

How to balance potato farmers' gains with consumers' needs



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Bangladesh has experienced record-breaking potato production this year, surpassing all previous records. Bangladesh Bureau of Statistics (BBS) data shows around one crore tonnes of potato production in fiscal year 2023-24, which rose to approximately 1.15 crore tonnes in FY2024-25, an impressive 9.17 percent increase from the previous year.

But what led farmers to expand potato cultivation so significantly this year? Marginal farmers often grow crops that fetched higher prices the preceding year in the hope of more profit. There is no fault in their logic, as it is a survival strategy. In 2024, the market price of potatoes was quite high, averaging Tk 50-60 per kilogramme, which naturally encouraged farmers to expand cultivation this year. As a result, Bangladesh has recorded the highest-ever potato output in the FY2024-25.

However, this bumper harvest has brought deep concerns. The record high production far exceeded the annual domestic demand of around 90 lakh tonnes, creating a substantial surplus and causing potato prices to plummet. Subsequently, marginal farmers suffered severe financial losses. According to news reports and local data, field production costs stand at roughly Tk 16/kg, with added cold storage costs of Tk 6-7/kg (some local cold storages in Rangpur charges Tk 400 per 60 kg sack). Yet, in local markets across the division, potatoes are being sold for only Tk 8.5-9.5/kg, resulting in significant losses. According to the Trading Corporation of Bangladesh (TCB), wholesale prices currently range from Tk 9-12/kg, while retail prices stand between Tk 15-20/kg. Over the past year, potato prices have fallen by 61-63 percent, leaving farmers struggling and the government facing challenges in managing the market surplus.

Many farmers and agricultural stakeholders have blamed the government for failing to implement previously announced measures—such as setting a minimum cold storage gate price of Tk 22/kg and procuring 50,000 tonnes of potatoes to stabilise the market. Take the case of Akhtar Mia, a potato farmer from Rangpur who cultivated



Bangladesh produced a record 1.15 crore tonnes of potatoes this season, far exceeding the annual domestic demand, causing severe financial losses to marginal farmers.

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potatoes on 25 acres of land this year. He reported an estimated loss of around Tk 30 lakh. He mentioned that in previous years, cold storage owners used to provide loans against stored potatoes, but this year those loans were discontinued. Moreover, when the government provides assistance, marginal farmers rarely benefit, as middlemen (*mahajans*) capture most of the advantages.

Evidently, potato farmers have faced substantial welfare losses this year. With prices collapsing, it is likely that many farmers

will reduce potato cultivation next year, leading to lower supply and higher prices in the market. From a consumer perspective, this means people will have to buy potatoes at prices much higher than the standard market price, resulting in consumer welfare loss. This cyclical pattern of alternating farmers' and consumers' welfare losses has been recurring in Bangladesh's potato market in recent years. So, the key question

cultivation each year. A cultivation limit could be introduced to prevent farmers from allocating excessive land to potatoes alone. Encouraging farmers to diversify into other crops would promote crop diversification, improve soil fertility, and enhance food security. Bangladesh spends a significant amount on importing food grains every year. If farmers shift towards producing a balanced mix of crops suited to local soil

Despite being the seventh-largest potato producer in the world, according to the Food and Agriculture Organization (FAO), Bangladesh does not rank among the top 20 exporters. According to the Export Promotion Bureau (EPB), Bangladesh currently exports potatoes to 14 countries, including Singapore, Nepal, Sri Lanka, Malaysia, and several Middle Eastern nations. Compared to FY2021-22, exports dropped significantly in FY2022-23 and FY2023-24 due to strong domestic demand. With record-breaking production in FY2024-25, exports increased again by a significant margin compared to the previous year. The Middle East offers immense potential for expansion. Signing Free Trade Agreements (FTAs) with Middle Eastern countries could enable duty-free exports, opening new markets and boosting export volumes. Moreover, developing transportation infrastructure would significantly reduce export costs. The North Bengal region, a key potato production hub, currently takes two days for goods to reach Chattogram port via Dhaka, increasing both time and costs. Establishing a direct railway route from North Bengal to Chattogram would enable faster and cheaper exports, helping Bangladesh compete more effectively in the global market.

The Rangpur division, especially the char areas, produces large volumes of potatoes and has an abundance of low-cost labour. This provides a comparative advantage for developing agro-processing industries, particularly in potato-based products such as chips and French fries. Setting up international-standard processing facilities in Rangpur could not only increase exports but also generate employment for flood-affected and low-income communities, contributing significantly to Bangladesh's GDP. For example, PepsiCo began producing Lay's chips in Bangladesh in 2023, some of which are already being exported abroad. If the government reduces supply-side constraints and improves infrastructure, the cost of doing business will fall, attracting more foreign investment in the chips industry and boosting exports.

However, Bangladeshi potatoes have relatively low dry matter content, making them less crispy and less energy efficient for chip production. The government should consider importing high-dry-matter potato seeds suitable for chip and French fry production and supplying them to farmers. This would enhance the country's competitiveness in the processed potato industry and create a sustainable export market.

arises: how can Bangladesh simultaneously protect both farmers' and consumers' welfare, where one group's gain does not come at the expense of another? To achieve this, effective government intervention is essential.

The Department of Agricultural Extension (DAE) maintains data on how much land in each upazila is allocated to various crops. By analysing domestic demand and the export volume of potatoes, the DAE can predict how much land should ideally be used for potato

fertility—rather than focusing excessively on a few profitable crops—the country could save valuable foreign exchange and move towards food self-sufficiency. Although such a policy may involve high monitoring costs, it would be highly effective and sustainable for the economy in the long run, provided it is implemented with integrity and strict oversight.

If Bangladesh consistently produces potatoes beyond domestic demand, it must identify and develop new export markets.

The cobra effect: When good intentions bite back



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Picture colonial Delhi, a city under British rule, plagued by a slithering, venomous problem: an abundance of cobras. Fearing for public safety, the government announced what seemed like a brilliant, simple solution: a cash bounty for every dead cobra.

Initially, the policy was a roaring success. Dead snakes piled up, and rewards were paid out. Administrators in their high-collared tunics likely congratulated themselves on their approach to pest control. But then, a strange thing happened. The cobra population was not declining. In fact, the treasury was paying out more rewards than ever.

It turned out that incentives had met human ingenuity. Enterprising locals realised that if killing cobras earned money, *breeding* them could be even more profitable. Makeshift snake farms sprang up. People began raising cobras in their backyards, killing them, and collecting the rewards—a perfect, perverse business model.

When the outraged authorities finally discovered the scheme, they cancelled the bounty. And then came the final twist. The breeders, now holding cages full of worthless, venomous snakes, did the only practical thing: they set them free. The result? Delhi was left with *even more* cobras.

This is the cobra effect: a well-meaning solution that backfires due to a poorly planned incentive, making the original problem worse. It is a tough lesson in unintended consequences, where the very tool meant to fix an issue ends up fuelling it. Several historical examples illustrate the principle. In French colonial Hanoi, authorities offered a bounty for each rat tail submitted to

combat an infestation. Soon, officials noticed rats in the city with no tails. Rat catchers were simply catching them, snipping off the tail for the bounty, and releasing the rodents back into the sewers to breed, ensuring a steady income. During China's Four Pests campaign in the 1950s, the government declared sparrows an enemy for eating grain. The population was mobilised to exterminate them. The unintended consequence? With their primary predator gone, the locust population exploded, contributing significantly to a devastating famine. The goal was to protect the harvest; the result was destruction.

This global phenomenon has clear and costly parallels in Bangladesh, where numerous policies, launched with the best of intentions, have been haunted by the same flawed logic. In 2010, driven by pressing energy shortages and global climate goals, the government mandated that new buildings must install rooftop solar panels to get a grid electricity connection. The noble goal was to boost renewable energy. However, what the government incentivised was not "production of solar energy"; it was "getting a grid connection."

Building owners complied. Many installed the cheapest, lowest-grade panels possible, often without proper installation or inverters. Once the connection was secured, these systems were often neglected. Today, reports suggest 80-90 percent of these mandated systems are non-functional, gathering dust and turning into e-waste. A regulatory hurdle was cleared, but the green energy goal was lost.

Similarly, to boost foreign exchange and support industrial growth, Bangladesh offers generous

cash incentives on export proceeds, particularly for garments and food. The goal is to encourage legitimate trade. The incentive, however, has encouraged widespread fraud.

This has given rise to "phantom exports"—fictitious shipments where documents are forged to claim subsidies for goods that never left the country. Between 2017 and 2021, dozens of companies reportedly laundered over Tk 300 crore through such ghostly consignments, often with alleged complicity from officials. The incentive designed to build the economy is, in some cases, actively draining it by rewarding the *paperwork* of exporting, not the actual economic value.

To ensure food security and keep rice prices stable, the government heavily subsidises chemical fertilisers. This makes fertiliser cheap. The result? Farmers, ignoring soil tests and expert recommendations, often apply 2-3 times the recommended dose, especially of urea.

This over-application has led to diminishing returns, with rice yields plateauing despite rising fertiliser use. Worse, it poisons the land. Excessive nitrogen depletes soil organic matter, increases acidity, and threatens drinking water. The subsidy, meant to secure the food supply, is degrading the very soil it depends on. This creates a dangerous long-term dependency, where future food security may rely on importing ever-larger quantities of chemical inputs simply to maintain yields on depleted land.

There are lessons in these backfires for those who listen: (i) humans follow the reward, not the intention, and they are masters at finding shortcuts to reward. If a loophole exists, it will be found and exploited. (ii) The metric is not the mission. When you reward a proxy, people will optimise for that proxy, not the actual goal. The goal in Delhi was "fewer live cobras," but the metric was "more dead cobras." This error is everywhere: in education, it leads to "teaching to the test" rather than genuine learning; in business, it leads to hitting sales quotas rather than building customer value. (iii)

A policy never does just one thing. A solution is often an intervention in a complex system, and it will create ripples. Ignoring these "second-order effects" is the most common path to failure. Wiping out sparrows does not just mean fewer sparrows; it means a new, bigger problem with locusts. Policymakers must always ask: "and then what happens?"

How can policymakers avoid this cobra effect? The lessons from these failures point to a clear path forward: (i) game the system first. Before

launching a policy, ask the most cynical questions: "how could this be cheated? What's the laziest, most corrupt way to get this reward?" This "red teaming" or pre-mortem analysis can reveal fatal flaws before they go live. (ii) Reward the real goal. Design incentives that are tightly aligned with the outcome you want, not the activity you think will get you there. Do not reward dead cobras; reward a verifiable drop in the live cobra population. Do not reward installing solar; reward producing solar energy. (iii) Test, Learn,

and Adapt. Pilot policies on a small scale. See what strange behaviours emerge. Treat the initial rollout as an experiment, not a final declaration. Be humble enough to admit a plan is backfiring and change course quickly. Ultimately, the cobra effect is a powerful lesson in humility. It reminds us that when we try to change a complex system—whether it is an ecosystem, an economy, or a company culture—we must be prepared for the system to alter our plans in ways we never anticipated.

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