

Agriculture of the Pakistan.

The oldest profession the human history is Agriculture; it was developed through the evolution. In primitives human occupation was hunting and fishing but with the passage of time he moves towards agriculture nearly 8,000 years ago. Today is age of science & technology, agriculture had modified and structured with multiples dimension. Pakistan is blessed country that had a lot of verity of seasons and fertile land so that it has a multiple Crops, Fruits, Vegetables, Dry Fruits; Spices & Herbs are abounded here in Pakistan. Mainly we can divide the Crops of Pakistan in to major category;

1. Kharif: Autumn Season to Moon Soon.

2. Rabbi: Winter Season.

3. Zaid Season.

➤ Major Crops of Pakistan:

Cotton, Maize, Rice, Sugar Cane, Tobacco, Wheat. CMRSTW.

➤ Medium Crops of Pakistan:

Barley, Millet, Sorghum, Oilseeds & Pulses.

➤ Seasonal Crops of Pakistan:

Vegetables, Fruits & Dry Fruits, Spices & Herbs.

- Total Land of Pakistan is 796096/ Sq. km =337074 Sq. mi and only 25% is cultivation land.
- Area covered by Mountains & Plateaus of Pakistan 20%
- Area covered by Rivers & Canals of Pakistan 25%
- Area covered by Deserts of Pakistan 20%
- Area covered by Forest & Water Logged Land 10%
- Area covered by Cultivation in Pakistan 10% & 15% still Un-Cultivated.
- The Agriculture of Pak contributes the 25% of GDP & 45 % employed in this Agro Economy.

The following are the main kinds of Agriculture.

SHIFTING AGRICULTURE: This type of agriculture is one of the most primary activities of man. This type of agriculture practiced in south Asia, Central Africa and tropical areas of north and South America. In this method some part of forest is cleared cultivated for two or three years and then abandoned. In this way it goes from plot to plot.

SUBSISTENCE AGRICULTURE: It is also known as domestic farming, because such farming is carried on intensive scale and most of the produced product is locally consumed and small surplus is exported. The farmer also kept some cattle to get milk such type of farming is carried on in India, Pakistan, China, Japan and other countries.

COMMERCIAL GRAIN AGRICULTURE: This type of farming is mostly performed in temperate grasslands wheat and other commercial crop grows. This type of agriculture is performed in USA, Canada, Russia, Argentina and Australia.

PLANTATION FARMING: In this type of farming commonly one cash crop is grown on commercial basis and other needs of the food and clothing are fulfilled from the imports. Such as rubber cultivation in Malaysia and Indonesia and Coffee and Tea cultivation in Brazil. This type of farming is common in countries of South Asia, Central America and Africa.

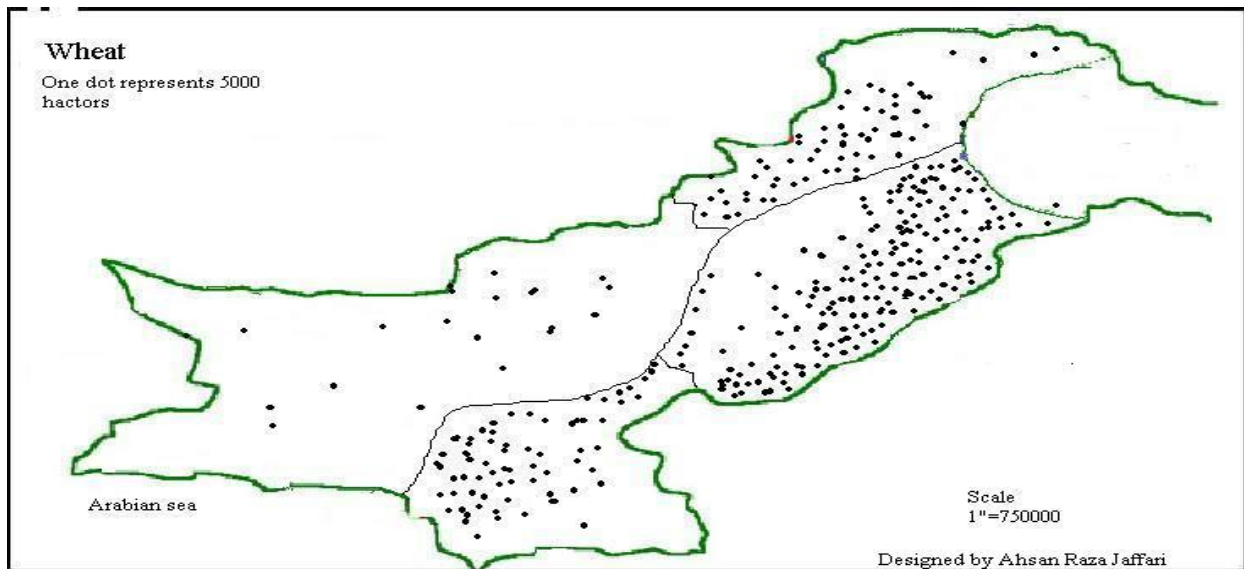
MIXED FARMING: In this type of farming two activities go side by side, such as rising of crops and rearing of cattle. It is very important for densely populated area. It is adopted in USA and some other countries.

TRUNK FARMING: Growing of vegetables on commercial basis is called trunk farming. Vegetables are grown in skirts of big town and cities because they are perishable. Atlantic coast of USA is best example.

Rice. Maize. Wheat. Cotton. Tobacco. Sugar Cane.

Commodity	Value	2016-2017	2017-2018(P)
Wheat	Tonnes	26,674,000	▼ 25,492,000
Cotton	Bales	10,671,000	▲ 11,935,000
Rice	Tonnes	6,849,000	▲ 7,442,000
Sugarcane	Tonnes	75,482,000	▲ 82,102,000
Maize	Tonnes	6,134,000	▼ 5,702,000

Wheat: Major Crop of the Pakistan;



TEMPERATURE:

For the growth of Wheat following Physical conditions are wanted Wheat production require a special kind of temperature at the time of plantation of the crop the temperature between 50 to 60 degree F is most suitable however if the temperature reaches up to 70 degree F at the time of plantation is harmful. At the time of harvesting the temperature between 80 degree to 100 degree For more is required, which helps in the ripening of the crop

RAINFALL:

At the time of planting the Wheat crop, moderate king of climate is required. And the rain is insufficient to the required ratio then the artificial irrigation is required. For the plantation of wheat crop, the areas having rain between 20" to 30" are most suitable.

SOIL:

For the cultivation of wheat loamy soil having proper quantity of sand and clay especially alluvial soil is very suitable. Beside this black mud i.e. Lava soil is very useful. After cutting the crop from the fields it requires sufficient amount of Nitrogen. So the use of natural ingredients of fertilizers causes more production.

ECONOMIC FACTORS:

Economic factors play an important role in the better cultivation of wheat. The following are the main economic factors for the cultivation of wheat:

- **Cheap Labor**
- **Means of Transportation**
- **Closed to Market & Ports**
- **Use the Good quality of Seeds**

➤ **Arrangement for the Proper Market**

KINDS OF WHEAT: The following are the main kinds of wheat.

- **Durum wheat**
- **White wheat**
- **Hard red spring wheat**
- **Hard red winter wheat**
- **Soft red winter wheat**

AREAS HAVING ABUNDANT PRODUCTION:

The areas having abundant production of wheat are the canal-irrigated areas. These areas included the north district of Sialkot and the South Rahim Yar Khan and in the East Kasur and in the West district of Sargodha. In these areas arrangements have been made for canal irrigation. All these areas have fertile land and flat areas having tube-well and many privileges are being provided to the farmers of these areas so the production of wheat crop of these areas is in abundance.

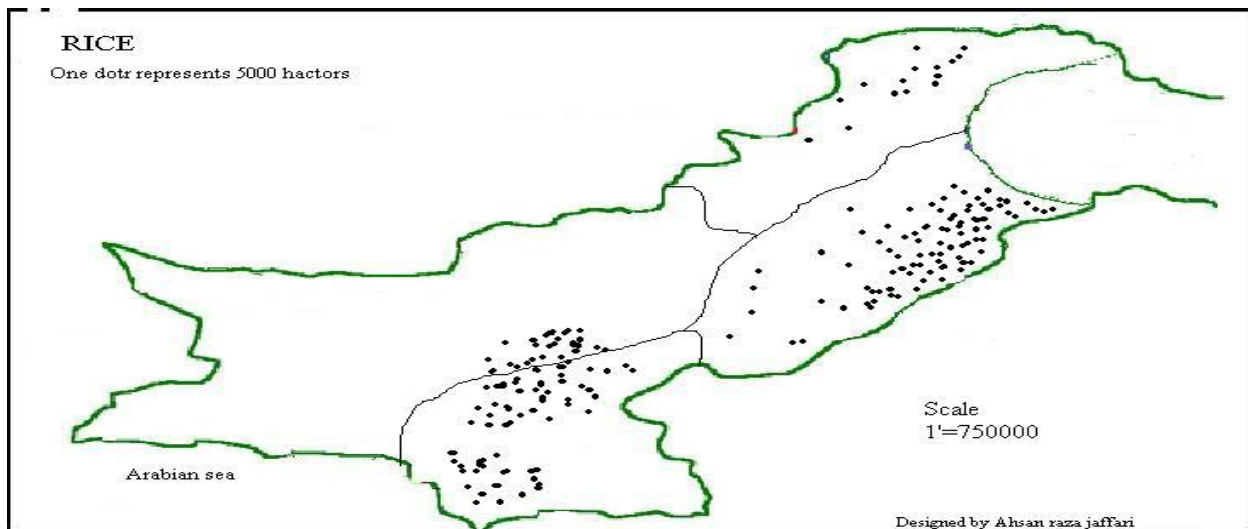
THE AREAS HAVING MODERATE PRODUCTION:

These areas are located in the surroundings of the areas producing wheat in abundance. These areas are including in the Eastern areas of Punjab, District Bahawalpur and Bahawalnagar. Whereas in the other areas in the west are include the district of Gujarat Muzaffargarh and Leiah district. Beside these the areas of rainy regions of district Attock are also include in it. In these areas the soil include in it. In these areas the soil is very fertile and the arrangement for the irrigation system are made available to the farmers.

LESS PRODUCTIVE AREAS:

Less productive areas of wheat production are included in all the four provinces of Pakistan. In these areas neither the land is fertile and smooth. No arrangements of irrigation are possible, so the farmers have to depend on rain. If it rains in time then it is possible to plant crop otherwise they have to depend on other areas for food and their other requirements. The areas are in Punjab province Rawalpindi Division. In NWFP Hanza and Dera Ismail Khan and most parts of Baluchistan are included in these areas.

Rice; Major Crop of the Pakistan.



Rice is also considered as an important element of human diet. This grassy shaped plant is produced mostly in the areas having of hot and moist climate; yet it can be cultivated in semi-arid areas. Many varieties of rice are cultivated in the world and these require different climate and other conditions. Rice plant has the height from 3 feet to 6 feet and the grains in a plant range from 30 of 100 and sometimes this number increases to 400 grains.

TEMPERATURE:

For the growth of rice following Physical conditions are wanted. At the time of sowing rice the temperature should not be less than 70 degree F but at the time of cultivation if it increases ranging from 80 degree F to 90 degree F then the rice cannot be cultivated there but in the areas where the temperature remains less than 40 degree F rice cannot be cultivated there. Intensive cold and most etc. are very harmful for its proper growth at the time of cultivating the crop if the temperature is high. 90 degree F or more even then the crop may be sown but at the time of harvesting if the temperature is less i.e. 60 degree F to 70 degree F it is normal and proper.

RAINFALL:

At the time of planting the rice crop, moderate king of climate is required. And the rain is insufficient to the required ratio then the artificial irrigation is required. For the plantation of rice crop, the areas having rain 40" is most suitable.

SOIL:

For the cultivation of rice alluvial soil and especially the soil in which the amount of loam is

present is considered most suitable as in the loam pores are less so the water does not absorb easily and water remains standing in the field. This standing water is very useful for the growth of rice crop.

ECONOMIC FACTORS:

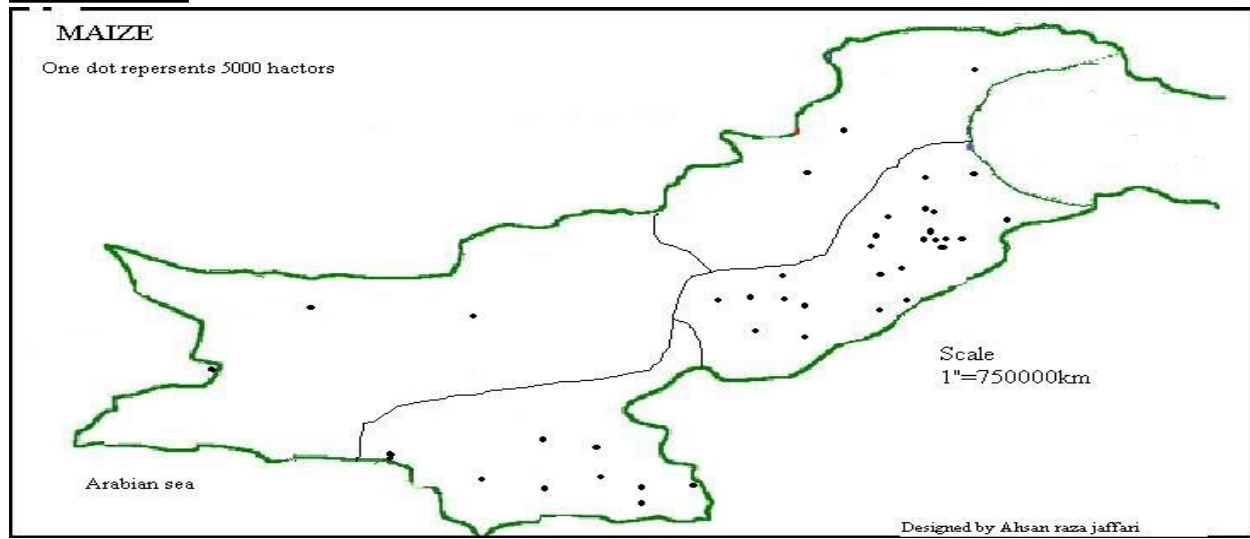
An economic factor plays an important role in the better cultivation of rice. The following are the main economic factors for the cultivation of rice:

- **CHEAP LABOUR**
- **MEANS OF TRANSPORT**
- **USE OF GOOD QUALITY SEEDS**
- **ARRANGMENT OF PROPER MARKET**
- **NEARNESS TO MARKETS AND PORTS**

In our country, like wheat, rice is not cultivated in all parts of the country. 90% of the areas under cultivation is in the province of Punjab and Sindh. In the province of Punjab, area under rice cultivation is increasing whereas there is a decrease in the area under rice cultivation in the province of Sindh. There is no area to compete with rice cultivation than the district of Gujranwala and Sialkot. Besides these other districts such as Lahore, Narowal, Kasur, Shekhupura, Okara, Hafizabad are included in second number where Sargodha, Hafizabad, Jhang, Toba Tek Singh possess secondary place in rice cultivation. The following graph shows the production of rice in past years of Pakistan.

PROVINCES OF PRODUCTION	PERCENTAGE PRODUCTION
Punjab	54%
Sindh	44%
NWFP	1.5%
Baluchistan	0.5%

Maize;



Maize is also a plant of tropical regions. It is said that Columbus was cultivating it in America before of its discovery. Hereafter this plant was brought to the European countries from America and gradually this was being planted in Asian and African countries. Maize is not only the diet of the human beings, but it is also an important part of food. This plant has sufficient height(6 to 8 feet) and its production per acre is more than as compared to the production of wheat. Beside this two or three crops in a year are obtained.

PHYSICAL FACTORS: For the growth of Wheat following Physical conditions are wanted.

TEMPERATURE:-The moderate regions are suitable for its production; however, its cultivation can be carried out in the (mild moderate regions). At the time of cultivation the temperature required is 70 degree F and at the harvesting time temperature required is higher. Forest and intense cold climate is injurious to its growth. The areas where the temperature so less than 40 degree F, cultivation of maize is not beneficial.

RAINFALL: The maize cultivation does not require abundant quantity of rain. The areas where the rain is approx. 20" annually are suitable for its cultivation. The areas where the annual rainfall is less than 20" cultivation cannot be carried out without irrigation intermittent Rain of Water is the cause of good maize crop.

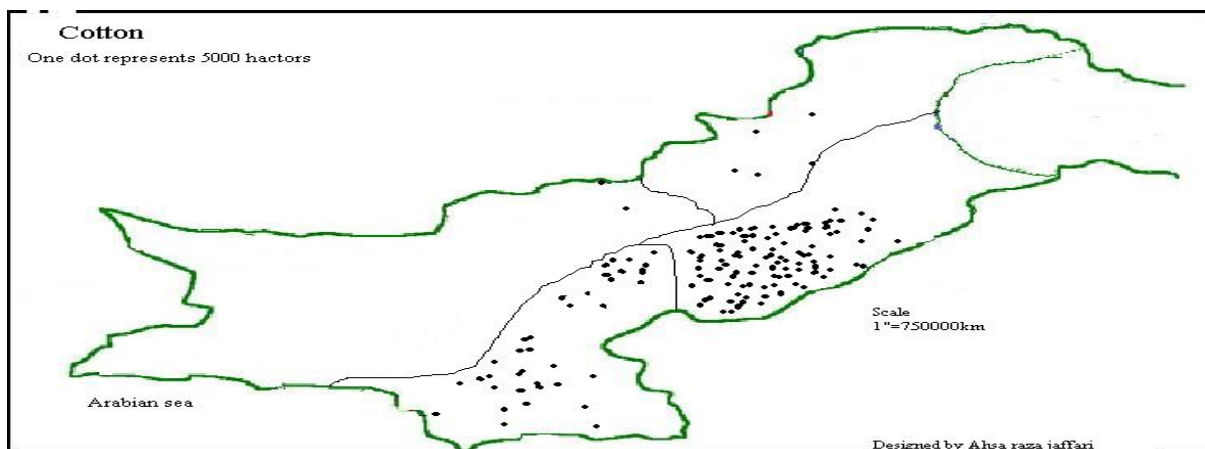
SOIL: For the cultivation of malice fertile soil is required. The soil formed through natural elements. The soil brought by rivers, air, glaciers is more suitable, black soil can also be planted.

ECONOMIC FACTORS: Economic factors plays an important role in the better cultivation of maize. The following are the main economic factors for the cultivation of maize:

- **CHEAP LABOUR**
- **MEANS OF TRANSPORT**
- **USE OF GOOD QUALITY SEEDS**
- **ARRANGMENT OF PROPER MARKET**
- **NEAR NESS TO MARKETS AND PORTS.**

YEAR	AREA(000 HACTORS)
1996-97	871
1997-98	869
1998-99	885.4
1999-2000	814.6
Percent increase	7.95%

Sugar Cane:



The people of advanced countries of the world use sugar as an important part of the diet for many years. The people of ancient times were not aware of sugar and were not aware of sugarcane and other means of producing sugar. However sugar was being sold in the markets of China in the mid of eighteen century. In the European countries sugar was only found at the tables of the nobles and rich people. Sugar is obtained from the plant of sugarcane and in the beginning this plant was found in India and later on the Arab planted it in Egypt and in North American countries, and it was taken to West Indians islands, Brazil and other countries for cultivation.

TEMPERATURE: For the growth of sugar cane following Physical conditions are wanted. The sugarcane cannot be cultivated in cold areas. The areas where the temperature is below 40 degree F sugar cane cannot be cultivated there. For the proper production of sugar cane it is necessary

that temperature may be warm. At the time of sowing and at the harvesting time lower temperature is required. Usually temperature ranging from 65 degree F to 80 degree f is suitable for its production.

RAINFALL: For the production of sugar cane sufficient quantity of rain and humidity is required and dry weather the production and juice of sugarcane decreases. The areas having 40” to 70” rainfall annually are considered most suitable areas for the production of sugarcane but at the harvesting time dry weather condition is necessary so that the juice of sugarcane may become thick.

SOIL: To get good crop of sugarcane, it is necessary to have fertile soil. The suitable soil for sugarcane is a field having sufficient quantity of phosphorus. Beside this it should contain lime for better results.

ECONOMIC FACTORS: an Economic factor plays an important role in the better cultivation of sugar cane. The following are the main economic factors for the cultivation of sugar cane:

- **CHEAP LABOUR**
- **MEANS OF TRANSPORT**
- **USE OF GOOD QUALITY SEEDS**
- **ARRANGMENT OF PROPER MARKET**
- **NEARNESS TO MARKETS AND PORTS**

AREAS HAVING ABUNDANT PRODUCTION:

The cultivation areas of sugar cane in Pakistan can be divided into three types.

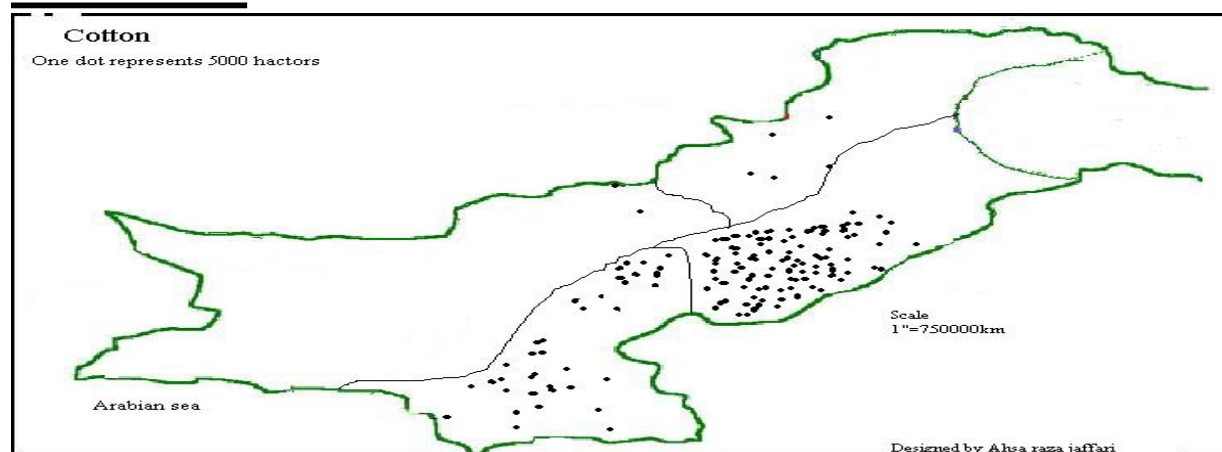
- 1- The areas of East and central of Punjab including Gujarat and to the North spreading up to the district of Rahim Yar Khan.
- 2- Central Southern areas of Sindh comprising of Nawabshah, Hyderabad and Badin.
- 3- Peshawar and Mardan districts in NWFP.

THE AREAS HAVING MODERATE PRODUCTION: These areas are located in the surroundings of those areas which are producing sugarcane in huge quantity. And these areas include Shekhupura, Sahiwal, Vehari, Bahawalpur, and Muzaffargarh, Leiah in Punjab and Khairpur and Thatta in Sindh.

LESS PRODUCTIVE AREAS: In the surrounding areas of less producing sugarcane areas, these are located and these areas producing sugarcane in less quantity these are in addition to Sialkot and Gujranwala districts, Rajanpur, Dera Ghazi Khan, Mianwali, Bakkar, and Khushab districts, whereas the district of Sukkur, Sanghar, Tharparkar and Dadu in Sindh are considered less producing areas of sugarcane.

YEAR	PRODUCTION(IN THOUSANDS)
1996-97	43521.2
1997-98	50278.5
1998-99	47780.0
1999-2000	45904
2010-2018 Percent increase	6.9%

Cotton:



Historian Herodotus has mentioned that a plant is cultivated in India from which wool is obtained. From this the information was obtained that Indian cotton was exported to Europe and Middle East Countries. Beside in the valleys of Indus the Nile, Tigris and Euphrates had also been planting cotton since ancient times. However with the passage of time the trend to plant cotton in other parts of the world started and now a day's many countries of the world grow cotton.

TEMPERATURE: For the growth of cotton following Physical conditions are wanted. The cotton plant grows well in (Subtropical Warm Temperate) regions. Severs cold and intense heat, both are harmful for the plantation of cotton. To achieve good production the weather must be clear most of the time. Frost, mist or snow-falling is not suitable for a good crop. Cotton crop is usually sown in the months of April or May and the temperature should be in the range of 77F to 90F. Mostly it is cultivated in 25to 42 latitude of Northern hemisphere and in 25 to 35 latitude in Southern hemisphere.

RAINFALL: Cotton Plantation does not require abundant water or rain. The areas of the world

in which there is rain ranging from 30" to 40" inches annually are suitable for its plantation. Light rain and abundance of water cause damage to cotton plant, so small quantity of intermittent rain is required and the plant is nourished in a better way. Good crop without the supply of water through irrigation is impossible.

SOIL: The cotton plant nourishes well in the soil having sufficient quantity of Potash, Lime and Nitrogen in the soil. Besides this if the soil has mineral ingredients in proper quantity, the plant nourishes well and quickly that is why fertility of land is pre-requisite for achieving good yield of cotton. The alluvial soil is suitable for its plantation. In desert areas its plantation is impossible. Besides this the volcanic areas and the soil caused due to volcanic process are good for its plantation. Economic factors play an important role in the better cultivation of cotton. The following are the main economic factors for the cultivation of cotton:

- **CHEAP LABOUR**
- **MEANS OF TRANSPORT**
- **USE OF GOOD QUALITY SEEDS**
- **ARRANGEMENT OF PROPER MARKET**
- **NEARNESS TO MARKETS AND PORTS**

The following are the main kinds of Cotton.

- **Long staple 2" to 2 ½"**
- **Medium staple 2"**
- **Small staple 1" 1 ½"**
- **Local cotton ½"**

AREAS HAVING ABUNDANT PRODUCTION: The cultivation areas of Pakistan can be divided into three types. Punjab province, comprising the district of Vehari, Multan, Bahawalpur are included in the areas producing cotton in abundance. Due to hot and dry climate there are good prospects of saving the crop from the attack of insects and virus diseases so in these areas, the production is in abundance as compared to other areas.

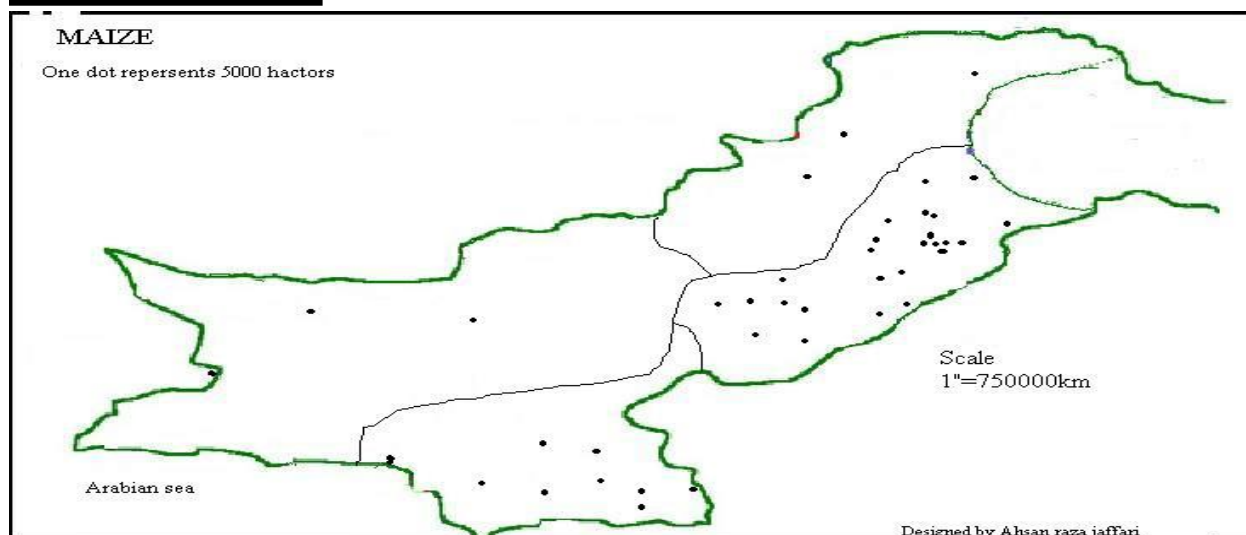
THE AREAS HAVING MODERATE PRODUCTION: These areas are adjacent to the abundant cotton producing areas. In Punjab, Bahawalpur, Sahiwal, Jhang, Muzaffargarh and Rajanpur districts and in Sindh, the districts of Sukkur, Khairpur and Hyderabad are included.

LESS PRODUCTIVE AREAS: The areas in this category are include Okara, Faisalabad, Toba Tek Singh, Sargodha, Mianwali, Bakkar, Leiah and D.G Khan district in Sindh. Beside this other district of the province in Punjab. In NWFP, Peshawar, Mardan, D. I. Khan and in Baluchistan, Loralai and Lasbela district cultivate local Cotton in small quantity.

YEAR	PRODUCTION(000 HACTORS)
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1996-97	9347
1997-98	9183.8
1998-99	8789.5
1999-2000	11240
Percent increase	27.9%

Tobacco;



The native country of tobacco plant is said to be new world the continent of South America, and the Spanish discovered it in 1492 AD. The Spanish took this plant from America with them and in the beginning it was used in the preparation of medicines. In Holland its cultivation began in 1615 AD. And with the passage of time it spread to other parts of the world. Dried tobacco leaves are used in different ways. Its consumption causes intoxicant effects. Though medically its use is injurious to life, however, the people use tobacco in cigarettes, Snuff, Cigar, and Pan.

TEMPERATURE: For the growth of tobacco following Physical conditions are wanted. Tobacco is cultivated in the tropical and temperate regions. The temperature requires ranging from 50 degree F to 80 degree F. Cold temperature is very dangerous for this crop.

RAINFALL: For cultivation of tobacco having 20 to 30 inches rainfall annually Sub Tropical areas are suitable. Excessive rainfall and stagnant water in the roots of the plants is harmful for the crops. Rain or water supplied after intervals should be provided intermittent water should be provided. **SOIL:** Fertile soil is wanted for the proper growth of tobacco crop. After the cultivation the fertility of land decreases so the natural and artificial fertilizers are used.

ECONOMIC FACTORS: an Economic factor plays an important role in the better cultivation of tobacco. The following are the main economic factors for the cultivation of tobacco:

- **CHEAP LABOUR**
- **MEANS OF TRANSPORT**
- **USE OF GOOD QUALITY SEEDS**
- **ARRANGMENT OF PROPER MARKET**
- **NEARNESS TO MARKETS AND PORTS**

The following are the main kinds of tobacco found in our country.

- **Local Tobacco**
- **Virginia Tobacco**

AREAS HAVING ABUNDANT PRODUCTION: The cultivation areas of Pakistan can be divided into three types. Districts Peshawar and Mardan of NWFP province are at the top of the list of tobacco producing areas and from total production 54% are cultivated in these two districts and 50% production is obtained from these areas.

THE AREAS HAVING MODERATE PRODUCTION: This area comprises of the central Eastern districts of Punjab. In these Faisalabad, Sahiwal, T.T.Singh, Gujranwala, and in NWFP area Mansehra and in Baluchistan district Pishin's area are included.

LESS PRODUCTIVE AREAS: The surrounding districts moderate tobacco producing areas i.e. Shekhupura, Okara, Vehari, Multan, Jhang, Gujarat and Attock are included in this category.

YEAR	PRODUCTION(000 TONNES)
1996-97	92
1997-98	98.6
1998-99	109
Percent increase	11.23%
1999-2000	12.83

The following graph shows the production of tobacco in different years and tells that its production was terminated in 1999-2000 due to the international community.

PROVINCES OF PRODUCTION	PERCENT AGE PRODUCTION
NWFP	65%
Punjab	31%
Baluchistan	3.5%
Sindh	0.5%

The following pie chart shows the production of tobacco in different provinces of Pakistan.

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