

Q Having the largest irrigation systems in the world, the land of sub-continent served as the main food supply basket for the British power for more than a century, but now Pakistan has to import food commodities. Discuss in detail the causes of this agricultural decline.

Ans:

Introduction:

Pakistan is an agriculture based country with agriculture as its backbone. It contributes to 24% country's GDP. Startingly, it was major contributor to GDP, but with the passage of time service sector has overhauled it. Now, it the 3rd largest contributor to the GDP. If we move few more steps backward, in British era, the agricultural land of ^{today's Pakistan} ~~continent~~ contributed a lot in filling the supply basket. Sadly,

its contribution capacity to fill the bread basket has declined. Instead of exporting food stuff, it is compelled to import for meeting the needs of population. Major reasons of this decline include water scarcity, limited cultivable land, energy crunch, climate change, lack of research and modernity in agriculture sector and many others.

Causes of Agricultural Decline

(i) Limited Cultivable Land:

Only 25% land is under cultivation, while remaining land is unfit for agricultural activities due to various reasons. The area of cultivable land is further reducing due to two major reasons: subdivision and segmentation of land and water logging and salinity. With the passage of time

time, due to law of inheritance the land is being subdivided among siblings. On small piece of land machinery and modern technology cannot be applied and production level is reduced resultantly. On the other hand water logging and salinity are making land unfit for cultivation. This is how, ^{cultivable} land is shrinking day by day.

(2) Water Scarcity:-

Agriculture is not possible without adequate water supply. Pakistan is suffering from water crisis. In the past, there was enough water available to meet the needs of population and agriculture, but now it is scarce. Now the explosion of population needs more water. Indus is lifeline of Pakistan, and it fulfills 90% of agricultural water need. Moreover, its tributaries

including Jehlum, Ravi, Chenab and Sutlej are contributing also. The construction of Baghliar Dam on Chenab River by India even in defiance with Indus Water Treaty has increased the water concerns.

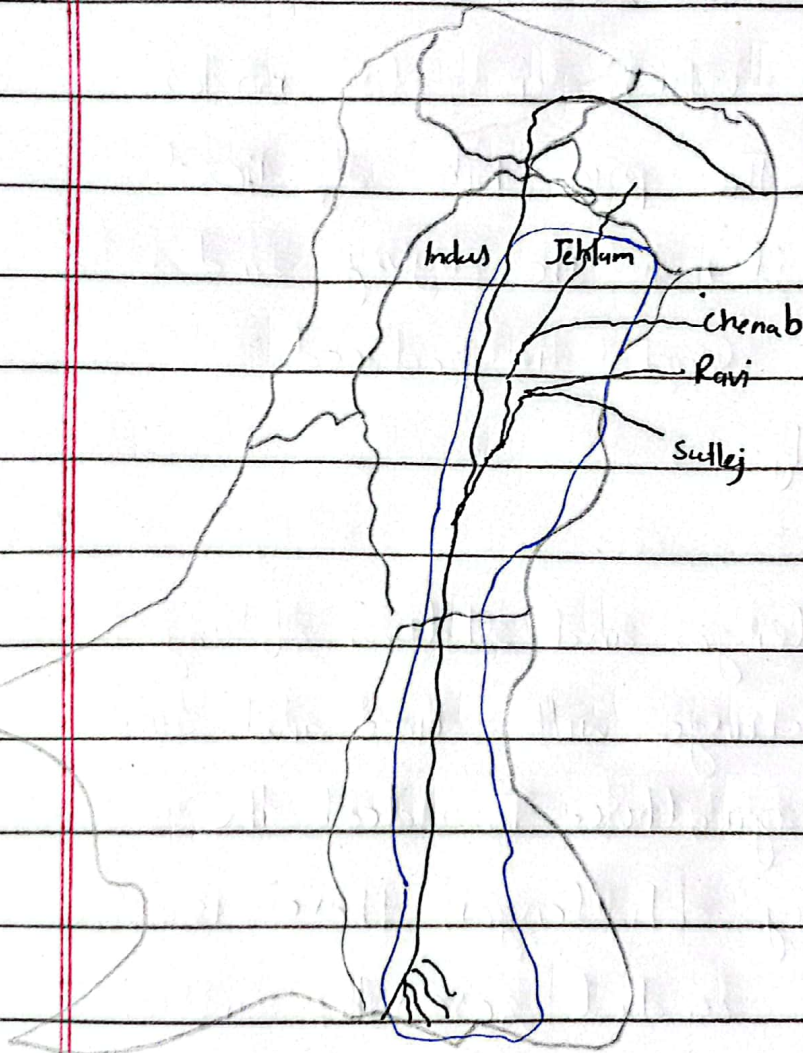
(iii) Inefficient Irrigation System:

Pakistan has the world's largest irrigation system, which is expanded on 16 million hectares. It was designed and started to construct in colonial era. This irrigation system had increased the production level to maximum extent. Although it is extensive, but it is inefficient to meet the present day agricultural demands. Due to its deterioration, mismanagement, lack of research and investment, a lot of water is lost during delivery. Approximately, one-third water is lost during delivery because

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of seepage and mismanaged watercourse. Thus, agriculture sector is unable to get benefit from such a large irrigation system.



(iv) Energy Crunch:

Modern machinery and appliances in agriculture need energy for working. In the present times, Pakistan is facing energy crunch and is unable

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provide energy to agriculture sector. There are almost 1,078,073 tubewells, and lack of energy results in their inability to run. The farmers look towards alternatives such as diesel which is also no less expensive. The price hike of diesel add insult to the injury and production level is reduced consequently.

(v) Lack of Research

The challenges and solutions of any sector change with time and same is for agriculture. To deal the present day challenges, there is dire need to conduct research and find solutions. Pakistan lag behind in the research domain and is not able to tackle the modern day issues. Moreover, lack of research has resulted in backwardness. The farmers use the traditional farming methods,

and there is no acceptance of modern agriculture methods. This is one of the major contributors to agricultural decline.

(vi) Subsistence Farming:

Pakistan's agricultural system is not commercially oriented, instead it is consumption based system. A huge portion of food production is used to fill the bread basket of farmer's home. Only a small portion remains behind for market supply. This result in low income of farmer, moreover, it will does not help in improving the economic condition of the country.

(vii) Absence of Justice based Land Reforms:

Land reforms define the share of all stakeholders. In Pakistan, the history shows the inefficiency of land reforms which never gave benefit to the poor farmers. Even nowadays, the absence of land reforms has resulted

a striking economic disparity among landowners and small farmers.

Landlords, especially those who have political influence, get benefitted from the subsidies, incentives and new technological developments. While poor farmers remain deprived.

Ultimate result of this is reduction in overall productivity.

(viii) Lack of Crop Rotation System:-

Crop rotation system means to rotate two or more crops alternatively. It enhances the fertility of land, while the cultivation of the same single crop on the land for multiple times exhausts the fertility of land. This leads to reduction in productivity of land. In Pakistan, there is no trend of crop rotation. It is also a major root cause of decline in production

(ix) Unreachable Prices of Fertilizers:

In Pakistan, prices of fertilizers are very high mainly due to two reasons: monopoly of fertilizer companies and high price of natural gas. Fertilizer companies are private with no governmental interference. So they decide their own prices which are usually very high. On the other hand, price of natural gas impacts the price of fertilizers especially urea. Natural gas is used for production of fertilizers. The price of natural gas increases and the price of fertilizers so. This results in incapacity of farmers. In the absence of fertilizers, the annual yield of crops is reduced.

(x) Climate Change:

Climate change is last but not the least factor in reduction of agricultural product. Climate change

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has resulted in unpredictable changes to seasons, droughts, floods and water scarcity. All these elements contribute to the low production rate.

Pakistan has witnessed the most devastating floods in 2022, which have affected 33 million people, destroyed 1.5 acre land, swept away crops and impacted 1 million livestock.

All these elements are involved in reduced output as compared to past.

Solutions:

(i) **Water Management:**

There is dire need to construct dams for better water management. Dams serve in various dimensions to improve agricultural yield. Firstly, dams can store excessive water from unpredictable, heavy and unwanted rains. Secondly,

they control the floods. Thirdly, they can be utilized for energy production which then can be used in agricultural sector. Thus, the government of Pakistan should plan and construct dams of various capacities at different needed locations.

(ii) Update Irrigation System:

Irrigation system is the jugular vein of agriculture sector. The outdated system should be replaced with new and modern one. Drip irrigation is the most accepted system all across the world. This is a microlevel irrigation system which irrigate the land at root level and avoid the wastage of water. Pakistan should adopt drip irrigation system for improving agriculture sector.

(iii) Increasing the Cultivable Land.

It is imperative to stop the reduction in cultivable land due to waterlogging and salinity. Moreover, Balochistan, the largest province by area, should be made cultivable by making possible the provision of water.

The water salinity removing plants should be installed for making the water availability possible. To run these plants, solar energy can be used. Thus, by utilising the large area of Balochistan, contribution of agriculture to GDP can be improved.

(iv) Modernising the Agriculture Sector:

First of all, there must be research in agriculture, which can be promoted by funding research institutions. The modern methods of cultivation should

be adopted. The government should provide financial assistance to the farmers for inculcating modern practices of cultivation in their practice.

The ideas of crop rotation systems should be normalised among the illiterate farmers. The farmers should undergo training to learn how they could orient their production towards commercialization. Moreover, Provincial Seed Corporations should ensure the distribution of high yield seeds among the farmers.

(V) Combating Climate Change.

It is imperative for all stakeholders, including public, private sector, industries and the government to take steps towards sustainable development. So, that the issue of climate change should be tackled.

Along with foreign aid on climate change, Pakistan should take firm

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steps for internal structural reforms. This is the most important issue of Pakistan, as it is among top ten most vulnerable countries to climate change.

Conclusion:

Pakistan's agriculture is suffering from poor condition due to various reasons. It is forced to import food stuff including wheat from other countries now, which was a major export of Pakistan in the past. However, the situation can be reversed by taking some steps towards modernity and good management.