have led to an increased need for relief efforts. However, higher food prices are making support and palliative programmes, food aid, and subsidies and social protection expensive as the price increment strains the budget of governments, donor institutions and development partners in relieving the burden of the vulnerable. This drives the level of poverty and food insecurity upward.

Commodity price changes are sometimes influenced by the nefarious activities of some operators in the commodity value chains involving supply chain disruptions, hoarding, formation of cartels and/or oligopolistic scenarios and monopolies. Such activities often influence the availability and stability of food, creating artificial scarcity and higher prices. To mitigate these challenges, there is a need for an adequate and extensive regulatory framework that governs the activities of food supply chain operators and curbs exploitative behaviour in the food systems. Moreover, there is the risk of

higher future food prices and food insecurity if the Black Sea Grain Arrangement collapses and access to fertilisers is restricted. Overcoming the challenges entails a reduction in trade restrictions and removal of supply chains and/or market access challenges/bottlenecks.

Conclusion

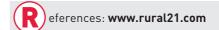
High agricultural prices affect developed and developing countries alike, but the problem is aggravated for the latter through the lack of or inadequate resilience measures. Institutionalising price stabilisation support mechanisms such as agricultural output and price support are germane interventions that could stabilise incomes, incentivise farmers, particularly small-holders, to invest and increase agricultural production amidst high agricultural prices. In the short run, subsidising consumption, engaging in cash transfers and other food support to the vulnerable might be viable options. Long-run

interventions could include the implementation of minimum price models that enable farmers earn a premium over production costs, implementing crop insurance schemes and input subsidies to make farmers more resilient to price shocks. These measures are important to hedge farmers and consumers against income and price fluctuations and food insecurity. In addition, using a common national market platform to trade can help minimise direct price shocks to producers and leverage profits.

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Strengthening the market linkages of smallholders in the face of global supply shocks

The consequences of the Russian invasion of Ukraine have enabled many countries to open up new export markets for their agricultural goods. However, smallholder farms have been largely left out. Drawing on his experience in India, our author gives a brief overview of how this can be changed.

By Niladri Sekhar Bagchi

In the aftermath of the Covid-19 pandemic, the Russia-Ukraine war created a ripple of global supply shocks in agricultural and energy supply chains around the globe. While the disruptions in agricultural production in both Russia and Ukraine created shortages in the global supply of foodgrains, sanctions on Russian exports of energy and fertiliser pushed the prices of these critical inputs up to a record-breaking level. The food and nutrition security of the African and Middle Eastern countries deteriorated to a large extent as they depended heavily on food imports from these two warring nations. In contrast, South Asian countries such as Bangladesh, Sri Lanka, Pakistan and India faced the heat through higher prices of fertiliser and fuel. While India could somehow manage to bypass the sanctions on Russia and imported fuel from it at discounted rates, other developing nations in this region were unable to enjoy this advantage. The increased fertiliser and fuel prices pushed up the cost of agricultural production in many of these countries.

This affected the smallholders (those having less than two hectares of land) in the developing countries in many ways. They faced higher input and transaction costs. They also experienced high uncertainty in the export market as many countries, among them India and Indonesia, took recourse to export bans on their major agricultural crops, such as wheat and edible oil respectively. Smallholders in general are dominated and exploited by intermediaries at different strata of agricultural markets. The export opportunities created through the Russian invasion of Ukraine for many countries were most likely to be captured and exploited by the intermediaries and big traders. Among the major reasons why smallholders cannot gain much from the export opportunities is their strategic weakness in proper quality assessment infrastructure and an aggregative marketing platform such as a cooperative. It is frequently observed that the existing cooperatives in the developing countries are not inclusive in their

membership and governance, so that the interests of the smallholders are very often neglected.

Another important aspect where smallholders face huge challenges is their inability to use modern ICT tools such as smartphones and computers. Thus, the immense benefits of these modern ICT tools and their applications in agriculture remain out of reach for them. There are some remarkable instances of applications of ICT tools including different apps and web-enabled platforms in agriculture, ranging from crop choice and harvest quality assessment to marketing. However, these successful instances are mostly third party initiatives such as those run by NGOs or academia. Initiatives of this kind from smallholders are almost non-existent, the major reasons being their low education level, lack of regular training and a lack of links with the research institutions. Therefore, the pertinent question is how the market access

or market relations of the smallholders can be strengthened so that they can really benefit from export opportunities arising out of a changing global market scenario and can be insulated from the global supply shocks like those observed in the aftermath of the Russia-Ukraine armed conflict.

First, smallholders must be brought under the membership of an allrounder cooperative or a farmer producer organisation. The cooperative will act as a single window for accessing various benefits such as buying appropriate seeds, hiring machinery, getting loans and assessing the quality of their produce and introducing it on appropriate markets. This kind of cooperative is observed in Australia and other developed countries. The prevailing cooperatives need to be upgraded into such a single window-providing institution for the smallholders. It has been noted that smallholders in developing countries like India and Bangladesh are in many cases members of various collectives, such as water user associations, marketing associations and custom hiring centres, etc. Thus, they do not have single-window access to all the facilities, which could have considerably reduced their transaction costs and helped them connect to the profit-generating mar-

Second, the current structure of intermediaries needs to be regulated and upgraded to a multirole agent system. In the existing system in India, it is observed that there are too many layers of intermediaries at different levels of markets – village, town, district and regional level, etc.

These multiple layers of intermediaries add to the price of the final produce multiple times just for making coordination possible at different levels. They also function in favour of the buying intermediaries at the higher level and, ultimately, in favour of the traders only. Unless these intermediaries have some incentives to function in favour of the smallholders, the latter will always remain at the receiving end. The example of farmer-allied intermediaries in Africa can be used to formulate policies in this regard. There could be compulsory registration of all the intermediaries in the agricultural sectors, and the government could introduce an incentive structure for them so that they could help the smallholders in various ways in their capacities. For example, intermediaries are incentivised through government schemes to fulfil the objectives of food security in Indonesia. The compulsory registration may wipe out the redundant intermediaries and thereby reduce unnecessary price rises of agricultural produce.

Third, regular training camps for smallholders in the application and use of modern ICT tools in agriculture and marketing could be popularised in the rural agricultural areas. Government-subsidised smartphones may be provided to the smallholders with dedicated apps for use in the agricultural sectors. The farmer producer organisations and cooperatives may receive easy credit for creating robust ICT infrastructure and linking them with agricultural universities and other reputed academia so that modern ICT research and applications can be percolated to ground

level without delay. In this way, smallholders would develop the confidence and capacity to be competitive in the world market.

Fourth, it is observed that the lack or total absence of quality assessment or certification facilities in most parts of rural India acts as a barrier for smallholders to connect with traders directly. There is a need for huge investments in quality assessment and certification of agricultural produce in the developing countries. This is the most crucial facility that can connect the produce of the smallholders with any big traders or exporters without the need for physical inspection by an intermediary trusted by the distant trader. Both private and government investments are necessary to make certification and quality assessment widely available and affordable for smallholders.

The above four ways have the potential to make market relations and access of the small-holders strong and robust. Along with this, direct benefit transfer to the smallholders as seen in India can create a suitable buffer for absorbing a supply shock such as the rise in fertiliser prices in the world market because of the Ukraine-Russia war.

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One of the reasons why smallholders cannot benefit from export opportunities is the absence of an aggregative marketing platform.

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