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SHASHANKA BHIDE

A policy emphasis on irrigation should not lead to the neglect of dryland agriculture. Where irrigation raises input costs for dryland farmers, alternative enterprises such as livestock rearing can be promoted. The challenge is to nurture crops to suit diverse conditions



Does growth of irrigation make dryland production more difficult?

The monsoon is expected to be bountiful in many parts of the country, with only the eastern region getting lesser rain than the long-term average. Skewed distribution over the monsoon season is not optimal for crop output. But late rain in the season could have a positive effect on the next season's crop, as the reservoirs get filled up for irrigation.

Where there is no irrigation, farmers may have changed crops or crop varieties so that they are able to make the best of the rain. With the investments in research and technology, there are perhaps now more varieties and crops for farmers to choose than earlier. Growing crops for the market rather than for own consumption has also expanded the choice before the farmer.

CROPPING AND MONSOON

The rainfall situation improved after mid-July. Floods and rainfall deficiency in the same season in different parts of the country are not unknown. The impact of monsoon highlights the difficult choices farmers and policymakers face in the allocation of land and water to different crops.

The policy response at the national level can be expected to refocus attention on growth and income stability for agriculture. However, the overall strategies quite often do not work in all situations.

It is perhaps the recognition of this potential for different outcomes that led to a detailed regional approach to agricultural strategies. But, even with detailed regional strategies, the policy choices may end up being the same as the national ones.

Greater attention to the disadvantaged is necessary to ensure equitable growth. A case in point is the policy preference that irrigated agriculture enjoys over dryland agriculture. Irrigation is a time-tested method of raising crop productivity.

A focus on growth leads to a push to expand irrigated area. An emphasis on stability may also point to the same strategy. Irrigation provides greater stability to output than dryland production, as it also helps protect yields when the monsoon is weak.

But does growth of irrigation also make dryland production more difficult? Or are there complementarities that help improve the returns to dryland production when there is an expansion of irrigated area?

The trade-offs are significant, as are the complementarities. One trade-off is the case of input markets. Irrigation allows farmers to bid input prices higher to ensure their supplies.

Dryland farms would now pay more than before. Higher wages bid labour from dryland production to irrigated production. Unwittingly, non-farm employment programmes may increase the divergence of profits of dryland production relative to irrigated farms or irrigated production. This wedge is likely to widen with respect to the price of most inputs, except land.

Lower price of land may help mechanisation if it is easier to aggregate smaller land holdings. The impact of mechanisation on productivity under dryland agriculture would have to be significant enough to match the advantages of irrigated agriculture, for the two systems to be equally attractive.

NEW OPPORTUNITIES

The diversification of farm output has not led to output or income growth in dryland production to the extent that it has in irrigated land. Irrigation helps farmers take risks, raise new crops and diversify output.

Growing vegetables and flowers is far more profitable when there is water for irrigation. It presents a greater choice of crops and timing output to meet market demand.

Diversification in dryland production, on the other hand, is essentially to reduce risks rather than increase income.

Delayed rain would mean recourse to somewhat lower-yielding but sturdier varieties of crops. Delayed and less-than-normal rainfall may also warrant switching to crops that would not have been grown otherwise.

The focus of irrigated production on crops that are more responsive to intensive use of inputs, such as fertiliser, sets aside some opportunities for dryland production. The crop choices under irrigation may also make livestock enterprises more attractive for dryland farming rather than irrigated land.

The complementarities between irrigated and dryland farming arise out of the externalities of irrigation, in the form of exposure and access to technologies.

They also emerge from increased supplies of food in the market, permitting farmers in dryland regions to exploit opportunities in other crops.

NURTURING POSITIVES

Limits to availability of land and water in the face of rising demand for food and fuel will require a choice of strategies that will raise productivity and profitability of farming under diverse conditions. The complementarities will need to be nurtured.

The trade-offs need to be accompanied by opportunities to adapt alternative technologies or enterprises.

Dryland agriculture will remain important, given the limits to increasing irrigation. Pushing innovations that improve income opportunities for dryland agriculture is as important as investing in irrigation. The randomness of monsoon patterns is a constant reminder of the need for this balance.

(The author is Senior Research Counsellor, NCAER. The views are personal.)

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