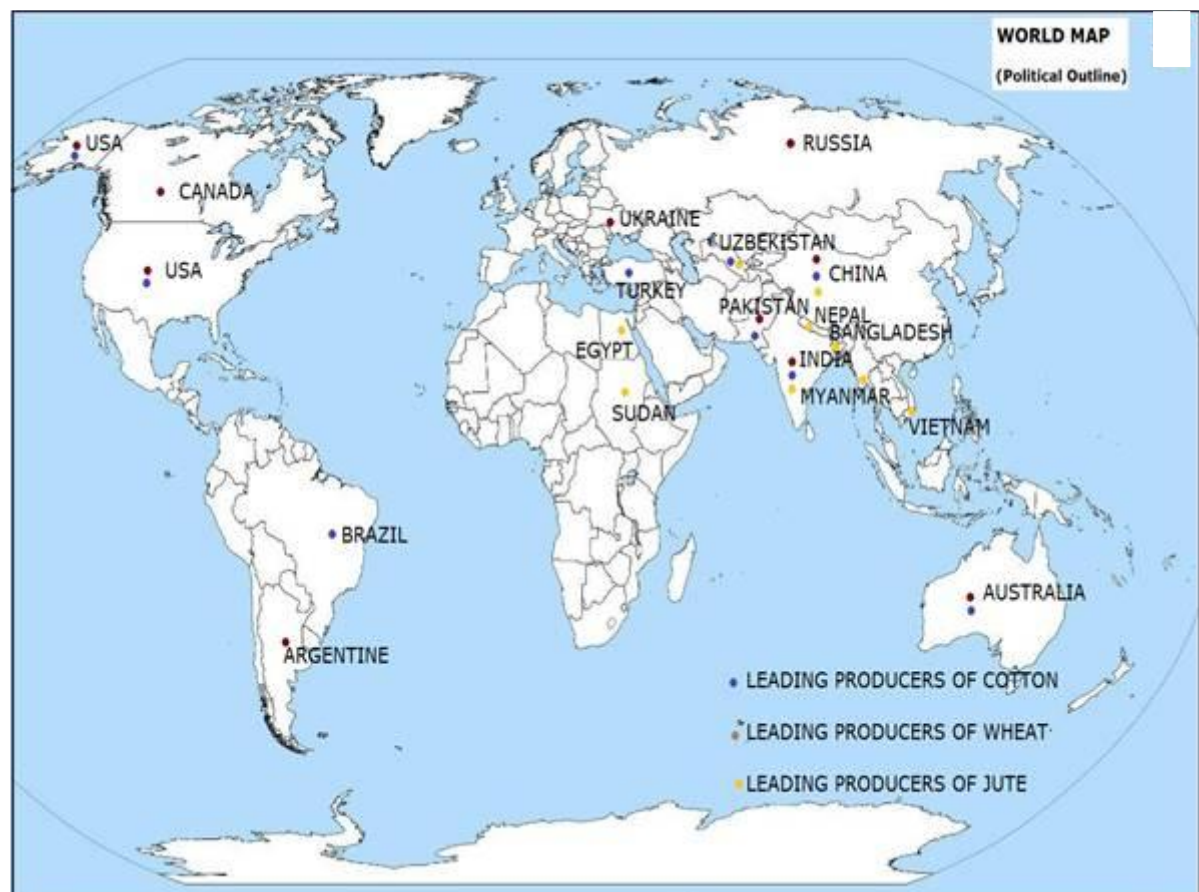
## Formative Assessment

### 1. Question

#### MAP SKILL

Mark areas producing wheat, cotton and jute on a world map.

## Answer



## 2. Question

### PROJECT

Collect a list of articles and pictures made out of jute.

### Answer

Jute is an important fibre crop that is grown in the tropical regions of the world. It is also known as the golden fibre. It is an important component of the textile industry throughout the world. The cultivation of jute requires a high temperature, high rainfall, and fertile, alluvial soil. Thus the tropical zone of the world is ideal for its production. It is majorly cultivated in the floodplains of West Bengal and Bangladesh where the soil is highly rich and fertile. It gives the best yield in the alluvial soil that has rich nutrients because of the deposition by the flow of rivers and water bodies over time. It results in the formation of river beds and ensures the development of smooth and fertile soil ideal for cultivation. Almost two-thirds of the jute production is carried out in India and Bangladesh.

Jute majorly used for making clothes, sacks, carpets, rugs, coverings and many other items. It is also being used as furniture, accessories and for other handicrafts



JUTE DRAWING CANVAS



JUTE FABRICS



RAW JUTE|



JUTE ROPE



JUTE FURNITURES



JUTE HANDICRAFT



JUTE BASKETS



JUTE BLINDS AND MESH



JUTE CARPETS



JUTE ACCESSORIES



JUTE HOME DECOR



JUTE DOLLS



JUTE PHONE COVERS



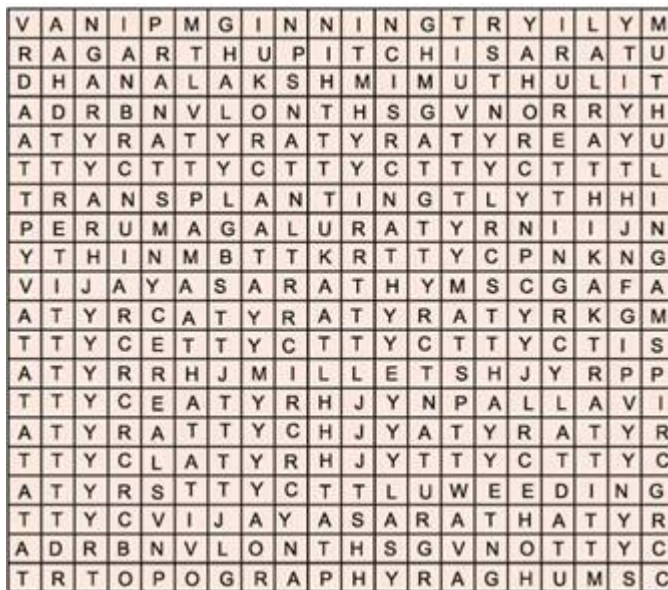
JUTE BAGS



JUTE MESH

### 3. Question

Word Search:



- Deseeding cotton
- Soaking process in jute.
- Food crops like ragi, campu, cholam.
- Grass-like edible plants.
- Removing unwanted plants.
- An important step in rice cultivation.

g. Different landform on the earth surface.

### Answer

a. Ginning

b. Retting

c. Cereals

d. Millets

e. Weeding

f. Transplanting

g. Topography



## 4 A. Question

### DISCUSSION

1. Have a discussion in class about the food eaten at home yesterday.

ASHA- Yesterday morning I had idli and sambar. In the afternoon, I had rice, sambar and side dish and in the night, I had dosa and chutney.

RANVEER- I had roti and curd in the morning, some rice and chapati with paneer in the afternoon. At night I had naan and butter chicken.

NUNMAI- I had rice in the morning with some fruits. In the afternoon I had rice, beef, and curd. At night I had momos and rice.

VANI- I had aalo poha in the morning. I had rice and fish curry in the afternoon and pav bhaji at night.

a. What were the main ingredients?

b. Where did it come from?

c. Why was the food different in each classmate's house?

### Answer

a. The main ingredients of the food were cereals, vegetables, fruits, fish and meat. They differ according to the region in which the student belonged.

b. All the food items came from either plant or from animals. Cereals, vegetables, and fruits came from plants and agricultural sources while chicken and fish from animals.

c. The food differed according to the differences in regions from which the student hailed- southern India (Asha's home), northern India (Ranveer's home), eastern India (Nunmai's home) and Western India (Vani's home)

### 4 B. Question

#### DISCUSSION

Plan a daily menu for a South Indian and a North Indian. Why is it different?

Food Timings	North India	South India
Breakfast		
Lunch		
Dinner		

### Answer

Food Timings	North India	South India
Breakfast	Aalo paratha, Dahi	Idly, Sambar, Chutney
Lunch	Rice, Dal, Roti, Aalo mutter, Dahi, Paapad, Chicken	Rice, Sambar, Rasam, Pappad, Side dish, Fish
Dinner	Chappathi, Paneer/Gobi curry	Dosa/Rice/Chappathi, Sambar, Chutney, Side dish

The menu at both the places is different because of the differences in food habits and the differences in the crops cultivated.

Northern India is the wheat bowl of the country. Nearly 90% of the wheat production is concentrated in the northern states of Punjab, Haryana and Uttar Pradesh. This makes wheat the staple diet of the population. This explains the porotta and chapathi in their menu. Even though rice is also consumed by them, it does not form their staple food. They consume only lesser amounts of rice and give more importance to wheat and other cereals like corn and millets.

Conversely, in southern India, rice is the staple diet of the majority of the population. It includes rice and other batters made out of rice like idly and dosa. Southern India is the rice bowl of the country, especially states like

Kerala and Tamil Nadu. Here the staple food of the people is rice and other derived products. This explains the predominance of rice, idly and dosa in their menu. The consumption of wheat in the households is negligible and can be seen very rarely. Being the coastal belt, their consumption mainly includes rice and fresh fish.