



**POLICY
PRIORITIES FOR
GROWTH IN
AGRICULTURE**

VII. Policy priorities for growth in agriculture

Within this decade, Pakistan must shift from being a victim of high global agri-commodity prices to a beneficiary. Pakistan's economic growth targets must include 4 percent real GDP growth in agriculture. This requires a rise in crop yields to take Pakistan from being a food importer to a food exporter—net of the food security stocks required in-country. Today's balance of payments crisis has created the need for significant import substitution and increase in exports.

Better seed is at the core of the long-term growth prospects in Pakistan's agriculture. The outstanding success in maize (a tripling of yields in the past two decades) and the sad story of cotton (stagnation followed by a fall in yields) is directly attributable to seed. The stagnant yields in wheat, the country's largest crop, require better quality seed. Seed is 'agriculture's great equalizer' since it gives the small farmer a chance to achieve the results available to large farmers. And farmers' verdict on seed quality is clear: they have purchased even more expensive seed if it performs reliably and gives higher returns. The main hurdles to seed development are the legal and regulatory regime that discourages the private sector to invest. The Seed Act must be amended to encourage reputable private seed companies to invest and the approach to seed regulation must shift from an approach of controlling the seed sector to an approach of maximizing benefit to the farmer. As demonstrated by maize and poultry, the import of modern genetic material for crops as well as livestock is critical for growth across the agriculture sector. Similarly, the genetic potential of livestock must be improved by facilitating the import of high-quality genes with support to farmers for artificial insemination and better feed. For food security and feed security, Pakistan needs to guide its wheat, maize, and soybean crops in tandem to reach not only self-sufficiency but also an exportable surplus. Local production of hybrid seed must also become a common activity in Pakistan.

Fruits and vegetables must expand from 5 percent of cultivated land to 15 percent to save water and to achieve more growth in agriculture. If global players in this trade can be attracted to Pakistan for off-take of fruits and vegetables for export, serious investment into cool chain infrastructure can be justified. Farmers are ready to respond to an assurance that their fruit and vegetable will be guaranteed off-take and the certainty that this produce will not die on the way end-consumers. But since land does not grow on trees, this shift is only possible with a rise in the yields of Pakistan's five major field crops which dominate agriculture's resources: land, water, inputs, etc. Another major roadblock to this transition is the government's intense involvement in the wheat value chain with little benefit to the farmer and little improvement in yields to show for it. This system must be shifted away from patronage and towards strength for competing in global markets through higher value wheat-based products.

The global buyers' demand for traceability and sustainability is not difficult to meet. It just requires stronger linkages between processors and growers. Pakistan's own examples of excellence in agriculture are found where processors have done backward integration with farmers. Processing of agri-commodities into higher value products is what drives agriculture to the next level. Investment in agro-processing right in the production areas is a priority for Pakistan to multiply its agriculture GDP.

Growth in agriculture requires a leap to modern agri-technology. And this is best achieved with equity capital. This leap requires capital for modern farm machinery, silo storages, cool chains for fruits and vegetables, controlled sheds for poultry, high efficiency irrigation systems, etc. And such an upgrade is difficult to achieve through debt alone. Equity needs to be invested. And it needs to be invested at scale since Pakistan's agriculture sector is yet to mechanize. The institutional vehicles best suited for bringing this technology upgrade are corporate farming operations which invest in machinery for their own use and service providers who invest in machinery to serve growers. Growth in agriculture requires investment not just farmers by all types of reputable players, particularly, the corporate sector.

An increase in agriculture exports is dependent upon a serious upgrade of Pakistan's irrigation system. Precision agriculture is not possible without precision water delivery. Seedlings from a rice nursery must be transplanted to the field typically in the range of 16 to 24 days after sowing. If a seedling is made to wait for the arrival of water for transplantation till it is 35 days old, it has grown too much to be sown by machine. Thus, the unpredictability of water from Pakistan's irrigation system harms not only the transition to mechanization, it encourages flood irrigation causing enormous on-farm wastage of water.

The massive loss of water in the irrigation system and the uncertainty associated with water delivery are the reasons why farmers are drawing on groundwater so aggressively. Of the 95 million acre-feet (MAF) diverted from the Indus River System to the canals, only 50 MAF is available at the farmgate. The Indus River System is fed by an annual cycle of snow melt (and more recently glacier melt) but the Indus Aquifer has a slower source of re-charge: mainly seepage from the rivers and canal system. And that aquifer now constitutes *half* of the water available to Pakistan's farmers. It must be preserved. This requires Pakistan's irrigation system to be fixed to deliver water when farmers want and in the volumes they want. The first step is better water accounting at each level but that also requires better water governance—both are politically charged activities but also essential for building trust. But growth in agricultural exports also requires a focus on the quality of water. If drainage and water treatment are ignored, 'bad water' from farms and harmful chemicals from industries will impact farms.

The tools to protect farmers from the impacts of climate change and biological perils are now available. The devastating heatwave and biblical floods of 2022 have highlighted the need for strong, globally accepted institutional mechanisms to address these risks. Instead of irregular pay-outs by the government to compensate farmers for such impacts every year, risk transfer mechanisms are now available at a predictable cost to shift this burden to local and global insurers using 21st century tools.

Livestock has driven growth in Pakistan's agriculture sector but it has plenty of further potential for growth. As the growth trajectory of the poultry sector has shown, modern feed is necessary for animals with modern genetics. The smallholder farmers with small parcels of land are also the ones with a couple of animals per family. Better surveillance and management of disease outbreaks with the involvement of key stakeholders can protect their animals' health and economic value. Disease-free zones with a complementing vaccination regime can be pillars of livestock-based exports.

As crop yields and animal yields rise, the price at which each grower breaks even falls. This bears the great promise of agricultural growth regarding lower inflation, higher profitability for growers, and better competitiveness for exporters. Many elements have to come together to realize this promise of higher yields: better seed and genetic material, reliable water supply, appropriate machinery, timely capital, insurance, suitable feed, etc. Coordinated action by the business community, the financial sector, governments, donors, and growers is required to achieve this. Finally, Pakistan must resolve its debate on genetically modified crops and remove the uncertainty associated with them.

Wealth generation from growth in agriculture is the main route to prosperity in rural Pakistan where most of Pakistan's poverty resides. Just shy of 40 percent of Pakistan's labour force earns from agricultural activities. But the vast majority of these workers are earning from jobs that machines have been doing for decades in developed countries but even in advanced developing countries. These low-productivity, low-pay jobs are at the core of rural poverty. The introduction of technology can create better-paying jobs in the rural landscape. But those whose jobs get displaced will also need to be accommodated into industry. Every country of the world that has modernized its agriculture has seen the mass of agricultural labour shift to industry. This is a shift Pakistan must navigate with care and compassion.