Bangladesh’s impressive performance on food security front

Wednesday, Dec 26, 2012

By *Dr. Ahsan H. Mansur*

Food security has always been an important objective of the government of

Bangladesh since its independence. With grain production increasing by 350% since 1972 to 34.5 million tonnes in FY12, Bangladesh’s domestic production of food grains is now believed to be sufficient to meet its domestic demand. This has always been a cherished national goal and we are indeed proud to realise it despite more than doubling of the population and higher intake per capita. We must commend our farmers and our government departments and research organisations and non-government organisations (NGOs) for their collaborative

efforts in realising this dream.

A host of issues however comes to our mind regarding food security in the case of Bangladesh. Some of these are: Would Bangladesh be able to ensure food security for its growing citizens in the years to come? What is meant by food security in future and would that necessarily require self-sufficiency in domestic food production? Has food security ensured "Balanced and Healthy Diet" for all, which is necessary for a healthy and productive nation? This article also presents an outline of a strategy for addressing the issues arising from above considerations.

Gains made on food security front: Bangladesh has been one of the prime beneficiaries of the global "Green Revolution" based on introduction of high yielding seeds, use of chemical fertilisers, and irrigation of land for enhanced agricultural productivity. Much of the gain was on account of boro rice which over time has become the most important rice crop from its original position of being least important. Production of boro rice increased 11-fold since 1972 to almost 20 million tonnes in FY12, accounting for more than 50 per cent – of domestic food grain production. This dry-season crop depends most on irrigation, and introduction of high yielding varieties though innovative research and extension services helped increase the average yield per acre significantly. Yield of traditional aman rice also more than doubled during this 40-year period primarily due to increased use of fertilisers and better seeds.

When compared with international comparators, Bangladesh achieved the second largest increase (32 kg) in per capita supply of cereal (rice, wheat and maize) since 1971, following China which recorded the highest per capita gain (43 kg) over the same period. It is also noteworthy that supply of cereal per capita in Bangladesh at 197 kg is the highest among all global comparators. Supplies of cereal crops per capita per annum in China and India at 150 kg and 131 kg, respectively, are well below that of Bangladesh.

Significant gains have also been made in supply of potato and protein. Potato supply which remained virtually static in per capita terms during 1971-95, increased sharply thereafter. Since 1995, potato supply almost tripled to 29.4 kg per capita per annum in 2009 and the level of potato supply in Bangladesh in per capita terms is the second highest in Asia after China at 36.8 kg. As regards supply of protein, the significant gains have been made against the backdrop of very low protein base in early 1970s in Bangladesh. At 57.8 gram per capita

per day, our protein intake is still the second lowest among all Asian countries except India (56.6 gram per day). However, in the case of India, there are obvious religious and cultural factors to explain its low protein intake in per capita terms.

The impressive gains on cereal supplies has been achieved because of the primary focus given to rice cultivation and by making self-sufficiency in rice production as the singular objective for ensuring food security. Almost all spending in the agriculture sector and incentives in the form of subsidies on fertiliser and fuel have been aimed at boosting cereal production. Government policy of keeping fertiliser prices affordable to the farmers and provision of agricultural credit helped fertiliser use to grow by more than 400% during FY81-FY08.

Focus was also given on dry season irrigation based boro cultivation because it is free from natural calamities like flood and drought. Total area under irrigation increased by 374 % during FY81-FY08, primarily because of a rapid expansion in boro rice cultivation. As a dry season crop supported by irrigation, boro production also helped bring unused land into this crop leading to increased cropping intensity, albeit moderately. The cropping intensity increased by 16% during the same period. Most of the new varieties of rice introduced during the last several decades were also of boro type leading to improved yield per acre.

Would Bangladesh be able to ensure food security for its growing citizens in the years to come?

The challenge of ensuring uninterrupted supply of food for 150 million citizens is a formidable one. It is even more challenging in view of the shrinking size of net cultivable land and growing population. Despite the recent slowdown in population growth and lower fertility rate, at about 1.5% population growth rate Bangladesh would have to feed additional 2.25 million mouths each year. At the same time net cultivable land has declined at the annual rate of 0.4% during FY81-FY05, and the rate of loss of crop land may have accelerated in recent years due to more rapid urbanization, industrialisation, and construction of houses/homesteads and roads. The loss of cultivable land for other uses would remain high with the pace of urbanisation and industrialisation gaining more momentum and as more and more young persons start raising families and have their own homes.

Bangladesh's recent performance on the food security front, in particular if limited to basic staple food grains, is quite positive. So far improvement in cropping intensity has helped offset the negative effect of loss of cultivable land on overall crop production and cereal production in particular. Cropping intensity has increased by 16% compared with loss of arable land of 10% during the same period. However, Bangladesh's cropping intensity is still relatively low and there is scope for further significant improvement through extension of irrigation and better flood management. The major factors constraining the level of cropping intensity in Bangladesh are (i) flooding of a vast area of crop land every year during the rainy season; (ii) a relatively long rainy season and stagnation of water over a prolong period due to siltation and blocking of natural canals preventing speedy outflow of water; and (ii) absence of rainfall during the dry season limiting scope for cultivation in non-irrigated land. Thus while there is scope for further increasing the cropping intensity, coordinated efforts will be needed over the medium and long term for this gain to materialize.

Bangladesh's impressive performance on the cereal front (particularly in rice production) is the result of a rapid increase in productivity in terms of per acre yield. The increase in output per acre has significantly exceeded population growth and for the most important crop like boro rice yield per acre has reached a respectable level, albeit from a low base. These gains notwithstanding, a review of agricultural productivity in major Asian rice producing countries indicate that Bangladesh agriculture still has some way to go. Further improvement in productivity through continued upgrading of seed quality: in the form of enhanced drought and salinity tolerance; for coping with water level changes during floods; and through introduction of newer high yielding boro rice varieties.

We may note that per capita grain availability is highest in Bangladesh and it has grown fast in recent decades. The food habit of Bangladeshi's is also heavily biased towards rice consumption. Over the years however demand for wheat has also been growing steadily. Per capita consumption of cereal in Bangladesh is unlikely to increase further; if the experience of other countries is any guide, with further improvement in the standard of living, per capita cereal intake should start to decline in the coming decades. In Asia this phenomenon was first experienced in Japan and more recently being observed in China. Household expenditure survey in Bangladesh also points to a decline in per capita cereal consumption in Bangladesh, and the trend should accentuate further in future as Bangladesh starts moving to middle-income country status.

It is also true that a country as vulnerable as Bangladesh should expect some variations in cereal output due to unfavorable weather or severe flooding. Thus access to international market should always remain an option.