THE NEWS

Reviving agricultural growth: Part - III

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At present, the canal irrigation management system recovers only a quarter of its repair and maintenance costs. In the 1970s, the entire cost was recovered by these water charges called 'abiana'.

The present average rate of surface water charges per acre is only one-fourth of what the farmer pays for tube wells and so it is not the ability to pay constraint. Flat water pricing or uniform water charges rather than usage based on volumetric measures militate against the adoption of high efficiency irrigation technologies and conservation of water. Punjab used to charge a flat rate of Rs135 per acre – Rs80 for kharif and Rs50 for rabi – until 2021 but has doubled these rates since then.

Abiana per acre assessed of crops irrigated is not only low but only 60 per cent of the assessed value is collected. The national average rate for abiana for cotton and for rice is the same – though rice requires 60 per cent more water than cotton. The irrigation charges do not reflect the crops' relative profitability. Water charges amounting to 6.0 per cent of gross income are common in many Asian countries.

Water availability in the future is likely to become more erratic as climate change raises average temperatures, the snowpack in the Himalayas diminish (the Indus Basin depends heavily on rainfall and glaciers) and rainfall variability increases. Pakistan has already witnessed heatwaves, abnormal rainfalls, and heavy floods.

Arid and semiarid agro-ecological zones such as Tharparkar, Cholistan, Thal, southern Khyber Pakhtunkhwa, Balochistan and the former Fata district are already backward and the worst affected areas and are likely to become even more so.

To get water to these areas, research and technology development for crops in water stressed ecosystems, investment, and financial resources world have to be allocated to address the problems they face. These areas account for 17 per cent of the total cultivated area of Pakistan. Water management is one of the areas where the net payoffs in terms of productivity increases of small and medium farmers remain the highest.

Research and development: Past research effects focused primarily on technologies relying on modern inputs but did not attend to issues of sustainability and efficiency such as integrated crop management, soil health, economical use of inputs and resources and the balancing of external input use with internal nutrients sources. Most public research expenditure is on crops. Some is on water resources. Little on livestock and fisheries; and almost nonexistent on social sciences.

R&D is needed to develop technologies that can build tolerance to stress such as floods, drought, heat, cold temperatures and to strengthen resistance against pests and diseases particularly for small-scale farms.

Internal rates of return from investment in the green revolution are estimated to have ranged from 57 per cent to 65 per cent. The current public research system labours under constraints of several technical capacities, financial resource availability, management and governance coordination, duplication and lack of application of results to the farmers' fields.

Budgetary allocations at 0.1 per cent of GDP are sufficient to cover the expenses on salaries, allowances, pensions of the staff and paying utility bills. Operating expenses on research activities or capital expenses for buying equipment and supplies are not available except under some foreign aided projects of short duration. PhD degree holders as a proportion of total staff employed constitute a minority. Opportunities for promotion, compensation, and advancement are not linked with performance but are based on seniority, length of service, just like all other bureaucrats.

Investment in private agriculture research has been curtailed severely for a long time. Incentives such as Tax credit should be given to the private firms

that are investing in R&D activities. A number of private sector companies have moved in this area recently but they need sustained support for scaling up their operations at the farm level, particularly small farmers who are not able to afford their charges. Disseminating improved cultivars, hybrids, transgenics and other products and reducing yield variability and losses to stresses or costs of production are some of the interventions which the private sector R&D companies can successfully implement.

Agriculture financing: The latest estimates from the SBP for the eight months of this fiscal year show that banking institutions have disbursed over Rs1 trillion as agriculture credit (target for FY23: Rs1.8 trillion compared to Rs33 billion in 199-2000) to three million borrowers. Private commercial banks, microfinance banks and Islamic banks are now the main lenders while ZTBL which used to be a dominant player (72 per cent) before the year 2000 has become marginalized (4.0 per cent).

Subsistence and small farmers account for 93 per cent of total outstanding borrowers. This amount has been rising but still falls short of the demand and the coverage is limited to only one-third of the farms. Other initiatives taken by the SBP are crop and livestock insurance schemes, credit guarantee schemes for small and marginalized farms, the PM's Kissan Package 2022. These schemes are still in their early stages and awareness campaigns have to be stepped up throughout the small farming community.

A successful approach to engage small farmers and increase their farm and labor productivity has been through contract farming. Sugarcane, maize, tobacco,

Potato crops are some illuminating examples of contract farming that assumes an extensive number of arrangements along the value chain linking small-scale farmers to some type of market. This ensures a stable and predictable earning stream for farmers and assured quantity of quality supplies for the buyer/ processors. For provision of formal credit to these farmers, value chain contract financing schemes are being offered by banks guaranteed by buyers/processors. The buyer often provides credit inputs and technical advice.

Risk allocation between producer and buyer is equitable. The producer has to provide the committed quantities of the commodity of acceptable standards while the buyer has to purchase the commodity at agreed price. This off-take guarantee enables small farmers to make on farm investments.

The other credit mechanism the SBP has designed and delivered is the warehouse receipt financing. It is estimated that post-harvest losses due to lack of proper storage capacity are in the range of 15-18 per cent in case of grains and around 25-40 per cent of fruits and vegetables. A reduction in these losses would amount to least 10 per cent addition to the availability of grains domestically saving foreign exchange incurred on imports and 20 per cent increase in the volume of exports of fruits and vegetables.

Lack of warehousing, storage facilities and cool chain facilities, lack of grading and standardization can be addressed by promoting warehousing receipt financing. These receipts can facilitate financing for inventory or products held in storage. "These receipts provide a secure system whereby stored commodities can serve as collateral, be sold, traded or used for delivery against financial instruments. A transaction backed by a warehouse receipt allows a financier to shift its risk from the borrower to the asset. Since the lender can sell the liquid collateral asset in case of default, this type of lending lowers risk and reduces typical cost of commodity transactions. Small farm holders can therefore get access to bank loans through this mechanism. Since the lending costs for the financier are reduced, the mark up rate for borrowers can also be reduced."

As the banks discount the warehouse receipts and provide ready cash to the small farmers for their requirements they do not have to resort to predatory borrowing from the arhthiyas who make forced purchases at below market prices at the time of the harvest. An amount of Rs1 billion has been disbursed to 377 borrowers and the capacity of the storage has reached 94, 500 tons.

Both these innovative schemes have a long way to go and should be able to provide a credible mechanism for reaching out to the small farm holders for meeting their financing needs.

To be continued...