**Agriculture**

Agriculture is a primary industry in Pakistan. It is a system with natural (physical) inputs such as land, soil, water and climate, and human (economic) inputs including capital, machinery, labour etc.

There are three types of farming common in Pakistan:

1. **Small-scale subsistence farming**

Farmers produce food and raw materials mainly for themselves. Any surplus production is sold in markets, while the farmer and his family consume most of it. The size of farms is smaller, with limited irrigation water and resources. Thus, traditional farming practices are followed like natural manure, using traditional wooden ploughs and bullocks for cultivation.

1. **Cash Crop farming**

Large-scale farming is primarily for sale and export. Farmers grow crops that bring high yields and more profit like wheat and cotton. Farmers use modern techniques and landlords invest more in farms to maximize profit by selling these crops. Thus, they make use of machinery, fertilizers and high-yielding seeds with different varieties. Warehouses are needed to store the harvested crop and then sell it to the wholesalers.

1. **Live-stock farming**

Breeding cattle to sell them in the market for meat, milk or skin.

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| **RABI CROPS**  **(Sown: Oct-Nov)**  **(Harvested: April-May)** | **KHARIF CROPS**  **(Sown: April-May)**  **(Harvested: Oct-Nov)** |
| Wheat | Rice |
| Barley | Cotton |
| Grams | Sugar-cane |
| Oilseeds | Millets |
| Pulses | Maize |

**Main Crops of Pakistan**

* ***WHEAT***

It is a staple food used to make roti or bread. Low grades of wheat and its by-products are used as feed for the livestock. It is a Rabi crop which grows during the winter season. Punjab and Sindh are rich in land irrigation canals thus they are the major regions for wheat cultivation. Their soil is rich in alluvium and flat. On the Potowar plateau, wheat is grown in rain-fed areas called the barrani lands.

After ploughing the field, wheat seeds are sown during Oct-Nov. These crops only require irrigation twice. First, one month after wheat seed is sown and last, one month before harvest. Thus, this crop doesn't require a lot of water to grow. Mild temperatures of around 10-20 degree Celcius is required for growth and a warmer temperature at the time of ripening. This crop grows in around 90-120 days, with a requirement of little rainfall.

* **RICE**

An important crop for Pakistan to earn foreign exchange. It is a Kharif crop and is grown on a large scale in Punjab and Sindh where the main river of Pakistan Indus flows. It is sown in April-May and initially grown in beds and nurseries. When it is 23cm tall it is transplanted into a prepared field which is flooded to 30-37 cm of water depth. The water level is maintained until the crop is ripe so harvesting in Oct-Nov can be done. It requires a temperature of 20-30 degrees Celsius and requires a warm dry period before harvesting. 1270-2000 mm is ideal rainfall required to grow the crop and irrigation is to be done to bridge the gap for 4-6 months of growing period. Some machinery and labour are required to prepare, sow, transplant and harvest the crop, Lastly, it is to be threshed and then polished in factories before being packed and sent as food. The husks may be used for cardboard manufacture or mixed with mud to cover house roofs.

* **COTTON**

Cotton is used in fabric textile industry in Pakistan to be made into clothes, furnishing fabrics, bed linen and industrial fabrics. It is a kharif crop and is sown in April-May 30-45 cm apart. Fields are irrigated after 1 month of sowing. Another irrigation is done after 2 more months and ripens in the month of Oct-Nov when the plant is about 135-150 cm and it’s harvested.

* **Sugar Cane**

Sugar and gur are made out of it. They are 30cm high and planted in April-May. If the plant is well taken care of, it grows to a height of 6-7ft. It is harvested after new shoots, called ratoons emerge. It grows dominantly in the entirety of eastern Punjab and Sindh. The cane is scrubbed with chalk to remove dirt, which is then processed under big blades to extract juice. Bagass and molasses are the two by-products. It requires a temperature of 25-30 and plenty of rainfall around 150mm. Loam or clay soil with silt is most suitable.

* **Minor crops:**
* **Maize-** Kharif crop. Used to make edible oil, cornflour, custard powder etc.
* **Pulses**- Mash, mung, masoor. Rich in proteins and low-value crops.
* **Millet**s- Jawar and bajra. Coarser cereals are used to make flour.
* **Oilseeds**- Sunflower, and soya bean to extract edible oil.
* **Tobacco**- Grown in KPK mainly and central Punjab.

**Fruit Farming**

Dates, bananas, apples, mangoes, watermelon, grapes, almonds, apricots. They all are grown mostly in Balochistan mainly, but also in lower Sindh and Punjab.

**Livestock Farming**

1. ***Nomadic***- Balochistan, Sindh and Punjab. They are people who shift from one place to another with their livestock in search of food, water and shelter. They live in temporary houses/tents. Their livestock carries their burden, when they settle down for weeks in one area.
2. ***Transhumance-*** They are people who shift from one place to another due to weather. They are usually the ones who go up north during summers to graze their livestock but move back south during winters due to snow. Goats, sheep and cattle are the main animals used.
3. ***Settled-*** These are people who live in settled villages in Sindh and Punjab with their livestock, using it for milk, power and meat.
4. ***Commercial farming-*** Carried out either at a small scale or commercial level. Bulk of livestock products are produced, using crossbreeding or selective breeding, improving their health conditions etc.

Types of livestock: Cattle, Buffaloes, sheep and goats, Poultry.

**Natural factors** affecting agriculture:

* Topography
* Soils
* Water supply
* Temperature
* Pests

**Human Factors**:

* Irrigation
* Fertilizers
* Machinery

**Land reforms** have been introduced by different governments over the years, as Pakistan is an agricultural industry. This starts from Ayub Khan’s Green Revolution, which was carried on by Bhutto in his policies.

**Industrial Development**



