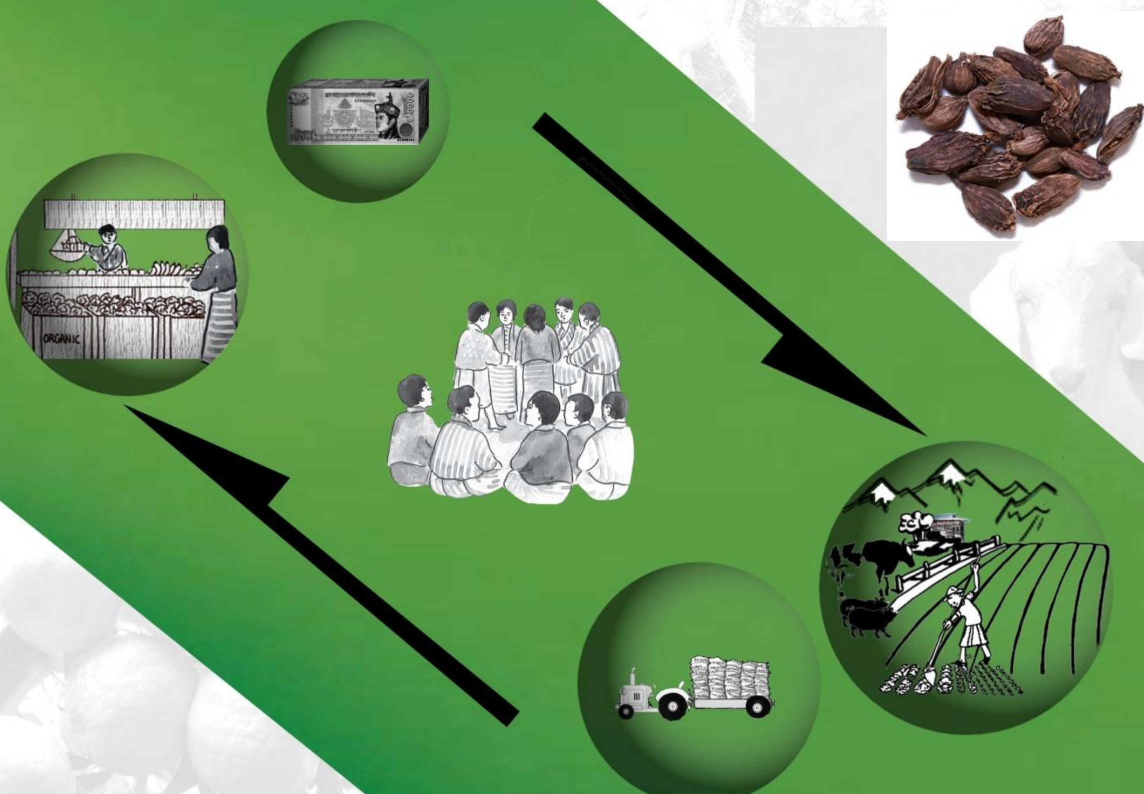
CARDAMOM – a rapid market appraisal

September, 2017



Department of Agricultural Marketing and Cooperatives
Ministry of Agriculture and Forests
Thimphu, Bhutan
PABX +975-2-322909, 335741, 331638 Fax: +975-2-334898
www.agrimarket.gov.bt

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1. Introduction

The locally grown cardamom –called the large cardamom - was first introduced to Bhutan in the early seventies and has since become an important cash crop in southern region, with total acreage reaching as high as 6,968 ha[1] in 1994. In 2015, the total area under cardamom cultivation was 4,293.73 ha yielding approximately 2,091 MT (Agriculture Statistics, 2015).

The Bhutanese themselves are not a major consumer; hence a vast majority is exported. In 2015, a little more than 845MT of cardamom worth approximately Nu. 940.85m was exported to India and Bangladesh (Bhutan Trade Statistics 2015), while a smaller volume is traded informally. Today, cardamom is grown in all the *Dzongkhags*[2] except *Thimphu, Bumthang* and *Paro*. The biggest cardamom growing districts are *Samtse, Chhukha, Sarpang, Dagana, Tsirang and Zhemgang*.

Cardamom seedlings are usually planted in the months of June and July and with proper husbandry, the first harvest of the crop can be achieved within the third year of planting. Pods are typically harvested in September and dried in traditional dryers known as *bhatti;* with the drying process taking around 2 days. The dried pods are typically packed in 40kg jute sacks for the market.

2 Objectives

The major purposes of the appraisal were to:

- Determine production, export and price trends over the years and reasons, thereof,
- Formulate recommendations for possible interventions

3 Methods& Materials

First-hand information were collected from 60 growers, 12 Bhutanese traders and exporters of the four main cardamom growing *Dzongkhags – Dagana, Chukha, Sarpang* and *Samtse* -, market facilitators such as the Bhutan Exporters Association (BEA) and around six Indian traders.

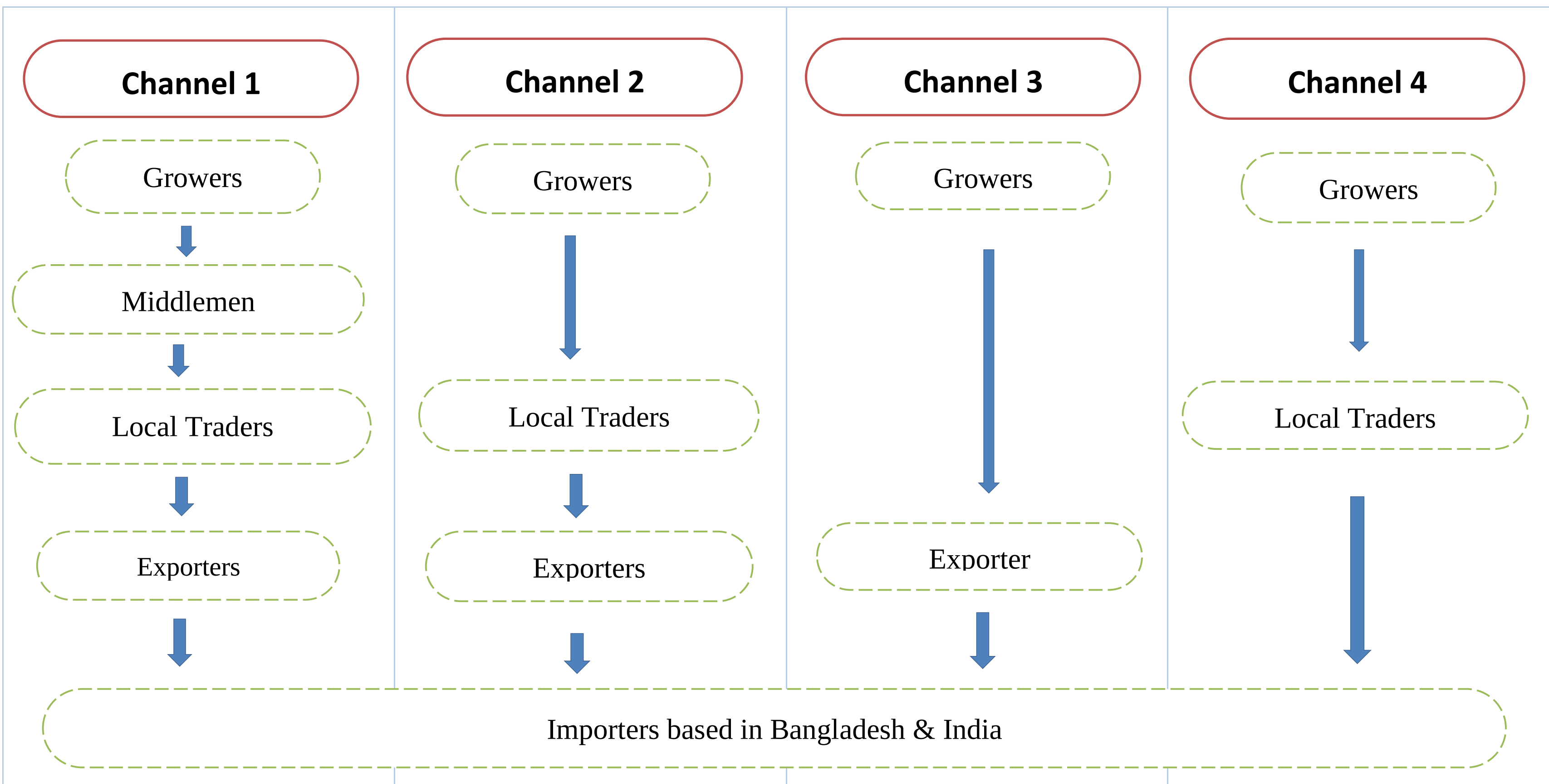
[1] 1 hectare (ha) equals to 2.471 acres
[2] Dzongkhag means District

4. Findings

4.1 Marketing Channel

There are four main marketing channels (Fig I). Unlike potato and other vegetables, cardamom does not go through the auction system.

Figure I: Major export marketing channels for Bhutanese cardamom



Generally, because of the higher prices, growers prefer to sell directly to the exporters. However, this may not always be available, especially if the cardamom fields are located far from trading locations. Conversely, exporters are known to prefer working with middlemen and traders because of the advantage of working in bulkier volumes.

A middleman can be either a grower himself / herself or someone residing in that village or the locality who buys the products, bulks them and sell it onwards. Traders are either Bhutanese or Indians residing in the neighboring Indian towns. Traders may buy either from the middlemen or the growers directly for supply to the exporters. It is known that some traders may also informally sell it across the border, without involving exporters, though the volume transacted in this manner is understood to be relatively small.

The importers based in *Bhogra* in Bangladesh and *Siliguri* in the Indian state of West Bengal, are very prominent actors in the cardamom value chain. According to the exporters and Indian traders met, the importers at *Bhogra* and *Siliguri* either, supply the goods to the local wholesale markets, supply to agro-processing firms or further export to other places, sometimes even to countries in the Middle-East.

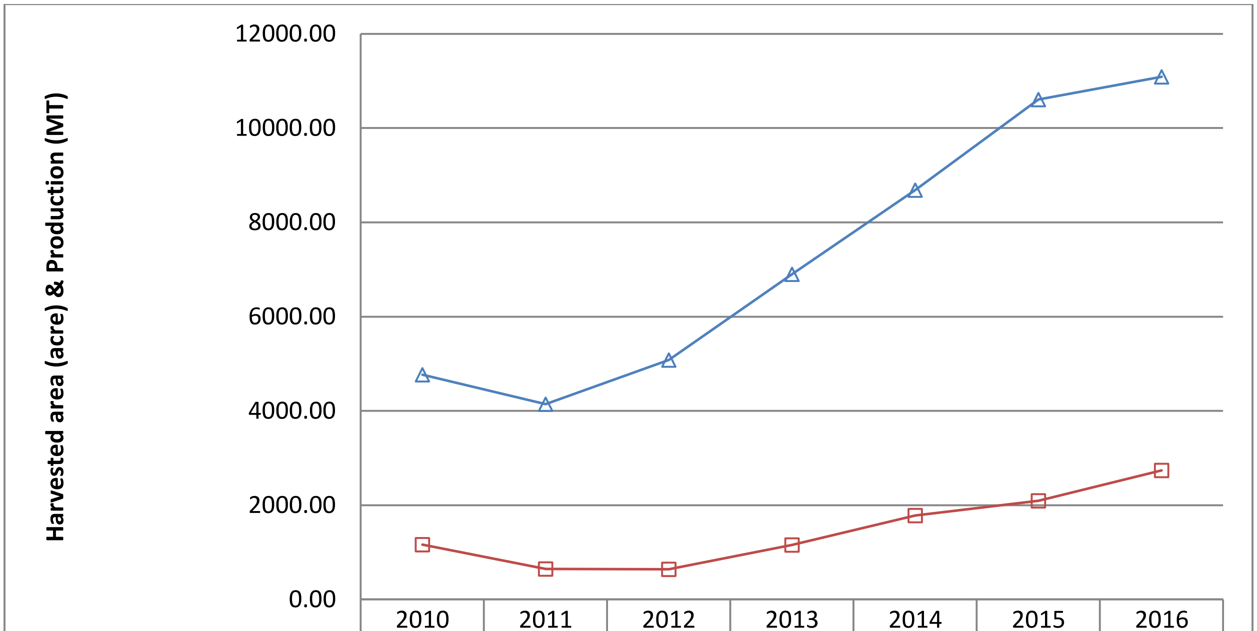
While the Royal Government of Bhutan (RGOB) and the Government of India has a free trade agreement (FTA) permitting tariff-free flow of agricultural produce, the RGOB also has a trade agreement with Government of the People's Republic of Bangladesh, to provide tariff concession. This favourable trade agreement has encouraged the Bangladeshi importers to engage in large-scale imports of cardamom from Bhutan.

Many farmers still take money in advance from the traders before the crop is harvested, with the promise to supply to those traders upon harvest. In order to pay back within the stipulated time, most farmers feel compelled to harvest the cardamom early, sometimes even before they reach optimal maturity. This practice ultimately affects the growers because though advance payment is made, the final price of the produce is determined only after the cardamom is inspected upon delivery.

4.2 Production

During recent years, due to higher export market demand and surge in price, production has been increasing consistently over the years (Fig. II). From a low of around 1,000 MT in 2010, the production has increased to a high of over 2,500 MT in 2016.

Figure II: Total harvested area and production in Bhutan (source: Department of Agriculture)



	2010	2011	2012	2013	2014	2015	2016
Harvested Area (Acre)	4771.00	4142.00	5083.26	6903.00	8684.80	10609.00	11089.00
Production (MT)	1163.00	650.00	643.02	1160.14	1781.17	2091.40	2736.00

However, local traders and exporters have expressed concern that the quality of cardamom from Bhutan is inferior to those produced in India and Nepal, ostensibly owing to the poorer drying practices. Poor drying practices is known to result in further quality deterioration during storage and transportation, inferior colour and other sensory characteristics of the produce.

4.3 Farm Gate Price

The prevailing farm gate price of cardamom ranges from Nu. 500 to Nu. 800 depending on the quality, while in the past, the farm gate price ranged from Nu. 700 to as high as Nu. 1,400 / kg, during good times. (pers. comm. with interviewees during the visit).

However, when compared to the prevailing auction prices of Indian cardamom at West Bengal and Sikkim (Tab. I) during the same period, (September 4 to September 11, 2017), it appears that Bhutanese cardamom still fetch higher prices. Indian auction prices ranged between Rs. 488 – 525per kg for *chhotadana* (locally known as *Golsai/ Ramsai*) and Rs. 600 - 675 for *Badadana* (locally known as *Bharlang).*

Table I: Range of Auction Prices in India (source: Spice Board India, 2017)

Sl. No.	Auction Market	Cardamom Type	Minimum Price (per kg)	Maximum price (per kg)
1	Gangtok	Badadana	525	575
2	Gangtok	Chotadana	450	500
3	Siliguri	Badadana	600	675
4	Siliguri	Chotadana	488	525
5	Singtam	Badadana	538	563
6	Singtam	Chotadana	488	500

The cost of production of cardamom in Bhutan as computed by the Department of Agriculture is only Nu. 292.39 per kilogram (Tab. II). When the cost is compared to the minimum farm gate price they got this year, they still gained a minimum of Nu. 208 per kg, which is a mark-up of 71 per cent on the cost of production.

Table II: Cost of production of cardamom (source: Department of Agriculture, 2017)

Outputs/ inputs	Unit	Farm-gate price/ cost		Total costs/ benefits (Nu)	Remarks
BENEFITS		Quantity	Unit		▪ All inputs is per acre ▪ Yield data is from the Agri. Statistics 2015 ▪ Seedling rate is from the NSC data source ▪ Price of seedling is also from NSC ▪ Labour costs is Average of 10 Dzongkhags labour wage rate ▪ Labour input is also average of 10 Dzongkhags ▪ Inputs for simple tools &equipment have been excluded as they would be used for various other purposes and also lasts certain no. of years, therefore the costs is negligible
Gross returns					
(value of production)	Kg	197	800	157600	
COSTS					
Capital (materials)					
Seedling	No.	1800	13	23400	
Total capital				23400	
Labour					
Land preparation	Person-days	25	450	11250	
Digging/planting	Person-days	15	450	6750	
Weeding	Person-days	12	450	5400	
Harvesting	Person-days	10	450	4500	
Shelling	Person-days	7	450	3150	
Drying	Person-days	7	450	3150	
Total labour	Person/days	76	450	34200	
TOTAL COSTS (EXCL LAND)				57600	
COST OF PRODUCTION (Nu/kg)				**292.39**	

4.4 Export Trends

Export volume and value has increased in tandem with the rise in production (Fig. III). Between 2010 and 2015, Bangladesh has been the bigger market of the two, but in 2016, exports to India were higher than to Bangladesh (Fig. IV).

Figure III: Export Trends (Volume and Value) (source: BTS, various years)

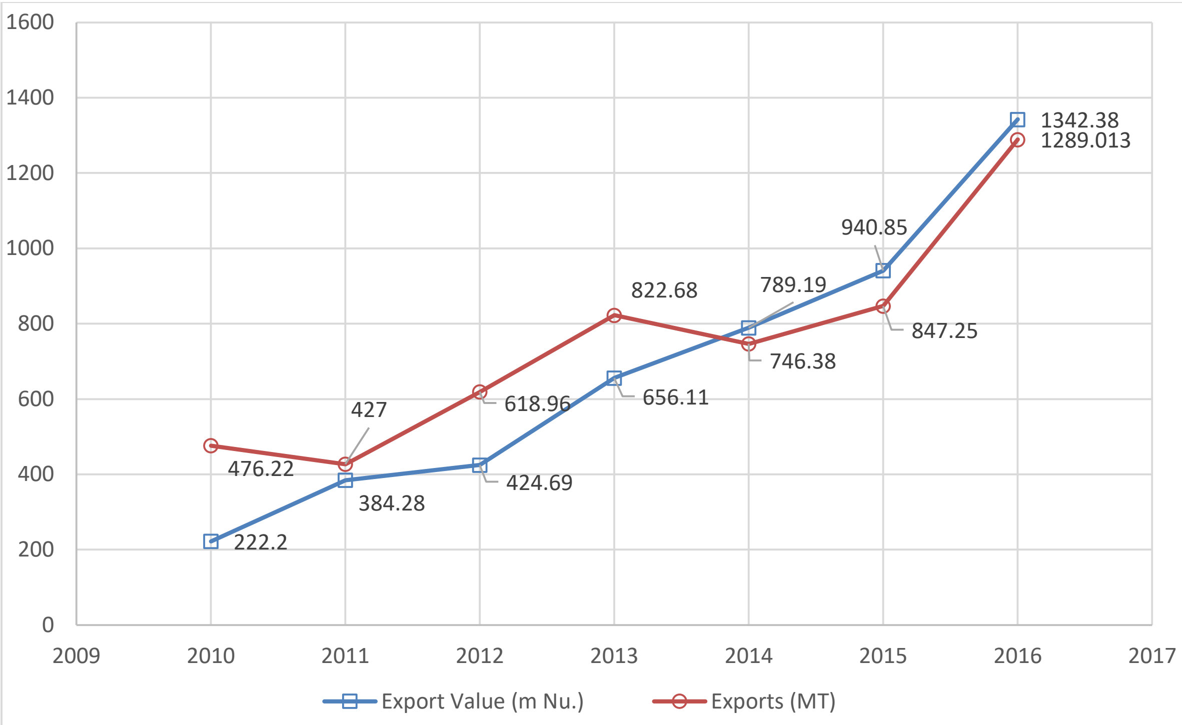
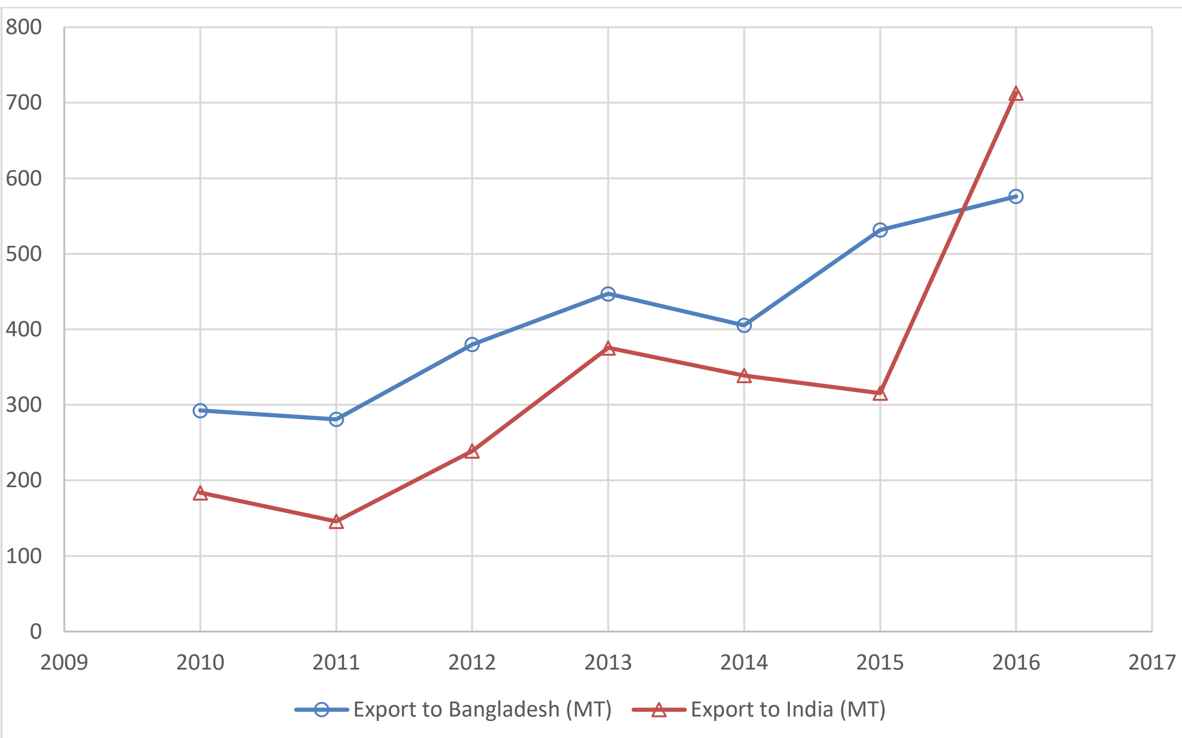


Figure IV: Volume of Export to Bangladesh and India (source: BTS, various years)



5. Cardamom production issues and government interventions

Diseased plantation and availability of clean planting materials was a challenge for growers in the past; and to tackle this problem, the government invested in nurseries to produce clean planting materials. According to the Department of Agriculture, the nursery established at the National Seed Center, *Samtenling*, is expected to produce 40,000 cardamom seedlings for promotion and rehabilitation of approximately 26.4 acres annually. Work on the establishment of a Cardamom Repository has also been initiated and collection, evaluation and multiplication of germplasm is in progress.

The government has also provided various forms of both financial and technical support to the farmers to help them rehabilitate diseased cardamom plantations and establish new plantations.

Post-harvest handling and processing techniques, particularly the drying method continued to remain very rudimentary in the past. Through agencies such as the Agriculture Machinery Center (AMC) and the National Post Harvest Center (NPHC), the government continues to make technology interventions predominantly to improve the drying technology.

More than sixty improved cardamom dryers, fueled by wood have been established on the basis cost-sharing with the beneficiaries, covering *Dzongkhags* such *Dagana*, *Tsirang*, *Samtse*, *Sarpang*, *Zhemgang*, *Chukha* and *Pema Gatshel*. Each of these dryers can be established at approximately Nu. 30,000. Other types such as electricity powered dryers are also being tested and promoted to improve drying efficiency and end-quality of the product.

Furthermore, the government continues to build the capacity of the growers by providing hands-on trainings and taking them on visits to cardamom growing areas of India and Nepal to study improved techniques in production, processing and packaging.

6. Cardamom marketing issues and the way forward

Perhaps, because there are many marketing channels and actors at play, cardamom growers sometimes may feel that they are not able to get the best value and bargain for their produce.

However, the study indicates that while the price may have decreased slightly in 2017 based on the growers' own feedback, there are no serious issues considering the current farm gate prices, the cost of production and the market price for Indian cardamom. It can be inferred that because the export price for cardamom surged in 2014 (Nu. 1,057 per kg) and remained high in 2015 (Nu. 1110.47 per kg), growers must have had high expectations.

To keep growers cultivating cardamom, and to support them in times of severe market failures, the government has also included cardamom as one of the commodities in its 'buy-back"[3] program, fixing the 'buy-back' price of cardamom at Nu. 540 per kilogram for the year 2017.

To guarantee the best value for their produce and to minimize the risk of formation of any buyers' syndicates to control prices, organizing formal auctions is a solution and its costs and benefits must be assessed. When this option was discussed with growers, most see this as a viable marketing option but for the auction service fee of 3 per cent (3 per cent charged to sellers and 3 per cent to the buyers) levied by the Food Corporation of Bhutan Ltd. (FCBL); which they opine is high, more so because cardamom is a high-value crop and they feel the pinch. For example, for a crop like potato, the auction service fee is acceptable to both buyers and sellers. For a high value commodity like *cordycep sinensis*, only 0.65 per cent of the total value is levied as auction service charge.

Another possible long term solution, which has already been initiated by the Royal Securities Exchange of Bhutan Limited (RSEBL) and the FCBL, is the online-auctioning. It is still in its early stages and the benefits of such a marketing system are yet to be fully assessed.

The non-recognition of Bhutan Agriculture & Food Regulatory Authority's (BAFRA) Phytosanitory Certificate (PSC) by the Indian counterpart at *Jaigoan*, has become a concern in recent times. With the introduction of the Goods and Services Tax (GST) by the Indian

[3] Buy-back program is a scheme by which the government through the FCBL and its network of farm-shops buys agricultural and livestock produce from farmers at a pre-determined price and other terms and conditions. While providing an assured market for their farm produce at any given time, farmers are encouraged to trade in open markets preferably and use this option only as a measure in times of market failure. For this reason, the buy-back price of a commodity is kept lower than the market price under normal market conditions but higher than the actual cost of production.

Government, an Electronic Data Interchange (EDI) system, has been introduced at the West Bengal Customs check post in *Jaigaon*, which apparently does not accept the PSC.

Furthermore, because of the introduction of GST, Bhutanese cardamom is also levied 5 per cent tax. According to the exporters, to cover this extra cost, the growers are offered lower than they might normally be offered. This is perhaps also one reason why growers have felt the decrease in the income they generate from cardamom.

Trade facilitation, in terms of negotiating with the importing countries on terms of trade and mutual recognition of standards and certificates, must be continued. The specific issue emanating from the introduction of EDI system arising from the GST application has to be pursued urgently by the government to facilitate unimpeded marketing of cardamom.

Since the market beyond the borders of the country is not fully understood (MIRD, 2017) and with the changing dynamics of the market, market assessment and exploration needs to be a continuous process.

7. Acknowledgement

The department would like to acknowledge its appreciation to all the stakeholders for their valuable contributions during information collection time. The department also acknowledges support by the *Dzongkhag* Administrations, corporations, private organizations and the concerned officials for cooperation and hospitality.

8. References

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