

# Bangladesh Plant Quarantine Legislation in the Context of Food Security and International Trade

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**Abstract:** Present study has aimed to know the status of Plant Quarantine regulation and its importance in ensuring food security of Bangladesh. Plant Quarantine regulation is very important for safeguarding agriculture of any country. Almost all country has strong Plant Quarantine regulations. Plant Quarantine regulations play very significant role in ensuring food security. Bangladesh sometimes compromises with Plant Quarantine regulations for importing some plants and plant products which are very dangerous for our agricultural development as well as our food security. Bangladesh has taken initiatives for Plant Quarantine regulations, made an act named Plant Quarantine Act, 2011 but working with the rules is difficult. To ensure food security, to compete in the international trade present Plant Quarantine Act, 2011 should be up to dated. To safeguard Bangladesh agriculture for ensuring food security and trade facilitation it is required to comply with the WTO-SPS Agreement for which Plant Quarantine regulations has to be revised and work closely with the IPPC of FAO.

**Key words:** Plant Quarantine; Legislation; Food Security, WTO, SPS, IPPC, FAO.

## INTRODUCTION

Bangladesh is a contracting party to the International Plant Protection Convention (IPPC) of Food and Agriculture Organization (FAO) of the United Nations and a member country of the World Trade Organization (WTO). The Agreement on the Application of Sanitary and Phytosanitary Measures is one of the Agreements of the WTO concluded as a result of Uruguay Round of Multilateral Trade Negotiations which is mandatory to all nations to comply with the negotiations.

Food security is a situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. After the 2008 global food price crisis, food security moved higher on the policy agenda in a number of countries, including Bangladesh, India, and Myanmar etc.

The key elements of food security are: (a) availability of enough food from domestic production and/or imports to meet the demand, (b) access to food to all people at all times through enough incomes and affordable prices, (c) proper hygiene and sanitary practices and safe water for utilization of food to have optimum impact on health and nutrition, and (d) a regulatory framework in place and its proper implementation for controlling contamination to ensure food safety.

So when we talk about food security status in Bangladesh, we need to keep in mind that it's not only about food production. Food security is a larger canvas - where production of food is definitely an important part. Bangladesh imports foods, planting materials like seed, seedlings, saplings etc. During import of these materials invasive alien species (IAS) can enter into Bangladesh which is absent in Bangladesh and which cause serious damage for crops.

## ENSURING FOOD SECURITY FOR ALL

Ensuring food security for all people at all times is the overarching objective of the National Food Policy, in line with the prime food security objective of the Sixth Five Year Plan. The successive HIES Reports have shown that average per capita food consumption increased over the past years, reaching 1001 grams per day, according to HIES 2010. However, as can be seen from Table 3.1, per capita daily food consumption of the lowest income group was about 40% lower than consumption of the highest income group. The reason for almost similar volume of food consumption by rural and urban households, despite differences in their income, may be explained by the Engle's law phenomena of spending lesser proportion of incremental income on food with rising income. Also, the successive HIES Reports show that there has been compositional changes in food consumption over the past years. For example, per capita daily rice consumption decreased by 35 grams for urban households during 2000-2010 period, compared to a decline of 18 grams for rural households during the same period. For some high value food items such as meat, fish, milk and edible oil, consumption increased both for rural and urban households, but the magnitude of increase was higher for urban than for rural households (HIES 2010). By analyzing the HIES 2010 data, the World Bank Report (2013) showed that 38.4% households were suffering from moderate calorie deficiency (calorie intake less than 2122 kcal/capita/day), while 16.1% were severely calorie deficient (calorie intake less than 1805 kcal/capita/day). Thus food security for all people at all time is yet to be achieved.

**Table 1: Per capita daily food intake (gram) by monthly household income group**

Monthly household income group (Tk.)	Per capita food intake (gram/ day)		
	National	Rural	Urban
Less than 1500	929	935	849
3000-3999	1088	949	891
6000-6999	1173	982	948
10000-12499	1233	1037	983
20000-24999	1487	1103	1013
Above 35000	1339	1203	1114
Total	1001	1019	997

Source: HIES 2010.

### CONSUMPTION OF FOOD BY MAJOR FOOD GROUPS

Table 2 shows per capita consumption of foods disaggregated by types of foods for the three survey years: 2000, 2005 and 2010. Consumption of cereal foods, dominated by rice, decreased during the period, though it is still higher than the desirable intake level. Consumption of potato, vegetables, milk/milk products, edible oil, meat and fish increased during the period, although the levels of consumption were far below the requirement. Increase in consumption is notable for products like fruits, animal and poultry products and spices.

**Table 2: Per capita (gram/day) food intake by food items**

Food items	2000	2005	2010	Desirable intake	
				Gram/day	% energy
Cereals	486.7	469.2	463.9	400	56
Rice	458.5	439.6	416.0	350	49
Potato	55.0	63.3	70.3	100	4
Vegetables	140.5	157.0	166.1	300	4
Fruits	28.4	32.5	44.7	100	3
Pulses	15.6	14.2	14.3	50	6.5
Milk/ milk production	29.7	32.4	33.7	130	3.5
Meat, poultry, egg	18.5	20.8	26.2	70	4
Edible oil	12.8	16.5	20.5	30	11
Fish	38.5	42.1	49.5	60	3
Species, candy	50.0	53.4	66.2	20	2
Sugar/ gur	6.9	8.1	8.4	20	3
Miscellaneous	10.0	38.2	36.5	na	na
Total	893.1	947.7	1000.0	1280	na

Source: HIES 2010. Desirable intake is obtained from Desirable Dietary Pattern for Bangladesh, NFPCSP/FAO study, 2013.

### MAJOR AGRICULTURAL PRODUCTION, IMPORT AND EXPORT EARNINGS

Besides, the full cycle of food production is equally important. Maintaining proper hygiene and sanitary practices are crucial. Unless foods are produced safe, consumers would remain exposed to unsafe food. This is a public health concern. From farm-to-fork food can be contaminated, adulterated at any stage of production, marketing, preserving and distribution cycle. Unless necessary regulatory frameworks are in place; and even if, those are in place, but not enforced than we are asking for a great public health danger.

Right at the moment Bangladesh is a case of success as far as producing food particularly rice, wheat, maize, soybean, potato etc. Over the last three/four decades, Bangladesh as well as entire South Asia has overcome the problem of food availability. All countries now have enough food for people to meet their minimum energy requirements.

**Table 3: Major Agricultural Production of Bangladesh**

Agricultural Production	2013	2014	2015	2016
Rice Production	51,534,000 MT	52,325,620 MT	51,278,400 MT	52,590,000 MT
Wheat Production	1,255,000 MT	1,303,000 MT	1,348,000 MT	1,348,186 MT
Maize Production	1,548,000 MT	2,124,000 MT	2,271,998 MT	2,445,576 MT
Soybean Production	58,037 MT	112,024 MT	91,496 MT	92,181 MT

Over the last three decades, food production and availability has increased at a good pace in Bangladesh as well as entire of South Asia. Food production grew annually by 1.2% between 1980 and 2010 regionally. This increase was attributed to the impressive performance of Bangladesh, India and Pakistan, where per capita food production increased by 1.1%, 1.4% and 1.0% respectively. While India and Pakistan are self-sufficient in the production of most food commodities, Bangladesh and Sri Lanka have also become self-reliant in production of their staple rice. As a result, South Asia's per capita food availability increased from 2,259 kcal/person/day to 2,434 kcal/person/day between 1991 and 2011.

**Table 4: Agricultural Imports of Bangladesh**

Agricultural Imports	2010	2011	2012	2013
Rice Imports	679,603 MT	1,310,873 MT	44,842 MT	260,256 MT
Wheat Imports	3,210,008 MT	3,112,314 MT	2,089,845 MT	3,376,956 MT
Maize Imports	701,356 MT	529,259 MT	187,352 MT	446,397 MT
Soybean Imports	102,800 MT	100,725 MT	268,490 MT	444,025 MT

Source: <http://www.foodsecurityportal.org/bangladesh>

From the above table it was found that, in each and every year; Bangladesh imports huge amount of food items. Those items must have to be free from contaminants. Those products enter in Bangladesh through different ports of Bangladesh. So, the port authority should follow the plant quarantine legislation strictly.

**Table 5: Agricultural export earning of Bangladesh (Value in Million US\$)**

	2011-12	2012-13	2013-14	2014-15	2015-16
Tea	3.38	2.44	3.71	2.63	1.83
Vegetables	77.43	110.34	147.55	103.24	104.34
Tobacco	68.74	60.18	58.68	68.45	54.98
Cut Flower	50.46	41.43	39.34	11.36	4.73
Fruits	57.16	71.89	61.84	38.48	20.23
Spices	13.68	21.13	21.96	23.24	29.06
Dry Food	37.19	45.24	72.6	94.25	96.04
Others	103.57	195.81	225.61	250.82	292.04

Source: Export Promotion Bureau of Bangladesh

From the above table it is clear that, Bangladesh is earning a lot of foreign exchange by exporting different agricultural products. All the agricultural products should be free from pests and any contaminants. Otherwise our market will be lost. For this reason it is mandatory to follow the plant quarantine rules. So, to safeguard Bangladesh agriculture from damages that can be caused by harmful (Quarantine) pests that can be brought in along with imported commodities and boost up export by complying with the phytosanitary requirement of the importing country following plant quarantine legislation is a must.

Thanks to farm mechanization, agricultural technology developments, better breeding and farm subsidy and other policy supports, farmers in Bangladesh are still being able to grow more crops from fast depleting farmlands. Resources (land, water, etc.) are scarce; demand for food is on the rise thanks to an increasing population. Choice is limited here. Higher demand for housing, road-building and industrialization is taking away fertile farmlands while challenge is getting bigger and bigger in meeting greater food demand of increasing population. Though the birth rate is stabilized yet because of an existing large population base, Bangladesh needs to grow nearly half a million tones of additional rice year-on-year just to keep pace with the increased number of mouths to be fed.

Bangladesh is being able to self-sufficient in rice production. In wheat, we're largely import-dependent but in maize growth have been fantastic over the last two decades. There has been tremendous growth in yields of potato and vegetables and rise in fish

productions is quite significant as far as meeting nutritional needs is concerned. But still for the poorer section of the population, rice-centric dietary habit and serious absence of dietary diversities remain a great challenge.

Bangladesh has done well and we all know that it achieved some of the vital MDGs even ahead of time. In fact, Bangladesh is one of the forerunners in achieving the first of eight Millennium Development Goals – reducing extreme poverty rates by a half (from 58% to 29%) between 1990 and 2015. Recently United Nation has initiated Sustainable Development Goals (SDGs), we have to work together to achieve SDGs. For this reason, agricultural development is necessary. To earn foreign exchange, we have to export more agricultural products and have to import less agricultural products. To compete in the international market, our agricultural products must have to be international standard. For this reason our plant quarantine legislations should be up dated. To make our agriculture sustainable we have to become more aware in importing agricultural products.

## PLANT QUARANTINE LEGISLATION

Article-1 of the IPPC clearly defines that the purpose of securing common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control, the contracting parties undertake to adopt the legislative, technical and administrative measures specified in the Convention and in supplementary agreements pursuant to Article XVI. Article-IV describes that:

1. Each contracting party shall make provision, to the best of its ability, for an official national plant protection organization with the main responsibilities set out in Article-IV.
2. The responsibilities of an official national plant protection organization shall include The following:
  - a) the issuance of certificates relating to the phytosanitary regulations of the importing contracting party for consignments of plants, plant products and other regulated articles;
  - b) the surveillance of growing plants, including both areas under cultivation (inter alia fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a);
  - c) the inspection of consignments of plants and plant products moving in international traffic and, where appropriate, the inspection of other regulated articles, particularly with the object of preventing the introduction and/or spread of pests;
  - d) the disinfection or disinfection of consignments of plants, plant products and other regulated articles moving in international traffic, to meet phytosanitary requirements;
  - e) the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence;
  - f) the conduct of pest risk analyses;
  - g) to ensure through appropriate procedures that the phytosanitary security of consignments after certification regarding composition, substitution and reinfestation is maintained prior to export; and
  - h) training and development of staff.
3. Each contracting party shall make provision, to the best of its ability, for the following:
  - a) the distribution of information within the territory of the contracting party Regarding regulated pests and the means of their prevention and control;
  - b) research and investigation in the field of plant protection;
  - c) the issuance of phytosanitary regulations; and
  - d) the performance of such other functions as may be required for the implementation of this Convention
4. Each contracting party shall submit a description of its official national plant protection organization and of changes in such organization to the Secretary. A contracting party shall provide a description of its organizational arrangements for plant protection to another contracting party, upon request.

As per APPENDIX XVIII The role of IPPC contact Points are the following:

The IPPC contact points are used for all information exchanged under the IPPC between contracting parties, between the Secretariat and contracting parties and, in some cases, between contracting parties and Regional Plant Protection Organizations (RPPOs).

The IPPC contact point should:

- have the necessary authority to communicate on phytosanitary issues on behalf of the contracting party, i.e. as the contracting party's single IPPC enquiry point;

- ensure the information exchange obligations under the IPPC are implemented in a timely manner;
- provide coordination for all official phytosanitary communication between contracting parties related to the effective functioning of the IPPC;
- redirect phytosanitary information received from other contracting parties and from the IPPC Secretariat to appropriate official(s);
- redirect requests for phytosanitary information from contracting parties and the IPPC Secretariat to the appropriate official(s);
- keep track of the status of appropriate responses to information requests that have been made to the contact point etc.

In relation to imports for preventing the introduction and/or spread of regulated pests into their territories, Article VII clearly specified that contracting parties shall have sovereign authority to regulate, in accordance with applicable international agreements, the entry of plants and plant products and other regulated articles and, to this end, may:

- (a) prescribe and adopt phytosanitary measures concerning the importation of plants, plant products and other regulated articles, including, for example, inspection, prohibition on importation, and treatment;
- (b) refuse entry or detain, or require treatment, destruction or removal from the territory of the contracting party, of plants, plant products and other regulated articles or consignments thereof that do not comply with the phytosanitary measures prescribed or adopted under subparagraph (a);
- (c) prohibit or restrict the movement of regulated pests into their territories;
- (d) prohibit or restrict the movement of biological control agents and other organisms of phytosanitary concern claimed to be beneficial into their territories.

In order to minimize interference with international trade, each contracting party, in exercising its authority under paragraph 1 of this Article, undertakes to act in conformity with the following:

- (a) Contracting parties shall not, under their phytosanitary legislation, take any of the measures specified in paragraph 1 of this Article unless such measures are made necessary by phytosanitary considerations and are technically justified;
- (b) Contracting parties shall, immediately upon their adoption, publish and transmit phytosanitary requirements, restrictions and prohibitions to any contracting party or parties that they believe may be directly affected by such measures.
- (c) Contracting parties shall, on request, make available to any contracting party the rationale for phytosanitary requirements, restrictions and prohibitions.
- (d) If a contracting party requires consignments of particular plants or plant products to be imported only through specified points of entry, such points shall be so selected as not to unnecessarily impede international trade. The contracting party shall publish a list of such points of entry and communicate it to the Secretary, any regional plant protection organization of which the contracting party is a member, all contracting parties which the contracting party believes to be directly affected, and other contracting parties upon request. Such restrictions on points of entry shall not be made unless the plants, plant products or other regulated articles concerned are required to be accompanied by phytosanitary certificates or to be submitted to inspection or treatment.
- (e) Any inspection or other phytosanitary procedure required by the plant protection organization of a contracting party for a consignment of plants, plant products or other regulated articles offered for importation, shall take place as promptly as possible with due regard to their perishability.
- (f) Importing contracting parties shall, as soon as possible, inform the exporting contracting party concerned or, where appropriate, the re-exporting contracting party concerned, of significant instances of non-compliance with phytosanitary certification. The exporting contracting party or, where appropriate, the re-exporting contracting party concerned, should investigate and, on request, report the result of its investigation to the importing contracting party concerned.
- (g) Contracting parties shall institute only phytosanitary measures that are technically justified, consistent with the pest risk involved and represent the least restrictive measures available, and result in the minimum impediment to the international movement of people, commodities and conveyances.
- (h) Contracting parties shall, as conditions change, and as new facts become available, ensure that phytosanitary measures are promptly modified or removed if found to be unnecessary.

- (i) Contracting parties shall, to the best of their ability, establish and update lists of regulated pests, using scientific names, and make such lists available to the Secretary, to regional plant protection organizations of which they are members and, on request, to other contracting parties.
- (j) Contracting parties shall, to the best of their ability, conduct surveillance for pests and develop and maintain adequate information on pest status in order to support categorization of pests, and for the development of appropriate phytosanitary measures. This information shall be made available to contracting parties, on request.

A contracting party may apply measures specified in this Article to pests which may not be capable of establishment in its territories but, if they gained entry, cause economic damage. Measures taken against these pests must be technically justified.

Contracting parties may apply measures specified in this Article to consignments in transit through their territories only where such measures are technically justified and necessary to prevent the introduction and/or spread of pests.

Nothing in this Article shall prevent importing contracting parties from making special provision, subject to adequate safeguards, for the importation, for the purpose of scientific research, education, or other specific use, of plants and plant products and other regulated articles, and of plant pests.

Nothing in this Article shall prevent any contracting party from taking appropriate emergency action on the detection of a pest posing a potential threat to its territories or there port of such a detection. Any such action shall be evaluated as soon as possible to ensure that its continuance justified. The action taken shall be immediately reported to contracting parties concerned, the Secretary, and any regional plant protection organization of which the contracting party is a member.

Now what see in our legislation? There is a provision for making authority in our Plant quarantine Act, 2011 but till date there has been a poor progress in this regard. After seven years of passing the Plant Quarantine Act, the new rules were formulated to work with the Plant Quarantine Act but the rules made were crippled that working with the rules are difficult.

As a contracting party to the IPPC the NPPO should have administrative, legislative and financial authority. But do we empower the NPPO to perform his duty that is aligning with the IPPC and WTO-SPS Agreement. Never had we done it rather we want to reduce the power of NPPO. We often encourage surpassing the Plant Quarantine Legislation to product coming in that does not comply with the phytosanitary legislation. So, everyday new species of harmful organisms are introducing in our country. If we often our eyes we see everywhere there new species of mealybug those attacks currently more than 100 species of crops, we see giant mealybug, we experienced the destructive wheat blast in the north west of Bangladesh, *Tutaabsolutaa* destructive pest of tomato and other solanaceous crops were intercepted in Bangladesh in 2016, Occurrences of citrus greening diseases is common, Parthenium weed which is very much devastating is engulfing the border areas of Bangladesh and so on which is leading us to food insecurity. Because pest eats our food, increases crop production cost, harm environment, kills predator's damages the whole ecosystem leading to poor production.

However, more importantly the implementation of the legislation is hindered by the pressure group so, in some cases products are coming in the port not complying the with the phytosanitary import requirements or with foreign pests (IAS) are bound to release by the Plant Quarantine Officer in the Port due to high pressure put on them. This encourages some unscrupulous plant Quarantine Officers to take advantage of the situations.

According to the WTO-SPS Agreement and IPPC convention every country should have a National Plant Protection Organization (NPPO) which is an authority supposed aligning the works for preventing and introduction of foreign pests when products are imported to safeguard the country's agriculture and comply with the phytosanitary import requirements when products are exported. But when the NPPO do not have the administrative, legislative and financial authority can hardly do something. The problem lies with Plant Quarantine system in place is more likely:

- a) Instability within the organization so, frequent transfer and posting occurs resulting expertise in the line of Plant Quarantine are not developing;
- b) No strategic Plant Quarantine plan
- c) Lack of awareness among all stakeholders including policy makers
- d) Legislation does not allow any financial authority
- e) Lack of expertise
- f) Legislation does not allow the stakeholders participation
- g) Lack of training facility
- h) Attention did not given to the infrastructural, laboratory and logistic support
- i) No power of eradication program
- j) Taking any emergency action is impossible
- k) No efforts for making competency in the phytosanitary inspection and detection of pest and diagnosis of diseases
- l) No provision for survey and surveillance
- m) No team for conducting PRA
- n) Poor understandability among all stakeholders, and there are many more

## CONCLUSION

Now every nation is making their Plant Quarantine regulations more stringent where we are relaxing our Plant Quarantine regulations resulting Bangladesh is getting the hubs of pests so day by day. So, it can be assume that our food security will be vulnerable in the coming days and also we will lose our international trade in agriculture. We must think that in 2013-2014 our import of agricultural commodity were around 7.5 lac M.T. and export were around 8.0 lac M.T. . After five years we only extend our export around 2.0 Lac M.T where as our import were increased around 50 lac M.T. So, we have more or less no time to align with the International organizations for retaining our market access and food security.

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