Agricultural decline in Pakistan and how to counter it.

A- Introduction

B- Agricultural decline in Pakistan.

1- Water shortage and mismanagement leads to lower crop yield.

2- Technological backwardness keeps agricultural productivity stagnant.

3- Excessive use of chemical fertilizers and monocropping results in soil degradation and reduce crop health.

4- Poor access to markets reduces farmers income, leading to lower agricultral investment and overall decline in productivity.

5- Vulnerability to climate change reduces crops productivity.

6- Rising costs of agricultural inputs ultimately lowers crop yield.

7- Weak and inconsistent agricultural policies create uncertainty and hinder long-term planning.

C- Ways to counter agricultural decline in Pakistan.

1- Modernize irrigation system and improving water distribution results in higher yield.

2- Research and innovation reduces losses and ensures efficient resource use.

3- Consolidation of fragmented landholings can

enhance farm efficiency.

4- Reducing input costs can encourage farmers to invest more.

5- Consistent and long-term agricultural policies are necessary for sustainable agricultural progress.

6- Climate-resielient agriculture can protect crops from climate change.

7- Crop diversification can reduce vulnerability, ~~and~~ increases value and reduces crop imports.

D- Conclusion

Pakistan is an agrarian country. Agriculture contributes around 19% of Pakistan's GDP and employs nearly 42% of the labor force, yet over the past decades, the sector has seen stagnating growth due to water sarcity, outdated farming techniques and poor policy implementation. In FY 2024-25, the agricultural sector recorded a growth of just 0.56%. This situation shows that Pakistan is facing agricultural decline and important changes needed to counter it. One of the key reason of agricultural decline is water shortage

and mismanagement of water that leads to lower crop yield. Furthermore, technological backwardness, weak and inconsistent agricultural policies also lower the productivity of crops. Moreover, poor access to markets and increase prices of agricultural inputs also decline the productivity of crops. However, modern irrigation system and improving water distribution can result in higher yield. Similarly, research and innovation reduces losses and consolidation of fragmented landholding can enhance crop yield. Hence, Pakistan is facing serious agricultural decline due to climate change, poor water management, technological backwardness and weak, inconsistent policies create uncertainty and hinder longe-term planning which can be counter by modernizing irrigation system, consolidation of fragmented landholding, technological advancement crop diversification can reduce vulnerability and increases crop value and reduces the dependency on crop imports.

Water shortage and mismanagement is the key factor that leads to lower crop yield. Pakistan's irrigation system wastes 60-70% water due to unlined canals and flood irrigation. Moreover, groundwater depletion and lack of small dams deepen the crisis. As agriculture depends on water-intensive crops, mismanagement directly translates into lower yields and rising imports. Futhermore, mismatch between seasonal water availability and crop demands often results in drought stress or crop losses. Hence, these challenges clearly demonstrate that without proper management and modern irrigation techniques, agricultural productivity will continue to suffer and it further leads to Pakistan's food insecurity and economic instability.

Technological backwardness also leads to lower crop yield. Most farmers still rely on traditional tools, outdated seed varieties and manual labor. Only a small percentage uses modern machinery.

precision farming or genetically improved seeds for their agricultural practices. How investment in research and development prevents innovation keeping yields far below global averages. Moreover, agricultural institutes like PARC and NARC are underfunded and lack the capacity to develop and use modern technologies widely. Similarly, compared to countries like India and China, Pakistan spends less than 0.5% of its GDP on agricultural R&D. Hence, technological backwardness due to low investment in agricultural sector resulting in stagnant productivity, growth despite population pressure.

Excessive use of chemical fertilizers and monocropping result in soil degradation and reduces crop health. These practices reduces soil nutrients. Also, soil erosion in hilly areas and salinity in irrigated regions lower crop productivity. Over 50% of Pakistan's irrigated land is affected by waterlogging, monocropping of wheat, rice and

cotton has depleted essential nutrients and deforestation have caused soil erosion. According to the Pakistan Agricultural Research Council (PARC), nearly 30% of arable land shows signs of degradation due to poor farming practices. Hence, without soil rehabilitation and modern agricultural practices, Pakistan cannot reverse agricultural decline.