

# Consumer Gains from Trade

## *A Case Study on Promoting Trade between Bangladesh and Tripura, India in Specific Agricultural Commodities*

**Taramani Agarwal**, Senior Programme Officer, CUTS International

**Sumanta Biswas**, Senior Programme Officer, CUTS International

**Sayandeep Chattopadhyay**, Research Associate, CUTS International

**Prithviraj Nath**, Associate Director, CUTS International

### Contents

Abstract .....	2
Background .....	3
<i>Tripura</i> .....	3
Objective.....	4
Methodology.....	4
Existing Legal and Regulatory Framework .....	5
<i>Quarantine Regulations and Sanitary and Phyto-Sanitary Measures</i> .....	5
<i>Food Safety Regulations</i> .....	7
<i>Import Tariffs</i> .....	8
Secondary Data on Production and Consumption of Selected Vegetables .....	9
Findings from the Ground .....	10
<i>Scoping visit to Golbazar, Tripura and Anandabazar, Bangladesh</i> .....	10
<i>Consumer Survey</i> .....	11
<i>Interviews with Wholesalers/Traders and Truckers</i> .....	14
<i>Visit to Choraibari Gate</i> .....	15
<i>Facilitation of Market Access</i> .....	17
Conclusions and Recommendations.....	18
References .....	21

## Abstract

India and Bangladesh have natural and cultural complementarities in terms of producing and exchanging goods for everyday consumption. However, in addition to infrastructure bottlenecks, non-tariff barriers negatively affect trans-boundary trade and exchange. Therefore, this study aimed to facilitate trade in specific agricultural commodities between Bangladesh and Tripura, India through knowledge generation on legal and regulatory framework for cross-border trade in such commodities, identification of solutions to promote market access and evidence-based advocacy to ultimately lead to trade and hence consumer gains.

The study included secondary literature review and primary data collection from 400 consumers spread across Tripura. The analysis revealed that on an average, a household in Tripura would gain INR (Indian Rupees) 73.21 per month per capita in the form of lower price for selected four vegetables. Available statistics (National Sample Survey 68th Round, Government of India) show that on an average monthly per capita consumer expenditure on vegetables by consumers in Tripura is INR 123.43 and on overall food consumption it is INR 895.60. This gain represents more than 59 per cent of average monthly per capita consumption expenditure on vegetables by consumers in Tripura and more than seven per cent on overall food consumption. In other words, consumers in Tripura can access selected vegetables at half the price that they are paying if they are sourced from neighbouring Bangladesh.

Thus, it argues that there is a strong case for promoting trade in agricultural commodities between Bangladesh and Tripura, India, given the gains that can accrue in terms of better availability and lower price to the end consumers in Tripura. In addition, there are possibilities of benefits via formalising of informal trade that thrives in absence of a formal channel and framework for flow of such commodities across borders.

## Background

India and Bangladesh have natural complementarities in terms of producing and exchanging goods for everyday consumption. Given their geographical proximity, cultures and consumption patterns, it makes economic sense to trade in agricultural and other products across borders.

However, in addition to infrastructure bottlenecks, which remains to be one of the biggest hurdles to higher cross-border trade between the countries, non-tariff factors such as regulatory barriers, non-harmonisation of standards and certification requirements across borders, lack of institutional and stakeholder capacity, etc. also negatively impact trans-boundary cooperation and exchange. While both India and Bangladesh have been working on improving infrastructure, both at the border points and along the corridors connecting them, in a phased manner, non-tariff barriers continue to pose a substantial hurdle in smooth flow of cross-border trade.

Concerns for health and safety of plants, animals and human life are legitimate, and so are the quarantine and sanitary and phyto-sanitary (SPS) measures that each country puts in place to protect the same. Therefore, it is necessary to periodically assess whether such domestic regulations aimed at protecting and safeguarding plants, animals and human life go on to become restrictive to smooth flow of goods and services across borders, leading to less-than-optimum utilisation of economic potential and ultimately adversely impacting consumer welfare.

Thus, it becomes important to weigh relevant regulations against consumer gains and look at possible ways out to work around such regulations so that consumer gains can be maximised without threatening concerns for health and safety.

## Tripura

Tripura is a state in North Eastern region of India with an area of 10,491 square kms (4,051 square metres). It is bordered by Bangladesh to the north, south, and west, and by the Indian states of Assam and Mizoram to the east. As per the Census of India, 2011, the state has a population of 3.7 million, constituting 0.3 per cent of India's population. The Bengali-speaking population constitute the ethno-linguistic majority in Tripura and indigenous communities, known in India as scheduled tribes, constitute about 30 per cent of its population. The state is mainly hilly and extensively covered with forest.

The cropping pattern in Tripura is characterised by two distinct farming systems – settled cultivation in the plains and shifting cultivation in the hills. Paddy, pulses and oilseeds are the major crops grown in the state. According to the Department of Agriculture, Government of Tripura, paddy is grown in 55 per cent of gross cropped area (GCA) whereas pulses and oilseeds and other crops altogether cover about five per cent of GCA. Fruits and vegetables are grown in 21 per cent of GCA, 10 per cent of GCA is under rubber and 9 per cent under other miscellaneous crops like tea, medicinal plants, etc.

In terms of connectivity with the rest of India, the state lies in a geographically disadvantageous location with only one major highway, National Highway (NH) 8, connecting the state with the rest of the country. The distance of Agartala, the capital of Tripura, is approximately 550 kms from Guwahati, the capital of Assam, 375 kms from Aizawl, the capital of Mizoram and 1,500 kms from Kolkata, the capital of West Bengal (through the chicken neck corridor in Siliguri, West Bengal). Due to its geographical isolation, the state faces challenges in terms of overall connectivity and economic growth.

In contrast, the distance between Agartala and Dhaka, the capital of Bangladesh, is about 130 kms. Some other commercial hubs/district headquarters of Bangladesh are also close to Agartala – for example, Brahmanberia is about 40 kms, Comilla is about 60 kms, Narsingdi is about 80 kms and so on. The geographic proximity and cultural/linguistic similarities between Tripura and Bangladesh makes for a strong case in favour of better connectivity and economic exchange between them.

## Objective

With this background, this study was undertaken by CUTS International with support from The Asia Foundation. This brief and focussed initiative is aimed to facilitate trade in specific agricultural commodities between Bangladesh and Tripura through knowledge generation, evidence-based advocacy and facilitative public-private dialogues.

The specific purposes were as follows:

- Identification of specific agricultural commodities (food items) that are high in demand across borders and stand to generate substantial consumer and producer gains if trade in such items is facilitated
- Estimation of possible consumer gains from trade in such items
- Generation of knowledge and understanding on legal and regulatory framework (both domestic and international, particularly quarantine regulations and SPS measures) for facilitating cross-border trade in such items
- Identification of solutions to promote market access for the identified agricultural commodities across borders, ultimately leading to consumer gains
- Undertaking of appropriate advocacy through public-private dialogues to build understanding and consensus on the need to facilitate market access on identified agricultural commodities and consumer gains that it will be generated
- Preparation of an action agenda to facilitate market access in identified agricultural commodities and facilitate specific actions by both private and public agencies

## Methodology

The study used both secondary and primary data and other information to come up with specific recommendations towards promoting trade in specific agricultural commodities between India (in this case, Tripura) and Bangladesh. This included:

- Literature review on agricultural production in Tripura and Bangladesh
- Secondary data on production and consumption of vegetables in Tripura – based on this, four vegetables usually consumed in Tripura were selected, viz. potato, green chilli, tomato and brinjal (aubergine)
- Existing regulatory arrangements on cross-border trade for selected products to understand the present regulatory status and hurdles to such trade
- Scoping visits to largest wholesale market in Agartala, Tripura and the closest wholesale market across the border in Brahmanberia, Bangladesh to understand price variations of common vegetables
- Consumer survey for primary data collection on consumption trends and prices of four selected vegetables in selected retail markets of Tripura

- Key informant interviews with vegetable wholesalers/traders and truckers catering to major markets across Tripura to understand possible demand-supply and price gaps and also to estimate transport costs
- Visit to Choraibari Gate, the major land entry for cargo coming to Tripura from other states of India, to get an estimate of the quantum of vegetables coming in from other Indian states
- Focussed consultations and interviews with key informants including government officials, private players, associations and chambers on both sides of the borders to gather perceptions on hurdles to cross-border trade and also possible solutions
- Concrete policy and practice prescriptions for improving trade in specific agricultural commodities between Bangladesh and India (in this case, Tripura)

## Existing Legal and Regulatory Framework

### ***Quarantine Regulations and SPS Measures***

Being a member of the World Trade Organisation (WTO), India adheres to the provisions of the WTO Agreements on SPS measures and technical barriers to trade (TBT) regulations and imposes legitimate safety-related restrictions on agricultural imports, particularly food items, into the country. To import food items, in this case plant items for consumption and/or processing into India, the item needs to go through a Pest Risk Analysis (PRA), which essentially tests the incoming plant/plant material for threatening pests, diseases and health hazards.

Specific food items need to be tested for such hazards/threats and accordingly included in the appropriate government regulation – in this case,

the *Plant Quarantine (PQ) Order (Regulation of Import into India), 2003 and its amendments*.

Moreover, there are other regulations that mandate testing of samples of food items before their entry is allowed into India. In this study, we have, however, limited our discussion to regulations that impact trade on non-processed agricultural items (fresh vegetables/tubers), viz. the PQ order.

The relevant Schedules of India's PQ Order for commodities under consideration are as follows:

- **SCHEDULE-IV** – List of plants/planting materials and countries from where import is prohibited along with justification
- **SCHEDULE-V** – List of plants and plant materials restricted import permissible only with the recommendation of authorised institutions with additional declarations and special conditions
- **SCHEDULE-VI** – List of plants/plant materials permitted to be imported with additional declarations and special conditions (Consolidated up to Sixth Amendment 2014, dated December 10, 2014)
- **SCHEDULE-VII**– List of plants/planting materials where imports are permissible on the basis of phyto-sanitary certificate issued by the exporting country, the inspection conducted by inspection authority and fumigation, if required, including all other general conditions

Subject to certain pre-conditions that are to be mentioned in the phyto-sanitary certificate, an analysis of India's PQ Order reveals the following:

- Potato can be imported only from Egypt, Pakistan and Turkey for consumption purposes and from Germany for processing

purposes. There are, however, strict norms for import of potato for planting/sowing purposes. Restricted import of potato for planting is allowed inside India only on the recommendation of Central Potato Research Institute, Shimla, India and by the Department of Agriculture Cooperation & Farmers Welfare in the Ministry of Agriculture & Farmers Welfare, Government of India.

- Green chilli cannot be imported for consumption purposes at all but can be imported for sowing purposes from any country with certain pre-conditions.
- Tomato cannot be imported for consumption purposes at all, but can be imported from Thailand and Israel for sowing purposes.

- Brinjal (aubergine) can be imported for consumption purposes only from Thailand. It can, however, be imported for sowing purposes from China, Europe, Japan, Philippines, Vietnam, Thailand, US, Jordan, Israel, Russia and Taiwan, with various pre-conditions.

Table 1 details India's PQ Order regarding each of the items under consideration. They reflect that without the inclusion of Bangladesh as a permitted country of import for consumption purposes for these items, no cross-border import on these items from Bangladesh can occur.

**Table 1: India's PQ Order on Potato and Other Vegetables**

Solanum tuberosum (Potato) - Tubers for consumption		
Country of Origin	Additional declarations required to be incorporated into Phyto-sanitary Certificate – Free from:	Special conditions of import
Egypt	<ul style="list-style-type: none"> <li>a. Phomaexigua var. foveata (Gangrene)</li> <li>b. Phytophthoracryptogea (tomato foot rot)</li> <li>c. Potato Spindle Tuber Viroid (PSTVd)</li> <li>d. Pratylenchusgoodeyi (banana lesion nematode)</li> </ul>	<ul style="list-style-type: none"> <li>I. Free from quarantine weed seeds, soil and other plant debris.</li> <li>II. Potato tubers shall be washed with clean water before packing.</li> <li>III. Potato tubers shall be treated with a recommended sprout inhibitor.</li> <li>IV. Prophylactic chemical treatment of packages and empty container</li> <li>V. Points of entry for this consignment shall be as per the Clause 3 (14), Chapter-II of PQ Order, 2003.</li> </ul> <p>The treatment should be endorsed on phyto-sanitary certificate issued at the country of origin/re-export.</p>
Pakistan	<ul style="list-style-type: none"> <li>a. Clavibactermichiganensis subsp. Sepedonicus (Potato ring rot)</li> <li>b. Ditylenchusdepsaci (Stem and Bulb nematode)</li> <li>c. Ditylenchus destructor (Potato tuber nematode)</li> <li>d. Globodera (Hetrodera) pallid (Potato cyst nematode)</li> <li>e. Globodera (Hetrodera) rostochiensis (Potato cyst nematode)</li> <li>f. Potato mop-top virus g. Pratylenchusneglectus (California meadow nematode)</li> <li>g. Pratylenchusscribneri</li> </ul>	
Turkey	<ul style="list-style-type: none"> <li>a. Clavibactermichiganensis subsp. Sepedonicus (Potato ring rot)</li> <li>b. Ditylenchusdepsaci (Stem and Bulb nematode)</li> <li>c. Ditylenchus destructor (Potato tuber nematode)</li> <li>d. Globodera (Hetrodera) pallid (Potato cyst nematode)</li> <li>e. Globodera (Hetrodera) rostochiensis (Potato cyst nematode)</li> <li>f. Leptinotarsadecemlineata (Colorado potato beetle)</li> <li>g. Meloidogynechitwoodi (columbia root-knot nematode)</li> <li>h. Meloidogyneethiopica (Root-knot nematode)</li> <li>i. Phytophthoracryptogea (tomato foot rot)</li> </ul>	

**Solanum tuberosum (Potato) - Tubers for processing**

Germany	<ul style="list-style-type: none"> <li>a. <i>Clavibactermichiganensis</i> subsp. <i>sepedonicus</i> (Potato ring rot)</li> <li>b. <i>Ditylenchus destructor</i> (Potato tuber nematodes)</li> <li>c. <i>Ditylenchusdipsaci</i> (Stem &amp; bulb nematodes)</li> <li>d. <i>Globodera</i> (<i>Heterodera</i>) <i>rostochiensis</i> (Potato cyst nematodes)</li> <li>e. <i>Globodera</i> (<i>Heterodera</i>) <i>pallida</i> (Potato cyst nematodes)</li> <li>f. <i>Leptinotarsadecemlineata</i> (Colorado potato beetle)</li> <li>g. <i>Phomaexigua</i> var. <i>foveata</i> (Gangrene)</li> <li>h. <i>Phomaexigua</i> var. <i>linicola</i> (Foot rot)</li> <li>i. <i>Phytophthoracryptogea</i> (Tomato foot rot)</li> <li>j. <i>Polyscytalumpustulans</i> (Skin spot of potato)</li> <li>k. Potato mop-top virus</li> <li>l. <i>Synchytriumendobioticum</i> (Potato wart)</li> </ul>	<ul style="list-style-type: none"> <li>i. Free from quarantine weed seeds, soil and other plant debris.</li> <li>ii. Potato tubers shall be washed with clean water before packing.</li> <li>iii. Prophylactic chemical treatment of packages and empty containers</li> <li>iv. Points of entry for this consignment shall be as per the Clause 3 (14), Chapter-II of PQ Order, 2003.</li> <li>v. Zero spillage during transit from point of entry to processing unit.</li> </ul> <p>The conditions (i) to (iii) should be endorsed on phytosanitary certificate issued at the country of origin/re-export.</p>
---------	---	---

**Solanum melongena - Vegetables for consumption**

Thailand	<p>Free from:</p> <ul style="list-style-type: none"> <li>a. <i>Bactrocerapapayae</i> (papaya fruit fly)</li> <li>b. <i>Pseudococcusjackbeardsleyi</i> (Jack Beardsley mealybug)</li> <li>c. <i>Tetranychusmarianae</i></li> <li>d. <i>Tetranychustruncatus</i> Pest-free area status for papaya fruit fly (<i>Bactrocerapapayae</i>) as per international standards.</li> </ul>	<ul style="list-style-type: none"> <li>i. Pest-free area status for papaya fruit fly (<i>Bactrocerapapayae</i>) as per international standards.</li> </ul>
----------	---	--

Source: <http://plantquarantineindia.nic.in/pgispub/pdf/files/pqorder2015.pdf>

**Food Safety Regulations**

Other than quarantine related regulations, which regulate whether or not a specific plant item is allowed to be imported from a specific country and when allowed, with what precautions, there are food safety regulations promulgated by the Food Safety and Standards Authority of India (FSSAI) that regulate the import of food into India. In case of agricultural produce the regulations that are applicable are the following:

- Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011, and its amendments

- Food Safety and Standards, (Import) Regulations, 2017

Considering the products that are under discussion, the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and its amendments mostly look at “residues” in crops. The relevant sections are:

- 2.3: Residues
  - 2.3.1: Restriction on the use of insecticides.
    - Subject to the Provisions of regulation 2.3.1 (2), no

insecticides shall be used directly on articles of food

Provided that nothing in this regulation shall apply to the fumigants which are registered and recommended for use as such on articles of food by the Registration Committee, constituted under section 5 of the Insecticides Act, 1968 (46 of 1968).

- The amount of insecticide mentioned in Column 2 on the foods mentioned in column 3, shall not exceed the tolerance limit prescribed in column 4 of the Table given below (The regulation along with the mentioned table is attached as an annexure to this document)

The Food Safety and Standards, (Import) Regulations, 2017, deals with clearance, sampling, testing and related regulations for imported food items. The relevant sections are:

- Chapter III (Clearance of Imported Food by the Food Authority)

- Chapter IV (Food Import Clearance for Specific Purposes)
- Chapter V (Storage and Sampling of Imported Food) and
- Chapter VI (Laboratory – Analysis of Samples of Imported Articles of Food)
- Chapter – VII (Scheme for Risk based Food Import Clearance)

### **Import Tariffs**

Over a period of time, with economic reforms, India has gradually liberalised its import policy and restricted import of agricultural products by tariffs and no longer through quantitative restrictions. On various products, with different countries, India imposes different levels of tariffs. At present, India applies 30 per cent tariffs on imports of all vegetables, including potato, green chilli, tomato and brinjal (aubergine). Along with this basic duty, there are other duties too which are levied on import of potato into India, which is stated in Table 2. HS code for potato is 070110 and for other vegetables including green chilli, tomato and brinjal (aubergine) is 070920.

**Table 2: Duty Schedule on Import in India: Potato (HS 070110) and Other Vegetables (HS 070920)**

Basic Duty	30%
Countervailing Duty (CVD)	0%
Central Excise Education Cess Rate	3%
Customs Education Cess Rate	3%
Special CVD	4%

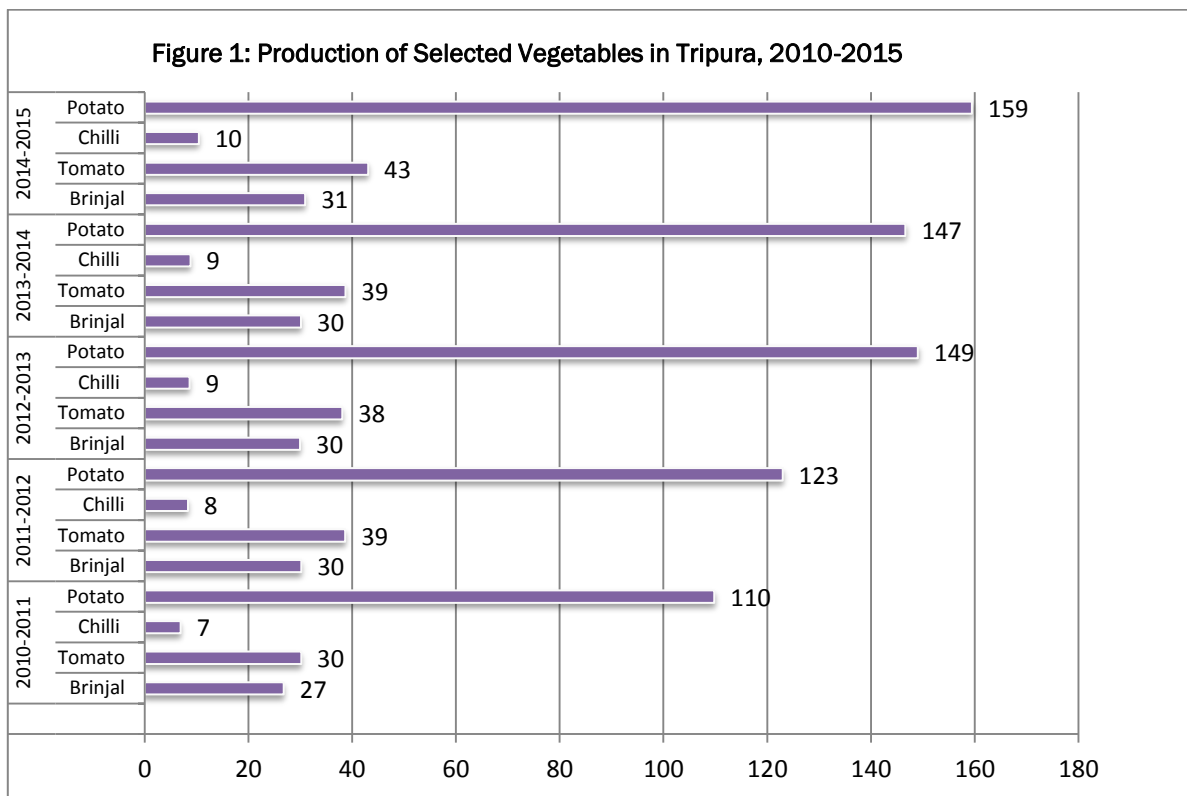
Source: Cybex, EXIM Solutions Ltd, Indian Customs Duty Calculator, Import Duty – Potato and other vegetables, as on March 4, 2017, available at <http://www.cybex.in/>

Note: On the value of the whole consignment (Cost, Insurance and Freight - CIF); One per cent of CIF is added as landing charges, and the whole duty structure is applied on the calculated amount of 1.01X

However, as per the Agreement on South Asian Free Trade Area (SAFTA), as a least developed country (LDC), Bangladesh has duty-free market access to India and barring a minimal list of 25 product lines (tobacco, liquor, etc.), the basic customs duty is not applied to imports from Bangladesh.

## Secondary Data on Production and Consumption of Selected Vegetables

Analysis of available production data of selected vegetables indicates that production has mostly been increasing over the past five years in Tripura. Figure 1 shows the production trend of selected vegetables in Tripura during 2010 and 2015.

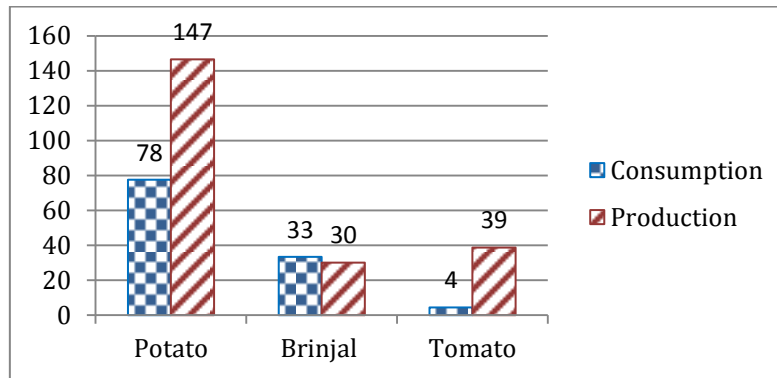


Source: Department of Agriculture, Government of Tripura; in '000 tons

On the other hand, secondary consumption data is available for potato, tomato and brinjal (aubergine), but not for green chilli. While our findings from the ground indicate a different story, a comparison of above-stated production data and yearly consumption estimates based on

National Sample Survey Organisation (NSSO) 68<sup>th</sup> Round Survey Report, 2014, shows a surplus for all the three items (for 2013-14) in Tripura, as shown in Figure 2 (figures in '000 tonnes).

**Figure 2: Consumption and Production of Selected Vegetables in Tripura**



Source: Production Data: Department of Agriculture, Government of Tripura;, Consumption Data: National Sample Survey Organisation 68th Round Survey Report, 2014

## Findings from the Ground

### Scoping Visit to Golbazar, Agartala and Anandabazar, Brahmanberia

Golbazar, Agartala, is the biggest wholesale market of vegetables in Tripura and Anandabazar, Brahmanberia, is the closest

(roughly 40 Km from Agartala) wholesale market across the border in Bangladesh. The idea was to understand price differences between these two markets. It was observed that average prices in Golbazar, Agartala were 40-42 per cent higher than in Anadabazar, Brahmanberia. Table 3 and Figure 3 show the relevant data.

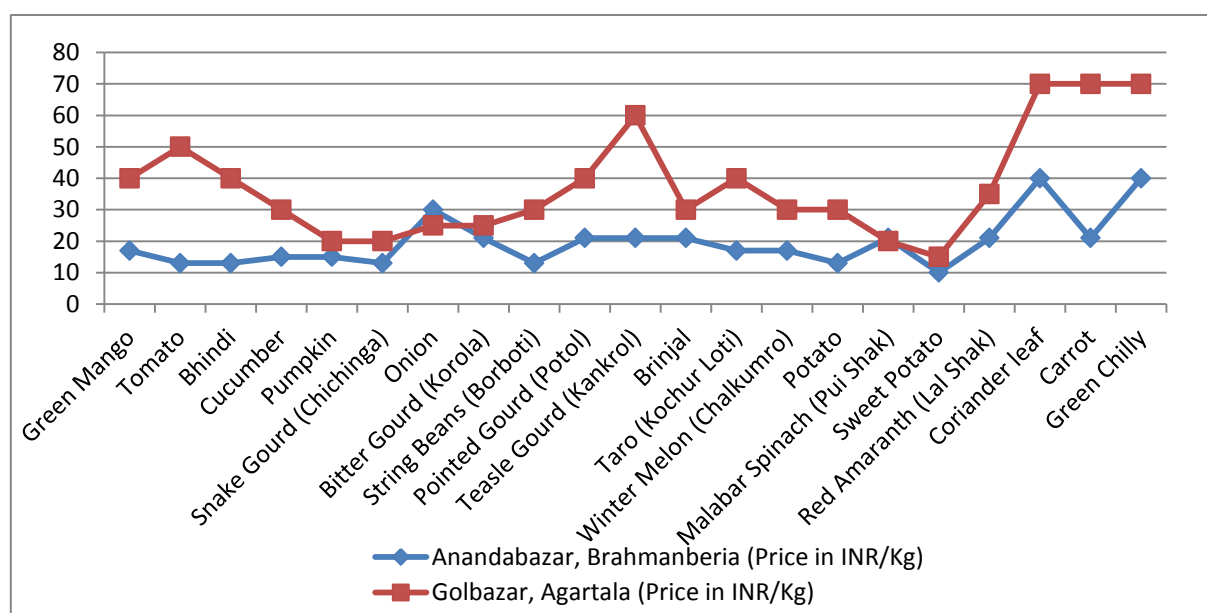
**Table 3: Price Differences between Anandabazar, Brahmanberia and Golbazar, Agartala**

Items	Anandabazar, Brahmanberia	Golbazar, Agartala	Difference in the rate (%)
	Price INR/Kg*	Price INR/Kg	
Potato	13	30	52
Green Chilli	40	70	57
Tomato	13	50	26
Brinjal (Aubergine)	21	30	70
Green Mango	17	40	42.5
Bhindi	13	40	32.5
Cucumber	15	30	50
Pumpkin	15	20	13.3
Snake Gourd ( <i>Chichinga</i> )	13	20	75
Onion	30	25	120
Bitter Gourd ( <i>Korola</i> )	21	25	84

String Beans ( <i>Borboti</i> )	13	30	43.3
Pointed Gourd ( <i>Potol</i> )	21	40	52.5
Teasle Gourd ( <i>Kankrol</i> )	21	60	35
Taro ( <i>Kochur Loti</i> )	17	40	42.5
Winter Melon ( <i>Chalkumro</i> )	17	30	56.6
Malabar Spinach ( <i>Pui Shak</i> )	21	20	105
Sweet Potato	10	15	66.6
Red Amaranth ( <i>Lal Shak</i> )	21	35	60
Coriander leaf	40	70	58
Carrot	21	70	30

Source: Primary data collected in April, 2016; \* Converted from Bangladesh Taka (BDT) using exchange rate: 1 INR=1.2 BDT

Figure 3: Price Differences of Selected Vegetables



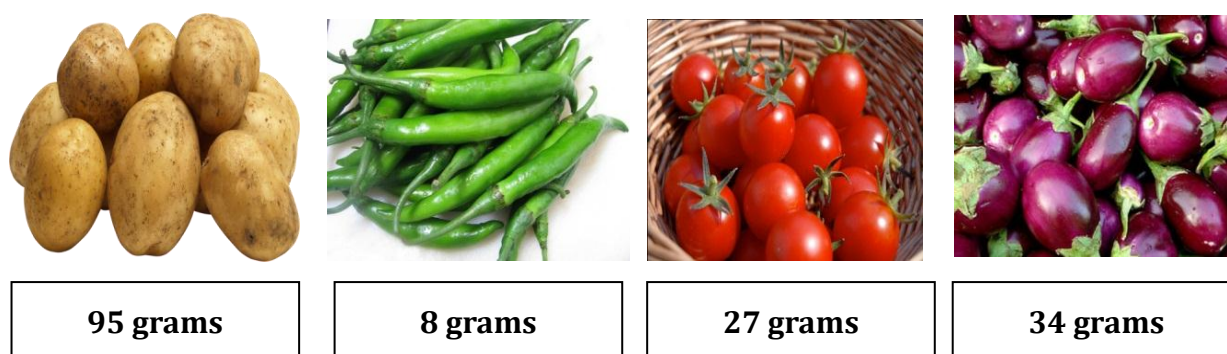
Source: Primary data collected in April 2016

## Consumer Survey

A questionnaire-based consumer survey was conducted in five districts from different parts of the state (viz. South Tripura, Gomati, Udaipur, Shepahijala, West Tripura) to understand the consumption trends and prices of selected vegetables, viz. potato, green chilli, tomato and

brinjal (aubergine). The survey was done with a statistically significant sample size of roughly 400 respondents (confidence level: 95 per cent, confidence interval: 5). Software used was PASS Power Analysis and Sample Size Software. The survey found the following.

**Figure 4: Average Daily Per Capita Consumption of Selected Vegetables**



Source: Primary data collected in April, 2016

The survey findings were quite different from available secondary data on consumption in Tripura and indicated a much higher consumption per person, per day. The survey also found that potato and green chilli are usually

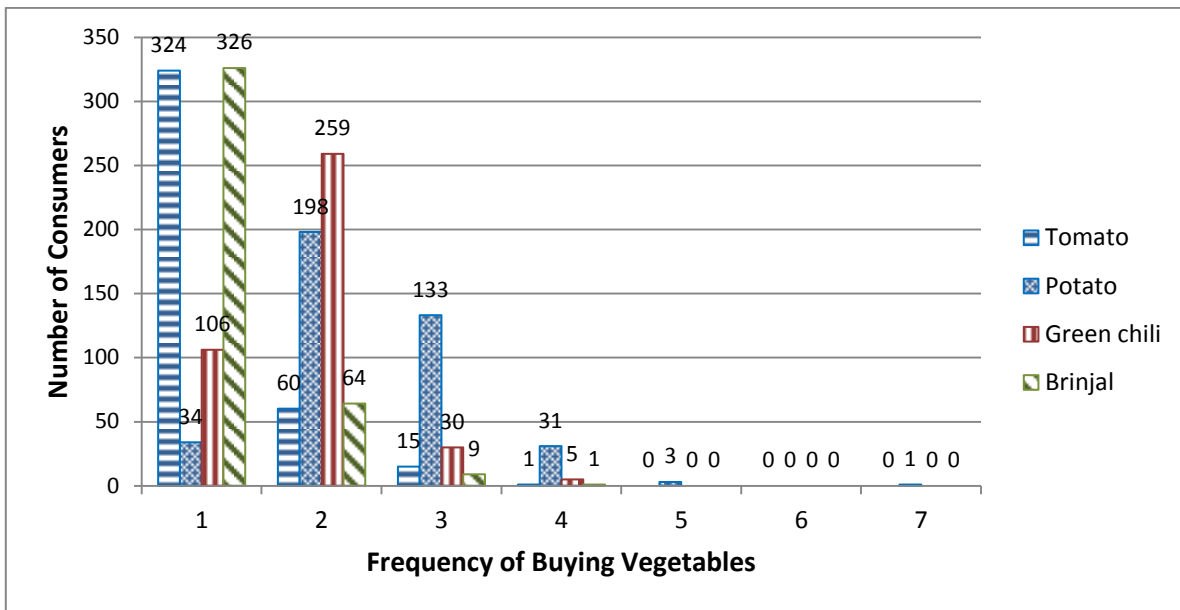
bought twice a week, while tomato and brinjal (aubergine) are usually bought once a week. Table 4 and Figure 5 show the weekly frequency of purchase by representative consumers in Tripura.

**Table 4: Weekly Frequency of Purchase of Vegetables in Tripura**

Item	1 time	2 times	3 times	4 times	5 times	6 times	7 times
Potato	34	198	133	31	3	0	1
Green Chilli	106	259	30	5	0	0	0
Tomato	324	60	15	1	0	0	0
Brinjal (Aubergine)	326	64	9	1	0	0	0

Source: Primary data collected in April 2016

Figure 5: Weekly Frequency of Buying Vegetables in Tripura



Source: Primary data collected in April 2016

The survey also gathered data on average price of the four vegetables. A comparison of their average price, as gathered from the consumer

survey in Tripura, and the price figures gathered from the visit to Brahmanberia, Bangladesh, is given in Table 5.

Table 5: Average Comparative Price of Selected Vegetables

Item	Average Price/KG in Tripura (1)	Average Price/KG in Brahmanberia (2)	(2) after Adding Applicable Duty in India*	Price Difference**
Potato	30	13	14	16
Green Chilli	85	40	44	41
Tomato	50	13	14	36
Brinjal (Aubergine)	35	21	23	12

Source: Primary data collected in April, 2016; \* As per Table 2; \*\* Not accounting for the transport costs separately

Table 6 shows the average weekly and monthly gains in money terms (Indian Rupees) to consumers in Tripura.

**Table 6: Weekly/Monthly Gains to Consumers in Tripura**

Item	Average Weekly Consumption (Kg)	Price Difference	Average Weekly Gain (INR)	Average Monthly Gain (INR) (4 weeks a month)
Potato	6.55	41	269	1074.36
Green Chilli	0.53	36	19	75.89
Tomato	0.98	16	16	62.53
Brinjal	0.97	12	12	46.66
<b>Average Monthly Gain in INR</b>				<b>314.86</b>

Source: Primary data collected in April 2016

Considering four weeks a month, this analysis approximately indicates an average monthly gain of INR 366.08 per household. Assuming an average of five members per household, the per capita monthly gain is INR 73.21. According to the Economic Review of Tripura, 2015-16, in the year 2014-15, average monthly per capita income in Tripura was INR 5,972.17. , available statistics (Key Indicators of Household Consumer Expenditure in India, July 2011-June 2012, National Sample Survey 68th Round, National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India) show that on an average monthly per capita consumer expenditure on vegetables by the consumers in Tripura is INR 123.43 and on overall food consumption it is INR 895.60. Therefore, gain for consumers in Tripura on account of sourcing just these four vegetables from neighbouring Bangladesh (as against bringing them from far-fetched other states of India) will be 0.011 per cent of their average monthly per capita income. This gain also represents more than 59 per cent of average

monthly per capita consumption expenditure on vegetables by the consumers in Tripura and more than eight (8) per cent on overall food consumption.

It may be pertinent to mention that price fluctuation is possible over time and season, and also depends on distance of retail market from place of procurement/re-purchase. Furthermore, these estimations do not specifically take into account the transport costs (from origin to Agartala and also from Agartala to other districts of Tripura) separately since an exact estimate for that could not be arrived at. However, since the calculations are based on final price faced by consumers, it is assumed that transportation cost is already factored in.

### **Interviews with Wholesalers/Traders and Truckers**

A total of 20 wholesalers/traders were interviewed from one major market in each of the five districts of Tripura to understand the trends of

arrival of vegetables from other Indian states and also to get an approximate estimation of the cost and time incurred for transportation.

Respondents unanimously agreed that there is production deficit of vegetables in Tripura and a sizeable quantity of such items is procured from other states of India, particularly West Bengal and Assam, for their daily consumption in Tripura.

The vegetables usually arrive at Golbazar in Agartala and then distributed to other markets across Tripura. The distance between Kolkata and Agartala is approximately 1,500 kilo metres as the road passes via the chicken neck in Siliguri. The distance from Guwahati, the other important origin point for agricultural commodities consumed in Tripura, is approximately 550 kms. This substantial distance adds to the transport costs and hence to the final price to consumers. Some of them also shared that due to easier availability at lower prices across border in Bangladesh, informal trade in agricultural commodities is a common phenomenon.

Given the limited scope of this study, while an exact estimate of transportation charges could not be arrived at, consultations with truckers catering to markets in Tripura revealed that, on an average, transportation costs comes to INR 5-7 per kg of vegetables. The same cargo coming in from nearby districts in Bangladesh will entail a much lower cost. This could either be from Brahmanberia district, approximately 40 kms from Agartala or Narsingdi district, approximately 80 kms from Agartala (considering respective district headquarters), both of which have substantial agricultural production.

An approximate estimation puts the transport costs from nearby district headquarters in Bangladesh at around INR 2 per kilogram of vegetables. The costs are estimated considering both formal (fuel, driver charges, labour charges, etc.) and informal (bribes, informal tolls, etc.) charges along the routes.

While a more accurate estimation of transport costs was not possible due to the limited scope of the study that the effective cost for procuring vegetables in Tripura from other Indian states than from Bangladesh is much higher. This is clearly shown in Table 3, which compares prices in Agartala, Tripura and Brahmanberia, Bangladesh. This is further validated when one compares the time required for cargo to reach from other Indian states to Agartala (8-10 days) and that from nearby Bangladeshi districts (1-2 days). It indicates the advantage of sourcing those products from Bangladesh.

### ***Visit to Choraibari Gate***

Choraibari Gate is at the border between Tripura and Assam, and is the main land entry point for goods coming to Tripura from other Indian states. The Office of Tripura Sales Tax maintains a record of entry of trucks at this gate for major commodities, including food items.

This visit was undertaken to gather an estimate of the quantum of agricultural commodities coming in from other states to Tripura. While the office did not keep a separate record for vegetables (other than potato) coming in due to the usual assorted nature of such cargo, record on the number of trucks carrying potato was available for the months from February-July 2016, and is presented in Table 7.

**Table 7: Date and Month-wise Arrival of Trucks Carrying Vegetables in Choraibari Gate, Tripura**

Date	No. of Trucks (Usual tonnage: 10 tonnes)					
	February	March	April	May	June	July
1	5	0	13	12	11	7
2	7	2	6	8	14	11
3	7	0	8	16	8	16
4	5	0	12	9	19	12
5	3	0	7	14	12	9
6	8	3	8	7	10	11
7	0	4	11	4	8	7
8	2	2	10	15	14	7
9	3	1	8	10	18	15
10	2	6	3	13	10	4
11	2	2	16	14	8	3
12	3	2	7	9	9	1
13	1	3	20	17	6	0
14	1	6	29	11	4	0
15	2	0	15	8	4	7
16	1	6	6	4	14	6
17	0	18	14	3	20	4
18	0	8	10	5	8	1
19	0	6	9	21	5	2
20	0	21	11	8	2	2
21	2	16	8	14	4	1
22	1	7	4	7	9	5
23	0	8	7	11	12	1
24	0	30	14	16	6	0
25	0	3	17	10	8	0
26	1	4	10	7	11	0
27	0	4	10	15	17	4
28	0	0	8	20	10	7
29	2	11	16	8	16	0
30	0	10	12	12	4	0
31	0	13	0	6	0	0
<b>Total number of trucks carrying vegetables</b>	<b>58</b>	<b>196</b>	<b>329</b>	<b>334</b>	<b>301</b>	<b>143</b>
<b>Estimated volume of potato in tonnes</b>	<b>580</b>	<b>1960</b>	<b>3290</b>	<b>3340</b>	<b>3010</b>	<b>1430</b>

Source: Primary data collected at Choraibari gate, May 2016

The above-stated data clearly show that substantial volume of potato is arriving in Tripura from other states of India. On an average, 2,268 tonnes of potato are arriving per month in Tripura from outside the state. Considering such substantial volume, the procurement cost (which includes transport costs) adds to the final price faced by the consumers.

Another important aspect is that all vegetables procured from other Indian states come in at Choraibari gate. From there they are sent to Golbazar, Agartala and then distributed to rest of Tripura. This means that the cost of transportation from Golbazar to other districts is also added to the final price faced by consumers.

On the contrary, since Tripura is surrounded by Bangladesh on all but one side, there could be multiple entry points/routes for vegetables coming in from Bangladesh with specific districts in Tripura procuring them from the adjoining districts in Bangladesh. This, in turn, may result in further reduction of transport and distribution costs.

### **Facilitation of Market Access**

For trade in specific agricultural items to occur between two countries, in this case between India (Tripura) and Bangladesh, market access initiatives are needed to facilitate the process. In terms of facilitative regulations, the *Plant Quarantine Order (Regulation of Import into India), 2003 and its amendments*, needs to suitably incorporate notifications to this end indicating Bangladesh as a country from where vegetables can be imported with appropriate quarantine measures as applicable.

To this end, PRA is to be carried out for each specific product under consideration to understand the risks and recommended measures that need to be included as pre-condition for import of such items into India from Bangladesh.

The usual process for initiating market access for plant materials is as follows:

- Exporter from Bangladesh requests the Bangladesh government for market access in India for specific items that they wish to export.
- The relevant agency in Bangladesh writes to its counterpart in India to request for such market access. The relevant agency of both countries is usually the PQ Authority, which is under the Ministry of Agriculture.
- An Indian importer wishing to import specific items from Bangladesh can also write to the PQ Authority of India to this end and initiate the process for importing such items.
- Following this, the PQ Authority of India requests for specific data, information and samples (for specific items for which market access is requested) from the PQ Authority of Bangladesh.
- These samples of specific items are then tested and analysed in designated Indian institutions/agencies for understanding the risks if such items are imported into India.
- After concluding the tests and analysis, the Indian PQ Authority communicates with its counterpart in Bangladesh to share the results and recommend safeguards for import into India. This process is performed to invite comments and to finally arrive at a consensus on the risks and the safeguards.
- Then the Bangladesh PQ Authority writes back to its counterpart in India with any

comments, observations and concerns, following which a consensus is reached on the risk and the safeguards.

- Following this, the Indian PQ Authority incorporates appropriate notifications to the PQ Order including (or otherwise, depending on the level of risks ascertained based on the sample test and other information) specific items that can be imported from Bangladesh with relevant safeguards.
- Import of specific items is allowed after such notifications are published by the Indian Customs.

Once market access is enabled by including relevant notifications for the specific items in the PQ Order, some of the other hurdles trade in these selected products may face are lack of testing facilities near border points, availability of quarantine and food safety officials at the ports and the likes. Given the present state of things, with the inclusion in the PQ Order, these can be traded through certain specific ports where quarantine and food safety officials are present.

## Conclusions and Recommendations

The study reveals that there is a strong case for promoting trade in agricultural commodities between Tripura and Bangladesh given the gains that can accrue in terms of better availability and lower price to end consumers in Tripura.

Based on primary data, price comparisons across borders reveal that on an average, a household will gain INR 73.21 per month per capita in the form of lower price for the four selected four vegetables. Available statistics (Key Indicators of Household Consumer Expenditure in India, July 2011-June 2012, National Sample Survey 68<sup>th</sup>

Round, National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India) show that on an average monthly per capita consumer expenditure on vegetables by the consumers in Tripura is INR 123.43 and on overall food consumption it is INR 895.60.

While it is to be noted that this study considers only four vegetables and price fluctuations over season and geographies has not been specifically addressed, an average gain of INR 73.21 per capita per month on account of the consumption of these four vegetables, viz. potato, green chilli, tomato and brinjal (aubergine), as found by the study, is a substantial gain to average consumers in Tripura. This gain represents more than 59 per cent of average monthly per capita consumption expenditure on vegetables by the consumers in Tripura and more than eight (8) per cent on overall food consumption. In other words, the consumers in Tripura can access selected vegetables at half the price that they are paying if they are sourced from neighbouring Bangladesh.

Further gains are possible from reduction in transportation costs if, instead of vegetables arriving centrally at Golbazar, Agartala and then going to the rest of Tripura, they can be sourced through all functional ports between Tripura and Bangladesh spread across different ends of Tripura.

While the study did not dwell on the issue of informal trade in agricultural commodities, it was palpable from consultations with relevant stakeholders that such trade is prevalent, particularly given that demand-supply gaps exist across the borders, which are driving the creation and sustenance of ecosystems for commercial exchange circumventing formal channels. If

processes and regulatory frameworks become easier and enabling, such ecosystems will gradually lose its advantage and is expected to stop functioning.

The study also found that there are substantial capacity gaps among exporters, importers and traders regarding their understanding of regulations that guide cross-border trade. Furthermore, it was observed that interpretation of relevant regulations by ground level officials at border points was not adequate, leading to information asymmetry. Therefore, their capacity to engage with exporters/importers and to explain them the legal and regulatory requirements is low. Given that the regulatory agencies like the PQ Authority are primarily concerned with regulation and safety as per their mandate and not with trade facilitation *per se*. It complicates the trade scenario.

Also accredited testing laboratories are rarely available near border ports which make the food testing affair expensive. Even when PRA enabled trade in the identified items, they will still need to undergo food safety testing via sample testing before they can be imported into India for consumption. Given that such laboratories are not easily available will be pose another set of hurdles to the trade. Also plant and animal quarantine offices are not there in all ports, whereby plant and animal products cannot be traded through such ports.

Therefore, our recommendations to facilitate trade in specific agricultural items between India (in this case, Tripura state in North Eastern region of India) and Bangladesh are as follows:

- Focused research on possible products for exploring cross-border trade is needed and it

should be based on complimentarity and demand-supply situations (production, consumption habits, natural advantages, etc.).

- Periodic exchange between private players (importers/exporters) and government institutions on both sides is an imperative to proactively push necessary evidence gathering and undertaking of PRA of plant products/items that are of trade and consumer interest across the borders.
- There is the need for regular advocacy on the part of producers/traders with relevant government ministries/departments and institutions to highlight the gains if cross-border trade on specific items takes place.
- Capacity building of importers, exporters and traders on relevant regulations and processes is needed so that they can proactively undertake evidence-based advocacy with governments and other agencies.
- Capacity building of ground level customs and other officials handling cross-border trade is necessary to reduce information asymmetry and promote better trade facilitation.
- Infrastructure development to ensure availability of testing laboratories accredited by internationally accepted accreditation agencies to test items for food safety norm
- Ensure presence of quarantine and food safety officials at all ports or at least at those ports through which trade in such products is economically most feasible
- Given the complementarities that exists and also the immediate economic gains that trade in specific agricultural commodities can bring for

common people on both sides, there should be more focused and evidence-based advocacy with both the governments towards Mutual Recognition Arrangements for conformity assessment requirements for trade in specific agricultural commodities.

In short, the North Eastern region of India is like a land-locked country, with international borders on almost all sides. As a bridge between two large economies of the world (viz. China and India) and also with other neighbouring countries (viz. Bangladesh, Bhutan, Myanmar and Nepal), what could have been one of its key advantages in terms of economic prospects is presently a hurdle for the entire region.

With limited and restrictive trade across the borders with their international neighbours (Bangladesh, Bhutan, China, Myanmar and Nepal), consumers in these states face higher prices and limited access. They are deprived of their consumer rights as per the United Nations Guidelines for Consumer Protection, 1985, particularly the Right to Basic Needs and the Right to Choice.

This is due to a combination of regulatory and infrastructure barriers. Due to obvious demand-supply gaps, cross-border informal trade is quite common in this region. Given such a situation, consumer gains are hardly at their optimum.

While the governments are working towards the betterment of infrastructure and connectivity in a phased manner, it may be worthwhile to undertake similar examination of regulatory barriers that affect free flow of products across the borders in each of the North Eastern states. This will include India's North Eastern states sharing borders with Bangladesh (Assam, Meghalaya, Mizoram and Tripura), Bhutan (Arunachal Pradesh and Sikkim), China (Arunachal Pradesh and Sikkim), Myanmar (Manipur, Mizoram and Nagaland) and Nepal (Sikkim).

Trade-related regulatory frameworks of each of these countries need to be examined to understand the current sub-optimal flows and potential for consumer gains on either side of the border. This will help identifying the prospects for and gains from cross-border supply chains, particularly for those products that can lead to immediate consumer gains through promotion of their cross-border trade.

## References

1. Tripura Towards Prosperity Workshop on “Emerging Challenges in Agriculture and Allied Sectors in North East”, 27- 29 March, 2011, Government of Tripura, Department of Agriculture
2. Key Indicators of Household Consumer Expenditure in India, July 2011-June 2012, National Sample Survey, 68<sup>th</sup> Round, National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India
3. Cybex, EXIM Solutions Ltd, Indian Customs Duty Calculator, Import Duty – Potato and Other Vegetables, as on March 4, 2017, available at <http://www.cybex.in/>
4. Plant Quarantine (PQ) Order (Regulation of Import into India), 2003 and its amendments, available at <http://plantquarantineindia.nic.in/pqispub/pdffiles/pqorder2015.pdf>
5. Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011 and its amendments <http://www.fssai.gov.in/home/food-standards/regulations/contaminants-toxins-and-residues.html>