



Deliberation on Ensuring Seed Quality

Recently, Katalyst, SoMaSHTe and The Daily Star organised a roundtable on "Quality Vegetable Seed Production and Certification". Here we publish a summary of the discussions.



Md. Abu Sayem, Regional Farm Broadcasting Officer, Agriculture Information Service presented the keynote paper in which he mentioned that according to the Food and Agriculture Organisation, Bangladesh is the third largest vegetable producer in the world. In Asia, it is the largest producer of vegetables. According to Bangladesh Agricultural Research Institute (BARI), vegetable consumption increased by 71 percent since 1994, from 42 gram per capita per day to 70gm in 2014. He said that seeds play the most important role for sustainable crop production. Quality seeds can increase 15-20 percent yield potentiality. This is true for all crops including vegetables. The public sector produced 4 percent of 2,854 metric tonnes vegetable seed the country required in 2014-15, while the private sector companies supplied more than 66 percent of the requirement. The import stood at 582 metric tonnes. In 2012 it was 718 metric tonnes. It shows that we have significantly reduced our dependency on seed import.

A good number of farmers are satisfied with the seeds of renowned companies. But many of the farmers did not get the promised yields that were written on the packets. In most cases farmers incurred losses when they purchased seeds from unauthorised vendors.

Ferdousi Begum, a renowned Plant Biotechnologist of the country said that Bangladesh cannot claim that we are self-sufficient in food production because we do not produce adequate amount of seeds to fulfill our local demands. Still we have to import a large amount of our seeds, particularly seeds of maize and potato. That's why we need to emphasise on seed production. This is a long term process. The government should grant adequate funds for this purpose. We should also go for public private partnership arrangement and involve private companies to produce seeds. We also need to invest in capacity building of our seed-related bodies.

Md. Abdus Sattar, Executive Coordinator, Partex Agro Ltd. Bangladesh emphasised that we cannot produce all seeds because our weather is not conducive to growing many varieties. Still, we can try to grow as much as possible. That's why we need investment in our seed research programmes. We need to learn from other countries.

Sudhir Chandra Nath, Programme Head, BRAC Seed and Agro Enterprise believes that there is an information gap about the present condition of the seed sector. BRAC has already started producing seeds of maize and potato. Jiban Krishna Biswas, Director General, BRRI thinks there are many cases where good quality seeds have yielded low quality of crops. For a good crop, high quality seed is one factor. But there are other factors as well. Thus he believes some sort notification may help regulating the seed sector better.

Role of Quality Seed in Agriculture

KRISHIBID AFZAL HUSAIN

Agriculture plays an important role in the overall economic development of Bangladesh where the vegetable sector alone contributes a good percentage of the country's GDP.

Substantial increase in yield and quality of vegetable crops depend upon a number of factors. The input like fertilizers, irrigation and plant protection measures and suitable agronomic practices contribute greatly towards enhancing yield and quality of the produce. If good quality seed is not used, the full benefit of such inputs and agronomic practices cannot be realised. The cost of seed represents a mere fraction (2-3%) of the total cost of production, but the quality of seed plays a decisive role in influencing the growers' profitability. Quality seeds, therefore, is the basic critical input upon which all other inputs will depend for their full effectiveness.

Seed regulation plays a very important role for development of vegetables production. Vegetable production is improving day by day after 1993 for the relaxation of government seed rule which attracts the private sector. Result of these rules a good quantity of private seed companies are established. They offer many hybrid vegetable seeds that have increased vegetables production substantially. And it ultimately brought recognition for Bangladesh as 3rd Vegetables Production Country given by FAO in 2015. So, it is not necessary to go back

by notified crops like rice.

Role of vegetable seed production of private sector is tremendous. Only around 5% vegetable seeds are produced by government sector like BADC. Rest of maximum quantities is produced by private sector and serves country to supply a huge amount of vegetables.

Public Private Partnership (PPP) initiative is badly needed for the demand of the people. Different universities can grow vegetables and offered companies to do the market. Many research organisations are developing varieties for the nation. They should emphasise on farmer's need and climate and saline resilient products and can offer to seed companies for the multiplication. Government can provide grant facilities to private companies for the strengthening of breeding activities of vegetables like other countries. NGO's and development sector can organise cross visit program at home and abroad for learning the special technologies.

Capacity build-up for the seed personnel is highly required. Bangladesh is slowly entering commercial Breeding, biotechnology and genetical engineering sector. We require enough knowledge and share success stories of other countries. In this regard, Government, NGO's, development sectors, Universities, Research organisations etc can play a vital role for the greater interest of the whole nation.

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RECOMMENDATIONS

- Maintain field and see standard to ensure quality seed production
- Introduce state of the art agro biotechnologies
- Stop seed adulteration and admixturing
- Strengthen market monitoring system
- Provide seed arable reports to local agriculture authorities
- Reduce dependency on seed dependency
- Improve R&D facilities of the private sector
- Employ agri- graduates at all the levels of seed production
- Strengthen public private partnership in seed sector
- Improve capacity of the seed regulatory authorities
- Vegetable could be included as a notified crop

Mir Emdad Ali, Producer, Sonali Din, ATN Bangla suggests to include more seed related courses in the agriculture curriculum. He also suggests seed companies should introduce small seed packages for households or small scale vegetable production.

Dr. M. Tauhidur Rahman, Principal Scientific Officer, Vegetable Department, BARI informed that we have invented many new varieties of vegetables. But cannot distribute these seeds to the grassroots level due to lack of skilled manpower and effective marketing system. Seed companies should involve their scientists in the skill development training. Our scientists have invented summer variations of many vegetables such as summer tomato, summer capsicum and so on.

Dr. Md. Nazrul Islam, Professor, Sher-e-Bangla Agricultural University said that much has been improved in seed production. Presently, most of the seeds come from our local companies. Still we have to do more. To ensure quality of the seeds we need to emphasise on certification system. Many seed companies do not have state of the art seed laboratories. So they do not know what they are selling to the farmers. When the seed fails all the seed companies are blamed. That's why the seed companies should come forward to get certification from the seed authority.

Afzal Husain, Senior General Manager, Metal Agro Ltd. said that farmers have to know the timing when a particular seed will give maximum output. Some farmers sow seeds ahead of the season to make higher profits. In those cases, the farm output is not so good even if they use good seeds. On an average in every two years a new variety of seed hits the market. There are some dishonest businessmen who sell adulterated seeds copying our packaging system. We need to take stern action against these culprits.

Mahbub Anam, Managing Director, Lal Teer Seed Ltd., informed that earlier, from April to August, we did not have many vegetables products. That's why our vegetable intake was so low. After a long struggle we succeeded to relax the compulsory notification system. It created the opportunity of producing seed varieties that can be

harvested during the barren season. As a result, our vegetable consumption grew significantly. Rather than restricting innovation in seed sector we should improve our monitoring system. At present the government issues only phytosanitary certificate which is not enough to ensure export quality. Buyers want orange certificate which clearly mentions about the productivity of the seed. It is a requirement of the International Seed Testing Institute (ISTA). The government should enhance its capacity to issue this type of certificate that is essential for increasing our seed export.

Rezaul Karim Siddique of BTV's *Mati O Manush* program suggested creation of consciousness among the farmers about the characteristics of a good seed than to regulate seed production. He also suggested universities and private seed companies should team up to do research on seed varieties.

Dr. Md. Zakir Hossain, Deputy Director (Seed Regulation), Seed Certification Agency, Ministry of agriculture pointed out that the sector was seriously suffering from manpower shortage. In our five regional laboratories, we only have a seed analyst in one laboratory. We are trying to hire more analysts. We also cannot regulate the market of non-notified seeds due to shortage of logistic support and manpower. Through notification we can ensure both seed standard and field standard.

F.R. Malik, General Secretary, Bangladesh Seed Association does not support seed notification system because it will restrict seed innovation efforts. Rather we should go for strong monitoring system at the grassroots level. We also need to bring the packaging industries into this effort. There should be a notification system for the packet design of the seed products. It will help a lot to curb on adulteration of seed.

Md. Azim Uddin, Chief Seed Technologist, Ministry of Agriculture, believes if a seed company fails to make profit from its seeds it is their liability. Good seeds will drive bad seeds out of circulation.

Fakhrul Islam, DCCO, Getco Agro Vision Ltd. stressed on a strong database for our seed products. The demand

for vegetable seeds has certainly grown over the last 22 years. It seems that we do not have any systematic demand analysis of our seed products. The government should develop this database with the help of private companies. He pointed out that we are yet to set up an ISTA accredited lab in our country. Nepal has already done it. If we fail to do that we would not be able to increase our seed export.

Dr. Bayezid Moral, Executive Producer, Sabuj Bangla, GTV said seed companies should clearly mention in the packet about the nature and amount of pesticides and fertilizers need to be used to get a good harvest from a particular seed.

In his concluding remark, **Anwar Faruque**, Former Secretary, Ministry of Agriculture said that he was particularly concerned about adulteration and admixturing. We do not find our government agencies active in filing cases against these dishonest businessmen. Instead of strengthening market monitoring system they are going for notification system which will certainly impinge on our seed production. There is an optional certification system in the new seed law. A company can get certification from a third party which will improve its image in the market.

We have successfully implemented PPP in rice research. We should do the same for vegetable seeds. In our seed regulations there is no barrier in this regard. Initially the government has to share the major cost of research. Later on private companies will join hands and develop seed research facilities. We also need to do more field research on the quality of seeds. We have to listen to farmers. If a farmer does not get proper price for his products the seed company is not liable for it.

I agree that there should be an insurance system for natural calamities. It should be handled by insurance companies not government. If crop fails due to bad seeds there can be a compensation mechanism not insurance. The use of unauthorised seeds has gone down owing to high quality of seeds being produced locally. The labels of the packages should be easily readable for the farmers. The government has formed many farmer seed groups. They have been trained on seeds. That's why we see production of seeds at the local level. We need to continue this initiative.

We have already completed maintenance breeding of rice, jute, wheat and potato. We should do same for our major vegetables.

Soon we will be able to establish an ISTA accredited lab in the country. We also need to improve our SCA labs. Before making the certification system compulsory we need to strengthen our certification system.

The private seed companies should strengthen their associations. Only then they will be able to counter unnecessary interventions.

Problems and prospects of quality vegetable seeds

EAM ASADUZZAMAN

IN the context of massive loses in traditional paddy cultivation in consecutive years, farmers in northern districts adopting with new crops pattern as inclining more and more to vegetable farming which is proved to be profitable.

According to the estimation by dept. of agriculture extension (DAE) in Nilphamari around 10 thousand hectares of land have been brought under vegetable cultivation both winter and dry season vegetables which is almost double comparing few couple of years.

On investigation, it is found that a number of big farmers in own land as well as a lot of unemployed youths taking lease of land from landowners have made green vegetable revolution in villages changing their fortunes and socio economic scenario.

Every day, hundreds of loaded vegetable trucks proceed to capital or other big cities as the traders of those places coming to farmers' doorsteps for collecting vegetables.

Even many of the farmers with their own innovation, cultivating mixed crops in same land at the same time and gaining fast.

Aminur Rahman (30), a youth of Balapara village in Sangalshi union of sador upazila cultivated four vegetables in same land in this dry season and got tremendous benefit. He said that first he showed seeds of cucumber in rows and when they become high enough to reach the bamboo made *junglas* (bangla word), he then transplanted *karola* (bitter gourd) in the space between the cucumber plants.

Cucumber plants start yield within 35 days and collecting the highest harvest for few turns, he removes them and allows korolas to use the same junglas. He follows the same process for other two other crops like *Jhingga* (ribbed gourd) and *Borboti* (string bean) like SM Idris Ali, deputy director of Nilphamari

DAE said that as per their estimation, in absence of pragmatic marketing policy, farmers are incurring loss of Tk 200-Tk 250 in a maund (37.5 kg) of paddy whereas innovative young and educative farmers like Aminur getting at least Tk 40-50 thousand in a bigah by cultivating hi-breed vegetables in mixed cropping pattern while producing cost is only Tk 20 thousand.

"We encourage farmers to follow mixed cropping pattern as it is our policy to encourage farmers towards crops diversification after ensuring our food security, the DD added.

District agriculture training officer Aftabuddin Ahmed said that govt. sponsored BADC doesn't produce vegetable seeds on which farmers rely most but in its absence we suggest farmers to use hi breed variety vegetables seeds of brand companies like Lal Teer, ACI, Ispahani, Supreme seeds, Metal seeds, AR Malik, Byers, Raihan seeds and few others.

Farmers alleged that they are facing the problem of adulterated seeds as there are only 120-150 genuine seed dealers in the district who have shops mainly in district or upazila towns having genuine license from the nation seed board and they can't cover entire area.

Taking this opportunity, more than 500 floating and unauthorized traders spreading sacks on earth in different rural markets sale low quality loose seeds which have only 10%-15% germination capacity and give low yield as produced and processed in unscientific way.

Poor and unconscious farmers are the buyers of those seeds as are cheap. For example a packet of 10-gm. seeds of gourd of a brand company has price of Tk 70-80, whereas loose seeds low in quality of that kind is sold at Tk 10-12 only.

Even a forged seed syndicate supply adulterated seeds of various reputed companies in same packets like the original companies and sale them lower than the price original companies luring farmers to use those seeds.

When farmers don't get his desired germination, complained to the floating trader, they (fake traders) blame the brand companies for this misfortune. Even a scuffle triggered at Nilphamari Sakhamacha bazaar between trader and buyer few days ago as his costly cucumber seeds brought disaster, reported locals.

Atiqur Rahmam a vegetable farmer of Angarpara village alleged that he brought a 1 kg packet of ladi's finger seeds (bangla Dheros) of a reputed company from a seed shop in pakerhaat market but 70% seeds did not sprout. As he complained, I did not get remedy as the trader blamed me that there was lot of moisture in my land though I am experienced.

Authority should come forward to combat such malpractice but no such step is visible till now regarding vegetable seeds, said many farmers. District seed certification officer Abu Ala Moudidi said that they certify only five kind of crops seeds like paddy, wheat, potato, sugarcane and jute and verifying of vegetable seeds is out of their jurisdiction.

He however said that if anybody complained we collected sample and send it to laboratory in Rangpur and if found to be adulterated, we filed case.

But he could not remember whether any such case was filed yet and reported that they have manpower shortage, he added.

Many farmers and seed traders opined that about 50% farmers still do not use high yielding vegetable seeds of brand companies as those are very costly and use own traditionally produced seeds preserved in bottles to cultivate in their house yard.

The price of quality seeds should be minimized by using simple packets as presently used packets are costly and increase seeds price, they told further.

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