When Bangladesh won its independence from Pakistan in 1971, its prospects for development were viewed dimly by many in the global community. A severe famine in 1974 reinforced its unfortunate image as a destitute country. A long period of socialist policies that began to be reversed only in 1988 did little to lower poverty rates.

Thanks in part to gradual market-based reforms and heavy doses of international assistance, but mainly owing to the initiative of the Bangladeshi people, the country can now boast of many accomplishments on the road to economic self-sufficiency.

- At $20 billion per year, it is the world’s number two garment exporter after China.
- Numerous other export sectors from pharmaceuticals to plastics to ship building are on the verge of taking off.
- About 8 million overseas workers send home over $1 billion per month in remittances.

Once heavily dependent on international assistance, Bangladesh is now in position to help other countries with rice exports

- Population growth is well under control as fertility rates have dropped from 6.9 children in the 1970s to less than three per woman.
- Micro-lending, a phenomenon that was first successful on a large scale in Bangladesh, has improved countless livelihoods in rural society.

*FOOD SECURITY SUCCESSES*

The above notwithstanding, advancement in food security is one of the biggest feathers in the nation’s collective cap,
particularly given population density, the highest of any large
country (160 million people in an area the size of Iowa or
Greece), lack of natural resources and vulnerability to more
and more frequent climate change-related natural disasters
like drought, cyclones and flooding.

With 33.5 million tonnes of milled rice production from
three annual crops, Bangladesh has maintained self-sufficiency
in rice production. Twenty years ago production levels
were less than half this amount. Population has increased by
40% to 50% in the same period such that per capita food avail-
ability and intake has increased significantly.

Like other countries in the region, ranging from India to
Myanmar to Thailand to Vietnam, today policy makers in
Bangladesh fret more about the risks inherent in surplus rice
production and the need to help farmers make ends meet.
Wholesale prices of milled rice have declined by 30% since
October 2011. Retail prices have fallen more slowly but are
now about 25¢ to 30¢ per kg for the most common varieties.

If farmers begin major plantings of other crops in place of
rice, reduced area and sudden drought could bring a crop short-
fall and domestic price spikes. Some Bangladeshi politicians
have even suggested allowing large-scale exports of common
varieties for the first time to raise domestic prices closer to in-
ternational levels and boost incomes of rice growers.

Bangladesh ranks fourth in rice production and consump-
tion after China, India and Indonesia, so any radical policy
moves could impact world markets.

LIMITED GOVERNMENT ROLE

In the past, the government has imported rice to make up
for perceived shortfalls in domestic supply. In the 2010-11
marketing year (May-June), a record 1.3 million tonnes of
imported rice filled Food Department warehouses, with the

Workers gather up and fill jute bags with parboiled paddy (rough) rice after
drying for milling at a husking mill. New automatic mills now accounting
for over 20% of production eliminate these labor intensive steps.
inward flow slowing to 445,000 tonnes the following year. This constituted a sudden policy shift, as the next largest year for government rice imports was 477,000 tonnes in 1996-97.

Successive bumper crops occurred in the last two years as the import contracts were executed reducing the government’s ability to make domestic purchases and boost the slumping rice market.

These activities aside, the direct role played by the government in the rice sector is relatively small compared to other rice dependent countries. Procurement for public food distribution schemes in most years ranges from 1 million to 1.5 million tonnes. This amounts to just 3% to 5% of total production.

By comparison, Indian federal and state government agencies procure about one-third of all rice production, and Thailand’s government is seeking approval to buy 19 million tonnes, or nearly two-thirds of annual rice production next year to support farmer incomes. Bangladesh government rice stocks are about 1.5 million tonnes versus 12 to 13 million tonnes in Thailand as of September 2012 and 25 million tonnes in India.

**FARM INVESTMENT**

It can be argued that public sector withdrawal from the rice market is largely what triggered the surge of investment in production and milling capacity. Up until the early 1990s, the government exercised monopoly powers over the rice market as the sole buyer of surplus from commercial mills in an attempt to control both producer and consumer prices. Such a policy was a disincentive for private sector risk-taking to invest in production and processing of the key food staple accounting for over 60% of caloric intake.

Since the late 1990s there has been a huge shift in the zone of surplus rice production from southern areas during the wet monsoon Aman season to the northeastern districts during the dry winter months of the Boro crop. Investment by farmers in over 200,000 electrically driven irrigation pumps and tube wells is at the base of this transition.

For the sake of greater food security, the pumps run without interruption in the hot dry months of April and May, even while Dhaka’s residents suffer repeated daily power cuts, euphemistically known as “load-shedding,” due to the country’s chronic undersupply of electricity.

The Boro crop now accounts for 60% of annual production, diminishing the Aman season share to 30%. Increased imports, production and distribution of subsidized mineral fertilizers by a government monopoly also have boosted output.

**MILLING INVESTMENT**

As production has expanded, the efficiency of the rice milling sector has gained through the construction of hundreds of automatic rice mills in the last 15 years. Ninety percent of rice is parboiled in Bangladesh. There are just a few small, peripheral, hilly regions where raw white rice is preferred.

“Auto mills” soak, steam and dry the paddy in a continuous automated process before milling, polishing and color sorting.

Traditional “husking mills” in Bangladesh soak the paddy in open outdoor vats before a few minutes of steaming or boiling followed by labor-intensive spreading and turning of the wet grain in a concrete yard to dry under the sun. Such mills still number from 10,000 to 20,000. Capacity of most is just 1 or 2 tph.

Industry insiders estimate that already over 20% of all rice in Bangladesh is processed by “auto mills.” The largest numbers are found in clusters in the surplus zones of the north Bengal region. For example, around Dinajpur there may be 100 such auto mills built just in the last five years. Capacity ranges from 2 to 14 tph.

Most milling and parboiling equipment is imported from neighboring India. However, many of the major mills ranging from 8 to 14 tph, are now being built with state-of-the-art equipment from the most well-known international manufacturers.

These mills compete to sell their brands to urban consumers throughout the country but primarily in greater Dhaka, a rapidly expanding urban conglomeration of 15 million where purchasing power is highest. Color sorters are a key piece of equipment for the new generation of mills in Bangladesh as middle-class buyers happily pay a premium for the product with fewest impurities.

**FINE RICE AND MINIKET**

While the food security policy emphasis has been on getting increased yields of common varieties of rice, there has been a pronounced shift in market demand to fine varieties, many of them similar to the aromatic jasmine and basmati varieties of Thailand and India. These varieties now make up about 15% of production but command a much higher price due to lower yields and high demand.

Responding to the market, innovative owners of auto mills have come up with their own fabricated version of fine rice, locally known as “miniket.” Low price coarse varieties are ground down in a final step in the milling process to make the kernels thinner and appear longer, giving them the visual appeal of fine rice. From 5% to 10% of the milled kernel is removed as flour in the process, which is sold for extrusion of rice noodles or for chicken feed.

One 2011 study estimates the miniket sales at an annual 5.4 million tonnes, nearly 20% of total domestic consumption, and still gaining market share. Miniket commands a price about one-third higher than the coarse varieties from which it is ground, so the incentives for millers are clear. True fine varieties on the other hand sell for about three times the retail price of coarse rice and twice the price of miniket. Miniket allows aspiring housewives to serve up rice having the appearance of expensive fine rice but with the flavor Bangladeshis are accustomed to from childhood.

**FURTHER INVESTMENT**

Entrepreneurial rice millers are beginning to explore opportunities in
production of rice bran oil. One major miller with such plans estimates that 150 truckloads of rice bran are taken daily to India, even though Bangladesh imports up to 1 million tonnes of vegetable oil per year. Reportedly, four rice bran oil plants have been started up in recent years and many more are likely to follow.

Today, farmers dry paddy themselves in order to store it on farm and to sell to millers at 14% moisture content. As farm economics change due to higher labor rates, it will be attractive for farmers to sell wet paddy to large millers with big, efficient dryers. Already a few are exploring investment in large paddy drying centers auto fueled by rice husk furnaces consuming only a fraction of the husks from milling.

WHEAT RISING

Per capita rice consumption may have already peaked as rising incomes allow for dietary diversification to wheat-based products, particularly for the burgeoning urban population. Large food groups with highly-efficient procurement, logistics and processing operations now account for two-thirds to three-quarters of wheat imports. Bushandhara Group has recently completed one of South Asia’s largest wheat mills at 1,200 tonnes per day and 60,000 tonnes of steel silo storage. It awaits only an electrical hook up from the government to start up. At the same time, truckloads of wheat arriving from India in cross-border trade assure adequate wheat supply to dozens of smaller wheat millers spread throughout the country.

Because of its lower cost compared to rice, the government usually favors wheat imports for distribution to the poor under a myriad of food welfare schemes.

Domestic wheat production has decreased from a peak of almost 2 million tonnes to 1 million as farmers plant maize instead to supply feed production for an increasingly industrialized poultry sector and growth in aquaculture. More protein intake in the form of chicken and fish has contributed to major reductions in the rate of childhood stunting.

CONCLUSION

With rice consumption soon peaking but rice yields still rising by over 3% annually, Bangladesh has the potential to add millions of tonnes to the international market within a five-year period if the export gate is opened and farm prices are allowed to climb.

Ironically in the process, once chronically food insecure Bangladesh would thereby help stabilize world rice prices and contribute to the food security of sub-Saharan African countries for which low-price imported rice can be a safety valve.