

Arsenic threatens rice production



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Cultivation of rice remains a dominant economic activity in rural Bangladesh and is key to sustaining food security. In fact, food self-sufficiency in Bangladesh mostly depends on rice production since rice alone contributes about 70% of the agricultural GDP and 50% of the total agricultural value added. Cultivation of modern rice varieties has been the main wheel of productivity growth in rice in Bangladesh for the last three decades.

Cultivation of irrigated winter season (boro) rice has increased tremendously after 1970s and at present the area under modern boro rice production is about 4.7 million hectares, covering about 44% of the total rice area. Boro is the most vital rice crop for the economy since it alone contributes about 61% of the total rice output. In fact, production of this irrigation dependent rice crop has enabled the country to shift from chronic food shortages towards self-sufficiency in the recent years.

About 57% of the total arable land area is currently irrigated through shallow tube wells (STW). However, much of the shallow groundwater in south-eastern and south-western parts of Bangladesh is naturally contaminated with arsenic, exposing more than 40 million people to unsafe levels of arsenic in drinking water and potentially threatening food security as arsenic is toxic to rice.

Build-up of arsenic in soil associated

with the use of arsenic contaminated irrigation water has been shown to lead to elevated levels of arsenic in paddy soils and eventually to rice grains. Arsenic contamination in water and soil can also adversely affect food safety. The arsenic content of lowland or paddy-rice grain is generally much higher than that of upland cereal crops because of the relatively high availability of soil arsenic under reduced conditions.

This arsenic hazard is a great concern for our country since about 25% people in Bangladesh are affected by arsenic contamination due to drinking of arsenic contaminated water from tubewells. Moreover, it is suspected that there will be possible reduction of crop production due to arsenic contamination if the issue remains unattended. The country cannot afford these adverse effects since it is already struggling to meet the ever-increasing food requirement for her increasing population.

Arsenic contaminated groundwater is the main source of drinking water for about 90% of the total population of Bangladesh (WHO, 2001), and an estimated 40 million people are at risk. High concentration of arsenic has been found in groundwater from thousands of hand tubewells (HTWs) under 60 out of 64 districts across the country. The groundwater in these districts is reported to be contaminated to various degrees, and several million people may be at some health risk due to the ingestion of this contaminated water (Huq and Naidu,

2001 and Ghani et al, 2004).

However, the adverse impact of arsenic contamination of ground water has been categorised as being both primary and secondary by Khuda (2001). The primary impact is on the health of individuals who are exposed to arsenic poisoning through drinking ground water laced with arsenic. After several years of low-level arsenic exposure, skin lesions appear. These are manifested through different symptoms -- dark spots, white spot, keratoses of hands and feet etc.

The secondary impact is an outcome of the primary impact and is reflected in the socioeconomic consequences like inability to do productive works, social exclusion, problems of getting married etc. Therefore, it appears from the available evidence that arsenic contamination in water and in crops is going to be a threat to the lives of hundreds and hundreds of the inhabitants in different locations of the country.

A case study was carried out by the researchers of the agricultural economics division of BRRI on a family at Ashrafpur village in Kachua upazila under Chandpur district.

Mrs. Nasima Khatun is about 45 years old. She is a widow with four children. Her husband was a farmer and had 70 decimal lands. He used to be a part-tenant farmer and continued farming through renting other's land. He also used to work as a petty contractor.

Nasima Khatun belonged to a well-off family. Her husband was an elected mem-

ber of the Union Parishad. They used to drink tubewell water, which was identified by the local government engineering department (LGED) in 2000 as being arsenic contaminated. Unfortunately, her husband was affected by arsenicosis in 1995, and became very sick due to arsenic related illness.

Due to prolonged ailment he eventually lost his working ability. His wife sold their assets, including croplands, for bearing the medical expenses. Ultimately, the family became landless. He died in December, 2004 at the age of 50. His elder son is a rickshaw puller, and his second son is an agricultural labourer. The two elder sons have separate families. Two younger sons are working in a shop as salesmen. The widow and her sons are now suffering from arsenicosis. She and her youngest two sons live together.

Their livelihood depends on the earnings of her youngest son. She also works as a maidservant occasionally. She cannot work properly due to her ailment. Very often, she suffers from fever and pain. Since her husband was a village leader and petty contractor, she had a solvent family with good social position. But the arsenic related problems made her family helpless and severely food unsecured, and now they are passing their days in a miserable condition.

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The looming threat of AIDS

Aids is now the fourth leading cause of death globally and the leading cause of death in Africa. But interventions seem dauntingly difficult because Asian societies keep the source under wraps, a vice that stems from ignorance and lack of proper education.

MD. ASADULLAH KHAN

Health officials and concerned citizens in the country are grappling with the national implications of the HIV/AIDS crisis and have been trying to come up with an answer to combat the threat that it poses. Experts see clear indications that the disease that was once supposed to be confined to some specific areas is now spreading wider.

Reports from India's National AIDS Control Organisation (NACO) suggest that India had 2.27 million HIV affected people in 2009. These reports make people genuinely concerned since the virus may have crossed the borders with the traveling people and has started playing havoc in the country. Recalling the days when the first Aids case was detected in the country in 1989 -- the carrier being a returnee from abroad -- officials in the government argued that Aids was a western disease that would not affect our uniquely moral society.

Out of 219 people diagnosed to be carriers of HIV virus till 2002 at BSMMUH at Dhaka, 111 were returnees from abroad, 26 of them later developed full-blown Aids and 20 of them died. Compared with the infection figures in African countries and India, Bangladesh is still considered a low HIV/AIDS prevalent country. It is estimated that there are about 13000 HIV-positive people in the

country now as revealed by WHO sources.

UN experts have indicated that a disaster is waiting to happen in the Asian region, including Bangladesh. There are some 5 million new cases each year, of which 58% people under 25. Bangladesh has hundreds of sailors, construction workers and other professionals who work abroad for a time, and a continual tide of students and businessmen returning from overseas.

Understandably, the growing number of HIV cases in India calls for stepping up efforts to halt the spread of the disease through cross border transmission. The most worrying aspect is the trafficking of teenage girls to India who eventually come back to Bangladesh, carrying with them HIV infection, and spread the disease.

Villages in Bangladesh, these days, to say nothing of the cities and towns, are not, in fact, the bastions of sexual probity they are quaintly imagined to be. Studies show that Bangladeshi society, long considered so conservative, is more footloose than is commonly admitted. Experts have clear indications that the killer disease that once prowled the red light areas now stalks the bourgeois neighbourhoods.

The increasing incidence of HIV infection in the country as revealed on the eve of the "World Aids Day" baffles the people and gives an alarming signal for all. Social researchers say: "In our country, with all the economic problems, rising unem-

ployment and drug abuse, only Aids was missing. Now we too haven't been spared." If the number continues to increase, as it has done from 219 infected people in 2002 to 13,000 by the end of 2009, it will be especially ominous for the country since it does not have medical facilities, physicians or drugs to adequately treat the disease.

In Bangladesh, Aids treatment is completely NGO-dependent. Sources close to the government revealed that some donor-assisted NGOs like Ashar Alo society, Open Sky Bangladesh, and Confidential Approach to Aids Prevention (CAP) are providing ARV medicine to some 452 AIDS-infected patients.

Aids is now the fourth leading cause of death globally and the leading cause of death in Africa. But interventions seem dauntingly difficult because Asian societies keep the source under wraps, a vice that stems from ignorance and lack of proper education. Sex in our society is not a subject of polite conversation. Public health officials have long despaired of this taboo because it makes the task of raising public awareness of sexually transmitted diseases more difficult.

In most cases in our country, marriages are arranged and sex education is non-existent. The actual number infected with the virus may be quite high. The majority of the people who are infected now don't even know they are ill. We are talking about a generation that will have developed Aids sometime after the year 2015. And the country simply does not have the wherewithal to deal with such a crisis.

Promiscuity is the single most important way by which the scourge has the possibility of spreading. People must know its incubation period, that keeps the virus hidden and after a certain time explodes in a virulent form, almost like an epidemic. So, an infected person can pass

the virus unknowingly to scores of people.

Most people do not use promiscuous behaviour do not use contraceptives while having sex since they do not know that it exposes them to sexually transmitted diseases. Most worrisome, the virus now percolates insidiously and afflicts low risk individuals like housewives and children of wealthy people.

Experts attribute this shift in the sexual behaviour of middle class or lower income groups to changes of culture in the workplace as the major reason. Besides, lack of housing facilities in the work place has spawned a breed of workers who spend half of their working lives away from home and family. At the same time, women have become an increasingly visible part of the professional workforce in industries, garment factories, hotels and business houses. With all these factors taken together, one can only see the settings for an increasing number of casual sexual relationships.

Social scientists point out that the growing affluence of the middle class and the influence of alien movies have something to do with changing moral values. Without contradiction, one can say that the influence of the West is not an escapable factor. We have borrowed the gloss, but not the ability to fight a crisis.

While, maintaining multiple sexual relationships is now considered "high risk" behaviour in the West, in our country, it has just become a symbol of liberation. At the same time, women are shedding their inhibitions and sexual abstinences of both the groups are running high.

In the face of the impending Aids threat that is likely to jolt the country by the end of 2020, the government from, now on, will have to launch an intensive programme to halt the spread of the disease. The health ministry must ensure that hospitals and clinics ensure safe blood transfusion of



patients and think seriously about screening those who they thought might be using drugs -- focusing mainly on young unemployed men. Lastly, both the administration and people must contend with the fact that Aids is no longer a medical problem, it is a social problem.

This is a county where people are more inclined to holding seminars and sympo-

and formulating policies on the World Aids Day every year, without trying to implement the policies. We only hope that the government this time will not cause any shift in the rationale of the national agenda.

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Aman procurement conundrum

large-scale food grain import is contrary to this government's pledge to attain self-sufficiency in food by 2013. When reporters put this question to the food minister, he evaded direct reply to the question by saying that "food consumption in the country had increased significantly."

M. ABDUL LATIF MONDAL

In its meeting on November 22, Food Planning and Monitoring Committee (FPMC) chaired by Food and Disaster Minister Abdur Raqzaq and attended, amongst others, by Finance Minister A.M.A. Muhith, Agriculture Minister Begum Motia Chowdhury, Commerce Minister Faruk Khan, dropped the plan to procure rice or paddy from domestic market during the ongoing aman season and decided to maintain the country's food-grain supply through imports.

While briefing newsmen after the meeting in Bangladesh Secretariat, Minister Abdur Raqzaq told that the FPMC had decided not to go for aman procurement this year from domestic market taking into consideration the

government's overall food stock and expected imports, adding that there was no possibility of any adverse impact on the rice prices in the domestic market because of the decision. He also clarified that government would launch aman purchase drive any time if any problem arose in the domestic rice market because of the decision.

There have been mixed reactions to the government decision for not purchasing aman this season from domestic output. Those who favour the government move say that the prices of different varieties of rice in the domestic market are already high and the same might go even higher if the government started procuring rice at a rate higher than the prevailing market rate. Experience of the last 5 years or so amply substantiate this. For instance, back in 2006 the govern-

ment administered aman rice price of Tk. 15 a kg pushed up rice price higher in the market, which resulted in the procurement of only 44,000 tonnes of aman rice from domestic production against procurement target of 175,000 tonnes of rice and 42,000 tonnes of paddy.

Secondly, government move towards large-scale imports will beef up government food security stock. This will discourage big farmers and traders to stockpile rice in anticipation of windfall gain during off-season and thereby raise the supply side of the staple food, which will ultimately help stabilise its price in the market.

The critics of the government decision say that providing incentives to growers by arresting the fall of price during harvesting season has been an important factor for internal procurement of rice, both aman and boro, for a long time. In the absence of government procurement of aman this season, the private sector traders including the rice-millers being the only players in the market might force the farmers sell their newly harvested aman rice and paddy at relatively lower prices for a brief period. Though the food and disaster management minister has

assured of the government intervention into the domestic food grain market in the event of such a development, in all likelihood, it could prove late because of procedural complexities.

Secondly, aman is basically a rain-fed crop. But there was late start of monsoon this year. More importantly, according to meteorology department, the country this year witnessed the lowest rainfall in past 15 years. The recorded rainfall in June, July, August and September this year stood at 47,447 millimetres (mm) compared to 56,163 mm in the same period of the last year, 60,551 mm in 2008 and 66,520 in 2007. Consequently farmers had to take resort to irrigation for preparation of seedbed as well as for plantation of aman. The use of pumps, run either by electricity or by diesel, has significantly increased the cost of aman production. Lower aman price in the harvesting season will hit hard small and marginal farmers who have to sell their produce during harvesting period to pay back their loans taken mostly from money lenders at an exorbitant rate of interest.

Thirdly, if there is low aman price during harvesting period following

government's absence in procurement drive, consumers will not gain because traders, rice-millers and middlemen will not pass on the low price at which they will buy paddy and rice from farmers to consumers. This is evident from the fact that the normally vocal rice-mill owners' association has maintained complete silence over the issue because the government decision has gone in their favour.

Fourthly, the FPMC took the decision not to go for aman procurement taking into consideration the existing government food stock of 8 lakh tonnes and the equivalent quantity in import pipeline. But the fact remains that the government even with better buffer food stocks did not do away with procurement programmes in the past in the interest of food security.

Fifthly, referring to food minister's disclosure that "the government is importing rice at Tk.35 per kg," knowledgeable people have questioned the government's unwillingness to procure aman rice from domestic market at the same or slightly lower price. They smell a rat in the large-scale import of rice.

Sixthly, large-scale food grain import is

contrary to this government's pledge to attain self-sufficiency in food by 2013. When reporters put this question to the food minister, he evaded direct reply to the question by saying that "food consumption in the country had increased significantly."

Considering the pros and cons of the issue, it is felt that in order to protect the interest of farmers, particularly of small and marginal farmers, as well as to allay the fear of pushing the market price of rice higher, the government could have gone for procuring from domestic market at least half of the rice that the government wants to import, within a comparatively short period not exceeding one month in the early days of harvesting when traders and rice-millers normally remain absent from the market. As stipulated in the National Food Policy Plan of Action (2008-2015), the said purchase of rice could be made from domestic market through open competitive tenders at a price high enough to cover cost of production with adequate profit for the farmers.

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