Source : www.indianexpress.com Date : 2019-10-28

FARM LESSONS FROM CHINA

Relevant for: Indian Economy | Topic: Agriculture Issues and related constraints

The writer is chair professor for agriculture at ICRIER. Views are personal

Gupta is a junior economist at Crisil Ltd.

India and China, the world's most populous countries, have limited arable land — China has about 120 million hectares (mha) and India 156 mha. The challenge before the two countries is to produce enough food, fodder and fibre for their population. Both have adopted modern technologies in agriculture, starting with high yield variety (HYV) seeds, in the mid-1960s, increasing irrigation cover and using more chemical fertilisers to produce more food from limited land. China's irrigation cover is 41 per cent of the country's cultivated area, while India's irrigation cover is 48 per cent. China's total sown area, as a result of such irrigation, is 166 mha, compared to India's gross cropped area of 198 mha. But even though China has less land under cultivation, its agriculture output is valued at $1,367 billion, more than three times that of India's agriculture output, $407 billion. How has China made this possible? Are there lessons in China's experience for India?

First, China spends a lot more on agriculture knowledge and innovation system (AKIS), which includes agri R&D and extension. China invested $7.8 billion on AKIS in 2018-19, 5.6 times the amount spent by India — $1.4 billion. A study by Ashok Gulati and Prerna Terway on the impact of investment and subsidies on agri-GDP growth and poverty alleviation revealed that the highest impact is from investments in agriculture research and education (R&E). The study estimated that for every rupee invested in R&E, agriculture GDP increases by Rs 11.2; and for every million rupees spent on agri-R&E, 328 people are brought out of poverty. Presently, India invests just about 0.35 per cent of its agri-Gross Value Added (GVA) while China spends 0.8 per cent (expenditure by Centre only) (See figure 1). To increase total factor productivity, India needs to increase expenditure on agri-R&D, while making the Indian Council for Agricultural Research (ICAR) accountable for targeted deliveries.

Better seeds that result from higher R&D expenditures generally require more fertiliser. It is worth noting that China's fertiliser consumption in 2016 was 503 kg/ha of arable area compared to just 166 kgs/ha for India, as per World Bank estimates. No wonder, China's productivity in most crops is 50 to 100 per cent higher than India's.

Second, the incentive structure as measured by producer support estimates (PSEs) is much better for Chinese farmers than Indian farmers. The PSE concept adopted by 52 countries, that produce more than three-fourths of the global agri-output, measures the output prices that farmers get in a free trade scenario. It also measures the input subsidies received by them. For Chinese farmers, the PSE was 15.3 per cent of the gross farm receipts during the triennium average ending (TE) 2018-19. For the same period, Indian farmers had a PSE of negative 5.7 per cent. In a way, this reflects that Indian farmers had been taxed much more than they have been subsidised — despite high amounts of input subsidies. This negative PSE (support) is a fallout of restrictive marketing and trade policies that do not allow Indian farmers to get free trade prices for their output.

This negative market price support is so strong that it exceeds the input subsidy support the

government gives to farmers through low prices of fertilisers, power, irrigation, agri-credit and crop insurance. The solution for correcting this situation is to carry out large scale agri-marketing reforms (APMC and Essential Commodities Act). But instead of doing that, the Indian government has been trying to jack up minimum support prices (MSPs) for 23 crops for farmers. Here, again, India can take a leaf out of the Chinese experience. They took that path as well. In fact, they gave procurement prices to farmers that were much higher than international prices. The result was massive accumulation of stocks of wheat, rice and corn. In 2016, such stocks touched almost 300 million metric tonnes (MMT) in 2016-17 (See figure 2). China had to incur a large expenditure as a result. Having burnt their fingers, China dropped the price support scheme for corn and in fact, has been gradually reducing support prices of wheat and rice. India's stock situation in July 2019 was 81 MMT as against a buffer stock norm of 41 MMT. India needs to reduce the gamut of commodities under the MSP system and keep MSPs below international prices. Else, India will suffer the same problems of overflowing granaries which do not serve any purpose.

The third lesson pertains to direct income support schemes. China has combined its major input subsidies in a single scheme, which allows direct payment to farmers on per hectare basis and has spent $20.7 billion for this purpose in 2018-19. This gives the farmers freedom to produce any crop rather than incentivising them to produce specific crops. Inputs are priced at market prices giving right signals to farmers to use resources optimally. India, on the other hand, spent only 3 billion dollars under its direct income scheme, PM-KISAN in 2018-19, but the country has spent $27 billion on heavily subsidising fertilisers, power, irrigation, insurance and credit. This leads to large inefficiency in their use and also creates environmental problems. It may be better for India to also consolidate all its input subsidies and give them directly to farmers on per hectare basis and free up prices from all controls. This would go a long way to spur efficiency and productivity in Indian agriculture.

India can learn three lessons from China — investing more in agri-R&D and innovations, improving incentives for farmers by carrying out agri-marketing reforms, and collapsing input subsidies into direct income support on per hectare basis. This could put India's agriculture on a high growth trajectory.

Gulati is Infosys Chair Professor for Agriculture and Gupta is research assistant at ICRIER

END