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Research Article

Consumers' Preference and Willingness to Pay for Nepalese Large Cardamom in the Global Market

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Abstract

This paper examines the consumers' preference and willingness to pay Nepalese large cardamom in the global market. A total of 255 respondents were surveyed using structural questionnaire in KoBo Toolbox online survey during 2019-2020. The Logit model was used for assessing factors determine consumers WTP and WTP regression was used to assess the monetary value of additional WTP price premium. Average age of the respondents were 29.21 years and 16.70 years of schooling. The average household size was 4.87 members. Two-third of respondents were male and 39% respondent's occupations were service. About 92% respondents belonged to Asia whereas 38% from urban city origin. One-fourth of respondents had US$ 5000 and above annual income. Consumers were willing to pay price premium of 34.56% for Nepalese large cardamom while about 33% additional WTP for organically certified once. About 40% respondents willingness to pay of Nepalese large cardamom whereas 65% expressed their additional WTP on organic certified. Average price paid for cardamom was US$ 19.6 per kg whereas the WTP additional amount for Nepalese cardamom was US$ 6.92 per kg and US$ 6.6 per kg additional for organic certified once. Major determine factors on WTP of Nepalese cardamom were preference based on color, size, household expenditure and knowledge. Additional WTP of Nepalese large cardamom price premium were determined by preference based on color, size and part of cardamom used. The results can significantly contribute to improving value added practices of Nepalese cardamom based on consumers' preference.

Keywords: Willingness to pay; consumers' preference; large cardamom; global market

Introduction

Large cardamom (*Amomum subulatum*) is a perennial herbaceous plant belonging to the family Zingiberaceae. It is also known as black or brown cardamom and queen of spices. It is a native crop of Nepal, India, Pakistan and Bhutan and is grown in sub Himalayan region of Nepal and I between elevation of 600 to 2000 masl where annual rainfall is between 1500 and 2500 mm per annum and the temperature varies from 8°C to 20°C. The total life span of cardamom plant is 20 to 25 years and its economic yield

starts only after the third year of plantation. Its optimal yield period is however only limited from 8 to 10 years.

It is believed that large cardamom was introduced to Nepal in 1865 by the Nepalese workers who went to Sikkim for seasonal work. However, planned development of large cardamom started in Nepal only after the establishment of Cardamom Development Centre at Fikkal, Illam in 1975. Large cardamom, though previously limited to the eastern hills of Nepal, now have been extended to 51 districts in Nepal (MoAD, 2017) in an area of 17002 ha with total production of 6521 mt and productivity of 0.385 mt ha^{-1} (MoAD, 2018). The major large cardamom producing districts of Nepal with production area of more than 1000 ha are Taplejung, Sankhuwashava, Panchthar, Illam and Khotang (MoAD, 2017). Large cardamom has been a prioritized crop by Nepal Trade Integration Strategy (NTIS) 2010 and Agriculture Development Strategy (ADS) and thus the area of large cardamom producing area can be seen in increasing trend. A large number of farmers living in the sloppy areas are being attracted towards the commercial cultivation of large cardamom as these areas are not suitable for the cultivation of other crops like cereals, vegetables and fruits. The most suitable and popular varieties of large cardamom being cultivated in Nepal are ramshai (1500 to 2000 masl), golshai (1200 to 1600 masl), saune (700 to 2000 masl), chibeshai (700 to 1000 masl), dammershai (700 to 1200 masl), kayntidar (700 to 1000 masl), salakpure (1500 to 2000 masl), varlange (1500 to 2000 masl) and jirmale (600 to 1200 masl) (Adhikari, 2015). Large cardamom is one of the major commodities with largest share in export values among various agricultural products in Nepal with India being the primary destination for the Nepalese large cardamom as well as the main competitor in the business. Large cardamom has been listed as one of the most potential crops for export in Nepal Trade Integration Strategy (MoC, 2016).

According to trade map of ITC, in 2016 total global export value of all commodities was US$ 16012823.28 million and total import value was US$ 16162933.28 million. The total global export of large cardamom was US$ 392.22 million and import was US$ 340.83 million. Hence, in the global market, the export of large cardamom covered only 0.00245% of the total export (ITC, 2018). In 2016, Guatemala, India and Nepal together contributed to 84.25% of world export of cardamom out of which Guatemala alone contributed to 58.39% of the total export. Nepal, being the third largest exporter of the large cardamom, contributed to 16.61% of the total + world export.

Large cardamom has very limited market but fetches good price in the market. Saudi Arabia, UAE, India, Bangladesh and Pakistan are major importers of large cardamom. According to ITC (2018), in 2015 Saudi Arabia alone consumed cardamom of US$ 122.36 million from world market which was 27. About 85.65% of world import. Similarly, United Arab Emirates imported cardamom of US$ 106.19 million which was 23.93% of world import. Combining these data, the two top importers had imported 51.51% of cardamom from world market in 2015

According to Trade Export and Promotion Centre, Nepal, in 2016/17, total export value of all commodities of Nepal was NRs. 73125.35 million (1 US$ = NRs. 114) and total import value was NRs. 9595.13 million. The total national export of large cardamom in the same year was NRs. 3875.75 million. Hence, large cardamom contributed to 5.30% of the total national export in the year 2016/17.

Data available at Trade Export and Promotion Centre reveal that export quantity of large cardamom from Nepal has decreased from 5783 mt in 2009/10 to 3429 mt in 2016/17 (TEPC, 2018). Although the export value has decreased, the total export value has not however decreased by significant amount. This is because of increased per unit price of cardamom (NRs. 202/kg in 2009/10 to 1130/kg in 2016/17) (ITC (2017). Similarly, trend of average Export price (US$/mt) variation at international market from the data available at ITC trade map shows that the per unit price of Nepalese cardamom is higher than the world average. Moreover, price of cardamom from Bhutan and India lies slightly above the Nepalese price rate.

Large cardamom is used in foods, beverages, perfumes, and medicines. Production is currently declining, and the improved post-harvest process would be one way to help ensure the sustainability of this position crop. Singh and Pothula (2013) reviewed the crop's post-harvest processing (with emphasis on curing, calyx cutting, packaging, and storage), quality issues, and trade patterns, and identifies research topics that could contribute to increasing its quality and value and thereby to protecting and promoting the livelihoods of several thousands of people in the value chain.

Earlier the main market hub for Nepalese large cardamom was Siliguri in India. In the last 10 years the market hub has shifted to Kolkata and Delhi. About 50 percent of Nepali large cardamom moves to other countries (particularly to Pakistan) from Kolkata and Delhi through Mumbai and Amritsar. Payment is cost and freight (CFR)-Delhi (TEPC, 2018; ITC, 2018).

Consumers' attribute and preference of products are major concerned in global market. In this context, this study was assess the consumers attribute and preference of Nepalese large cardamom in the global market using online survey questionnaire.

Review of literatures Related to Consumer Preference and Attributes

The preferences of the consumers indicate their priority for freshness of food products followed by price, quality,

variety, packaging, and non-seasonal availability (Ali *et al*., 2010). Consumer buying behaviour for food and grocery products has always been influenced by a number of economic, cultural, psychological and lifestyle factors (Brokaw and Lakshman, 1995; Asp, 1999; Choo *et al*., 2004; Ling *et al*., 2004; Ahlgren *et al*., 2004; Goyal and Singh, 2007; Nagla, 2007). Consumers have now become more discriminating in their food product choices and have started emphasising more on convenience, freshness and quality of the products (Acebron *et al*., 2000).

Product attributes, as perceived by consumers, are critical factors in the food choice process and are considered to be a major determinant for the success of many product marketing strategies (Batra and Sinha, 2000; Kupiec and Revell, 2001). Consumers' preferences on various food product attributes is a well-researched area and empirical analysis show that consumers use a variety of evaluation parameters while selecting the appropriate products to satisfy their consumption needs (Ness and Gerhardy, 1994; Cardello, 1995; Ahlgren *et al*., 2004; Chung *et al*., 2006).

The literature on consumer behaviour argues that the consumer perceives a product as a bundle of attributes like convenience, variety and choice, product price, non-seasonal availability, packaging, cleanliness and freshness. The buying decision or choices between the products largely depend on a combination of these attributes (Juric and Worsley, 1998; Silayoi and Speece, 2004).

Consumer Preference and Attributes of Large Cardamom

Cardamom is being used for different purposes in different parts of the world based on the varying preferences of people around the world. Mostly, it is used in the middle-east part of the world. Some of the uses of large cardamom are listed below based on empirical past literatures review:

- *Ghawa* is a popular cardamom-coffee combination consumed in the middle-east. Arabian people use large cardamom for the preparation of tea and coffee.
- In Southeast Asia, large cardamom is used in the preparation of *Garam masala* which is used in the preparation of curries, pickles, *Biryanis*, etc.
- It is also used in the European countries for high quality beverage preparation.
- It is also used for baking in Nordic countries, such as in Finnish sweet bread *Pulla* or in the Scandinavian bread *Julekake.*
- Nepalese chew large cardamom to freshen the breath and palate. It is also used as home remedy for digestive disorders and is considered beneficial to teeth and gums.
- In India, cardamom is used in sweets and also in tea. It is also used as garnish in Basmati rice.
- Large cardamom is also used in beauty product in European countries like in making perfumes.
- Cardamom seeds have pleasant volatile element called 'cineole' which is used in medicine and oils. These essential oils are used in imparting aroma in sweets, cake, pastry, etc.

Cardamom in global market demands more with characters with dry capsule, high mass per volume ratio, compact ribbed surface, seeds and by products of large cardamom (Govindarajan *et al*., 1982).

Dry capsule: World's most of the large cardamom trade carried out in the form of dried capsule. Dried capsule of full size i.e. capsule shows tightly packed and not shriveled are preferred in markets. Capsule with glistering dark brown seeds slightly sticky in touch fetch good price and have more demand as well.

High mass per volume ratio: This indicator is another important attribute of consumer for large cardamom. The disease and insect infected empty and split capsules have more volume with the low in weight.

Compact Ribbed Surface: The dry capsules with compact rib like smooth appearance is another important characteristic of large cardamom which gives the pleasant in look and catchy for consumers.

Seeds: Seeds of large cardamom are lower in demand but consumers look for seeds in global market. Seeds are used in mouth freshener and helps in oral cure.

By products: Large cardamom is processed to form several by products such as essential oils, powder, seeds with sweets, aromatic role in bakery items, beauty products etc. Diversity in product desired by consumer with their own selection.

There is no scientific grading system based on predetermined standards and standard measurements. However, the common grading used in the Nepalese market is of three categories: Jumbo jet (JJ), Standard (SD) and *Chalan chalti* (CC) which attract different prices. This grading is done based on four factors presented in Table 1.

Jumbo Jet is a superior quality cardamom and *Chalan Chalti* is the inferior one. Standard grade is the one in between these grades which slightly fails to meet the criteria of Jumbo Jet. The price at Ilam (Fikkal) in 2014/15 was on average US$ 27.64 per kg for Jumbo Jet, US$ 25.13/kg for Standard and US$ 24.62/kg for *Chalan Chalti*. However, in 2015/16 average prices were recorded at US$ 20.28/kg for Jumbo Jet, US$ 18.40/kg for Standard and US$ 17.69/kg for *Chalan Chalti* (MoAD, 2015). A new scientific grading system has been formulated which is yet to be implemented. Based on the National Sector Export Strategy of large cardamom in Nepal fixed few standards has been established and presented in Table 2 (GoN/ITC, 2017).

Table 1: Grade and specification of the large cardamom in Nepal

Grade and specification	**Jumbo jet (JJ)**	**Standard / Super Delux (SD)**	***Chalanchalti/Ilami* (CC)**
Hygiene	Free of dust, smoke and fungus		
Size	Large (>14 mm)	Large (>14 mm)	Small (<10 mm)
Tail cut	Yes	Yes	<15% tail/Absent
Colour	Natural (Brownish to Pinkish)	Natural (Brownish to Pinkish)	Natural
Moisture	<12%	<12%	>12%
Medium sized	<5%	<10%	

Source: FLCEN (2016)

Table 2: Nepal standards for Grade A and Grade B large cardamom, Nepal Standard 35:2040

Attributes	**Grade A**	**Grade B**
Extraneous matter in percentage to total quantity (Scaly pieces, stalk, bits of vegetable origin and other mineral origin)	0% maximum	3.0% maximum
Empty capsule in percentage	1% maximum	3% maximum
Percentage insect damage	0	3% maximum
Percentage immature capsule	2% maximum	4% maximum
Percentage of split capsule	10% maximum	10% maximum
Weight per liter	0.350 kg maximum	0
Moisture percentage	12% maximum	12% maximum
Size (in mm)	2 mm maximum	0
Color	Light brown to pink	Pink to dark brown

Source: GoN/ITC (2017)

Brand Preference

Aparna (2011) in a study found that the reason for preference of particular brand of spices by consumers was because of taste followed by quality, aroma, advertisements and availability of products in stores while price was the least reason. Noor *et al*. (2017) stated that the tendency to use branded spices increases with increase in education level and income of consumers. The influencing factor for using branded spices was quality based on taste, color and aroma of the product. Most of the consumers had strongly disagreed on using branded spice powder as status symbol while strongly agreed on use of spice powder is time saving and depends on availability. Next to this, most of the consumers were not willing to pay extra price for branded spices.

Kumari (2018) conducted study on consumer preference for branded spice product and found that most of the consumers disagreed for willingness to pay extra price for branded spices. Vincent (2007) studied on brand consciousness among children and its effect on family buying behavior in Bangalore city. The study reported that quality was the most important criteria for the purchasing the branded product. Increase in consciousness among the child was seen on decision making regarding the purchase. The study reveals that parents prefer branded products because child insists for them. Media was the key consistent in promoting and influencing brand.

Organic Product Preference

Salma and Ramakrishnan (2017) found one fourth of respondents had used organic spices while one third of the respondents had not known about organic spices. Education was found to affect significantly on people perception towards attributes of organic foods but age and occupation had no significant differences on consumer perception.

Moreover, consumers with service as occupation and higher income were more familiar with organic food products.

Chandrashekhar (2014) in a study to know the perception of consumers towards organic products found that two third of consumers buy products from organic stores followed by few consumers buying from producers' farm and supermarkets and retail shops. Maintaining good health was the major reason for purchase of organic products while regular unavailability was the major reason for not purchasing the organic products. Ghai and Ramawat (2016) pointed out that the self-motive and impulse buying behavior had influenced consumers to purchase organic tea rather than physician's advice which indicates the consumers are aware of the health benefits.

Sumi and Kabir (2018) studied on factors affecting the purchase of organic tea in Bangladesh. Health benefits, environmental concern, product attributes, quality of product, price, trust and perceived value were the factors to affect buying intention of consumers significantly. Price had negative influence on perceived value and buying intention of consumers while others had positive reaction. Rupesh Mervin and Velmurugan (2013) studied consumer's attitude towards organic food products. The finding of the research work revealed that gender, monthly income, area of residence, family status, period of consumption, level of awareness on organic foods and state of health are associated with consumer positive attitude towards organic foods. The research work shows an inverse relationship between consumer awareness and positive attitude towards organic food.

Materials and Methods

Sample and Sampling Site

The respondents in this survey were confined globally during 2019 to 2020 using online survey structural questionnaire (using KoBoToolbox). The collection of data was done by internet survey (entitled "A survey on consumer preference and willingness to pay on Nepalese orthodox tea and large cardamom") using survey face online survey questionnaire (https://ee.kobotoolbox.org/::2Tg3BYAI?fbclid=IwAR0c9lN6BOTAeuKmQKvxuLK9R2nCofYmN76Q3GQ0gNG1K3RxVUrkfhXCW0k) and few by direct face-to-face interview.

The semi-structured questionnaire consisted of section of demographic information, level of education received, income and expenditure, knowledge on Nepalese large cardamom, attributes, preferences and willingness to pay (WTP). The web address containing questionnaire was disseminated to global consumers at Nepal and at abroad via email, Facebook messenger, post on the wall on common groups in Facebook. In order to avoid duplication of filling form, respondents were requested not to fill twice at the time of sending questionnaire link. Email addresses of potential respondents working at University, I/NGOs, large cardamom consumers in global market hubs were collected via email, phone calls and Facebook messenger. The data collection was started from January 2019 and ended on March 2020. Altogether there were 255 samples obtained for analysis. The responses with incomplete information were sort out and removed. Microsoft Excel, Statistical Packages for Social Science (SPSS) and Stata (version 14.1) software were used to analyze the data. Descriptive analysis, Logit model and WTP regression were analyzed to assess consumers' preference, attribute and WTP of Nepalese large cardamom in global market. Fig. 1 presents the samples obtained from globally.

Econometric Models

Logit model was used to analyze the factors determining consumers' WTP on Nepalese large cardamom and additional WTP on organic certified Nepalese large cardamom.

To determine the factors influencing consumers' willingness to pay a premium price for Nepalese large cardamom and organic certified once, the relationship between explanatory variables and willingness to pay a premium price was modeled by using logistic regression (logit model). The explanatory variables were selected based on socio-demographic, economic, knowledge and preferences of large cardamom. The logistic regression can be estimated by applying method of maximum likelihood (Alberini, 1995).

The consumers' preference on large cardamom WTP on premium price was estimated using Logit model to derive the determinants of (1) WTP on Nepalese large cardamom ($Y1_i = 1$) and (2) additional WTP on organic certified Nepalese large cardamom ($Y2_i = 1$). The Logit model was based on the following econometric expression:

The Willingness to pay (WTP) on price premium on Nepalese large cardamom and organic certified Nepalese large cardamom are estimated using WTP regression. Contingent valuation data can be modeled as follows (Alberini, 1995):

The model for WTP is $Y_i^* = X_{ji}\beta + \varepsilon_i$

Y_i^* Where, Y_i^* is willingness to pay variable (WTP on Nepalese large cardamom and WTP on organic certified Nepalese large cardamom in US$/kg additional than existing global market price), ε is a zero-mean error term, and the plan and individual characteristics are summarized into 1×k vector X. The explanatory variables used in WTP regression (Equation ii) are also presented in Table 3.

Fig. 1: Map showing response samples obtained
[Source: https://kf.kobotoolbox.org/#/forms/aQAHeKFGbGhUJbhPjAwqYt/data/map]

$$Y_i(WTP\ Yes=1) = \beta_0 + \beta_1.Location_i + \beta_2.\mathrm{Re}\,gion_i + \beta_3.Age_i + \beta_4.Gender_i + \beta_5.Education_i + \beta_6.HHsize + \beta_7.Log\_Income_i + \beta_8.Log\_Expenditure_i + \beta_9.LC\_consume\_vol_i + \beta_{10}.Know\_NP\_LG_i + \beta_{11}.\mathrm{Pr}efer\_Type_i + \beta_{12}.\mathrm{Pr}efer\_Part_i + \beta_{13}.\mathrm{Pr}efer\_\mathrm{Pr}ice_i + \beta_{14}.\mathrm{Pr}efer\_Color_i + \beta_{15}.\mathrm{Pr}efer\_Size_i + \beta_{16}.\mathrm{Pr}efer\_HB_i + \beta_{17}.\mathrm{Pr}efer\_Flavor_i + \vartheta_i$$

Eq (i)

Where Y_i is the dependent variable having a binary response. Y = 1 if WTP on Nepalese large cardamom (WTP_NP_LC), and WTP on organic certified Nepalese large cardamom (WTP_OC_NP_LC), and otherwise 0. β_0 = Constant term, ϑ = Error term, $\beta_1 \ldots \beta_{17}$ are the regression coefficients to be estimated. The explanatory variables used in Logit model (in Equation i) are presented in Table 3.

$$Y_i(WTP\ in\ US\$/kg) = \beta_0 + \beta_1.Location_i + \beta_2.\mathrm{Re}\,gion_i + \beta_3.Age_i + \beta_4.Gender_i + \beta_5.Education_i + \beta_6.HHsize + \beta_7.Log\_Income_i + \beta_8.Log\_Expenditure_i + \beta_9.LC\_consume\_vol_i + \beta_{10}.Know\_NP\_LG_i + \beta_{11}.\mathrm{Pr}efer\_Type_i + \beta_{12}.\mathrm{Pr}efer\_Part_i + \beta_{13}.\mathrm{Pr}efer\_\mathrm{Pr}ice_i + \beta_{14}.\mathrm{Pr}efer\_Color_i + \beta_{15}.\mathrm{Pr}efer\_Size_i + \beta_{16}.\mathrm{Pr}efer\_HB_i + \beta_{17}.\mathrm{Pr}efer\_Flavor_i + \vartheta_i$$

Eq (ii)

Table 3: Descriptive statistic of variables used in the models

Variables	Description of the variables (n=255)	Mean	Std. Dev.	Min	Max
Dependent variables for Logit model					
WTP_NP_LC	Willingness to pay (WTP) for Nepalese large cardamom (1=Yes, 0=No)	0.40	0.49	0	1
WTP_OC_NP_LC	WTP more for Nepalese organic certified large cardamom (1=Yes, 0=No)	0.55	0.49	0	1
Dependent variables for WTP regression					
WTP_Amount_NP_LC	WTP amount for Nepalese large cardamom (in US$ per kg)	6.92	10.19	0	35

Table 3: Descriptive statistic of variables used in the models

Variables	Description of the variables (n=255)	Mean	Std. Dev.	Min	Max
WTP_add_OC_NP_LC	WTP amount for organic certified Nepalese large cardamom (in US$ per kg)	6.60	10.08	0	50
Explanatory variables used in the models					
Socio-demographic factors					
Location	Location city of the survey respondents (1=Urban, 0= Peri-urban and rural)	0.38	0.48	0	1
Region	Region/continent of the respondents (1=Asia, 0=Europe, Australia and USA)	0.92	0.26	0	1
Age	Age of the respondents (in years)	29.21	8.69	19	78
Gender	Gender of the respondents (1=Male, 0=Female)	0.73	0.44	0	1
Education	Education of the respondents (Years of schooling)	16.70	2.85	8	25
HH size	Household size (in number)	4.87	1.31	1	9
Income and consumption factors					
Log Income	Annual respondent income (US$ in natural log)	7.45	2.84	0	11.28
Log Expenditure	Annual respondent' HH expenditure (US$ in natural log)	8.24	1.05	5.48	11.00
Consume Large Cardamom Volume	Annual consumption of large cardamom at HH level (in gram)	250.50	402.56	0	2000
Knowledge and attributes variables					
Knowledge Nepalese Large Cardamom	Knowledge about Nepalese large cardamom availability and features (1=Yes, 0=No)	0.80	0.39	0	1
Prefer Types	Types of large cardamom preference (1= Electric dried, 0 other/firewood dried)	0.14	0.35	0	1
Prefer Part	Part of large cardamom consumed (1=seed and extracted oil, 0=whole capsule)	0.32	0.47	0	1
Preferences of Nepalese large cardamom variables					
Prefer Price	Preference based on large cardamom price (1=Yes, 0=no)	0.27	0.44	0	1
Prefer Color	Preference based on large cardamom color (1=Yes, 0=no)	0.43	0.49	0	1
Prefer Size	Preference based on large cardamom size (1=Yes, 0=no)	0.34	0.47	0	1
Prefer Health Benefits	Preference based on large cardamom health benefits (1=Yes, 0=no)	0.49	0.50	0	1
Prefer Flavor	Preference based on large cardamom flavor e (1=Yes, 0=no)	0.59	0.49	0	1

Source: Own illustration based on samples obtained in 2020 from online survey.

Results and Discussion

Socio-Demographic and Economic Characteristic of The Respondents

Table 4 presents the socio-demographic and economic characteristics of surveyed respondents. Average age of the respondents was 29.22 years with 16.72 years of schooling education. Average family size was about 5 with 2.41 male and 2.47 female members in household. Monthly income of the respondents was US$ 598 and monthly expenditure was US$ 552 on an average. Majority of the respondents were male (73%) and from Asia region (92%) including Nepal, India, Bangladesh, Pakistan whereas 7.5% belonged from developed countries of USA, Australia and European continent. Majority of the respondents were from peri-urban and rural areas (61.6%) whereas about 38% from urban city area. About 39% respondents had have service and own business whereas 61% belonged from university students and unemployment. About one-fourth of the respondent had have US$ 5000 and above annual household income whereas one-fifth had have US$ 1000 and below.

Consumers Attributes on Large Cardamom

Consumers responded about how often they consume large cardamom, about 48% consumers consumed large cardamom rarely whereas 12.5% consumed weekly and 7.5% consumed daily. About 19% consumers did not

consume large cardamom. Majority of consumers knew about Nepalese large cardamom (80.4%) whereas about 52% were consumed Nepalese large cardamom and 40% did not know about country origin of large cardamom they consumed. About 56% consumers preferred Nepalese large cardamom whereas majority of them preferred based on flavor (59.6%), health benefits (49.8%) and color (43.9%). Table 5 presents the consumers attributes on large cardamom.

Consumers Preference of Large Cardamom

Table 6 presents the consumers preference of large cardamom based on attributes. Majority of respondents (69.8%) preferred large cardamom based on its flavor whereas 14.5% preferred based on size and about 3% based on varieties. Majority of respondents (65.1%) had have no idea about types of large cardamom preference whereas 23.5% preferred fire dried and 11.4% preferred electric dried large cardamom. In case of part of large cardamom preference, majority of respondents (76.8%) preferred whole capsule whereas 46.5% preferred seed only and 5.2% preferred extracted oil of large cardamom. However, 36% had have no idea abort part of large cardamom preference. Majority of respondents (66.3%) felt health benefits from consuming large cardamom whereas 23% thought benefit of large cardamom from consumption satisfaction and 1.6% environmental benefits. About 41% respondents knew about the essential oil extracted from large cardamom and available in global market hubs.

Table 4: Socio-demographic characteristic of the respondents

Continuous variables (n=255)	**Mean**	**Std. Dev.**
Age of the respondent	29.22	8.69
Year of schooling	16.72	2.82
Total family size	4.88	1.29
Number of males in HH	2.41	0.87
Number of females in HH	2.47	0.99
Monthly income of the respondent (US$)	598.70	609.21
Monthly expenditure of the respondent (US$)	552.48	777.44
Categorical variables (n=255)	**Frequency**	**Percentage**
Gender		
Male	187	73.3
Female	68	26.7
Religion		
Asia	236	92.5
Other (Europe, Australia, USA)	19	7.5
Location types		
Urban	98	38.4
Peri-urban and Rural	157	61.6
Occupation		
Service	100	39.2
Others (University students and unemployment)	155	60.8
Range of annual HH income of the respondent		
Less than US$ 1000	55	21.6
US$ 1000 - 1999	32	12.5
US$ 2000 - USD 2999	18	7.1
US$ 3000 – 3999	49	19.2
US$ 4000 – 4999	35	13.7
US$ 5000 and above	66	25.9

Table 5: Consumers attributes on large cardamom

Characteristics	**Frequency**	**Percentage**
How often do you consume large cardamom?		
Daily	19	7.5
Weekly	32	12.5
Fortnightly	14	5.5
Monthly	19	7.5
Rarely	122	47.8
Do not consume	49	19.2
Do you know about Nepalese large cardamom?		
Yes	205	80.4
No	50	19.6
Which large cardamom are you consuming?		
Nepalese	132	51.8

Table 5: Consumers attributes on large cardamom

Characteristics	Frequency	Percentage
Indian	21	8.2
Vietnamese	1	0.4
Do not know	101	39.6
If you know about Nepalese large cardamom, do you prefer it?		
Yes	143	56.1
No/Do not know	112	43.9
If you prefer Nepalese large cardamom, why? (Yes)		
Price	70	27.9
Flavor	152	59.6
Size	89	34.9
Color	112	43.9
Availability	94	36.9
Health benefits	127	49.8
No specific reason	91	35.7
Others	67	26.3

Table 6: Consumers preference on large cardamom based on attributes

Characteristics	Frequency	Percentage
Attributes		
Size	37	14.5
Color	4	1.6
Flavor	178	69.8
Softness	6	2.4
Variety	8	3.1
Others	22	8.6
Type of large cardamom preference		
Electric dried	29	11.4
Fire dried	60	23.5
No idea	166	65.1
Part of the large cardamom composition		
Whole capsule	119	76.8
Seed only	72	46.5
Extracted oil	8	5.2
No idea	56	36.1
What do you think are the benefits of the consuming large cardamom?		
Health benefit	169	66.3
Consumption satisfaction	58	22.7
Environmental benefit	4	1.6
Other	24	9.4
Do you know about the essential oil extracted from large cardamom?		
Yes	104	40.8
No	151	59.2

WTP, Knowledge, Used, Price and Varieties Preference of Large Cardamom

About 40% respondents willingness to pay (WTP) of Nepalese large cardamom whereas 65.3% expressed their additional WTP on organic certified Nepalese large cardamom. One-third of respondents had have knowledge on Nepalese large cardamom price decreased since three years (Table 7). About 40% respondents willing to (WT) consume 'seed' of large cardamom whereas 34.5% WTP on powdered form, 4.7% willing to consume extracted oil form of large cardamom. Nevertheless, about 21% respondents did not know/no idea about value added form of large cardamom willingness to consume.

Majority of respondents (65.5%) had have no idea about reasons of Nepalese large cardamom price decreased since three years whereas 23% expressed reason due to lowering of price of large cardamom in India, while about more than 95% Nepalese large cardamom has exported in India. About 5.5% respondents had responded the reason due to increase in high supply of large cardamom from other countries in global market whereas 3.1% responded due to barrier to entry in global market and 1.6% responded due to actual

price fixation of price volatile commodity of large cardamom (Fig. 2).

About 36% respondents were aware about varieties of large cardamom. About 33% respondents had no idea about large cardamom varieties preferences whereas 22% preferred *Ramsai* variety, 16.5% preferred *Golsai*, 10.2% preferred *Dambersai and 6.3% preferred Sauney* variety of large cardamom. Very few respondents preferred other varieties of large cardamom like *Chibeshai*, *Bharlangey* and *Jirmale* (Fig. 3).

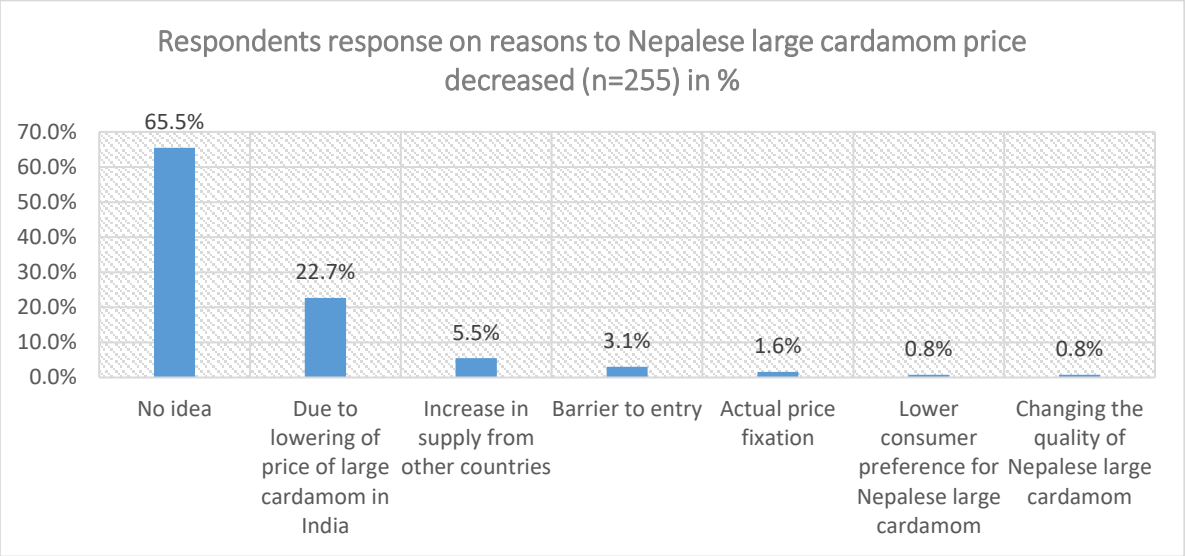

Fig. 2: Reasons of Nepalese large cardamom price decreased in global market

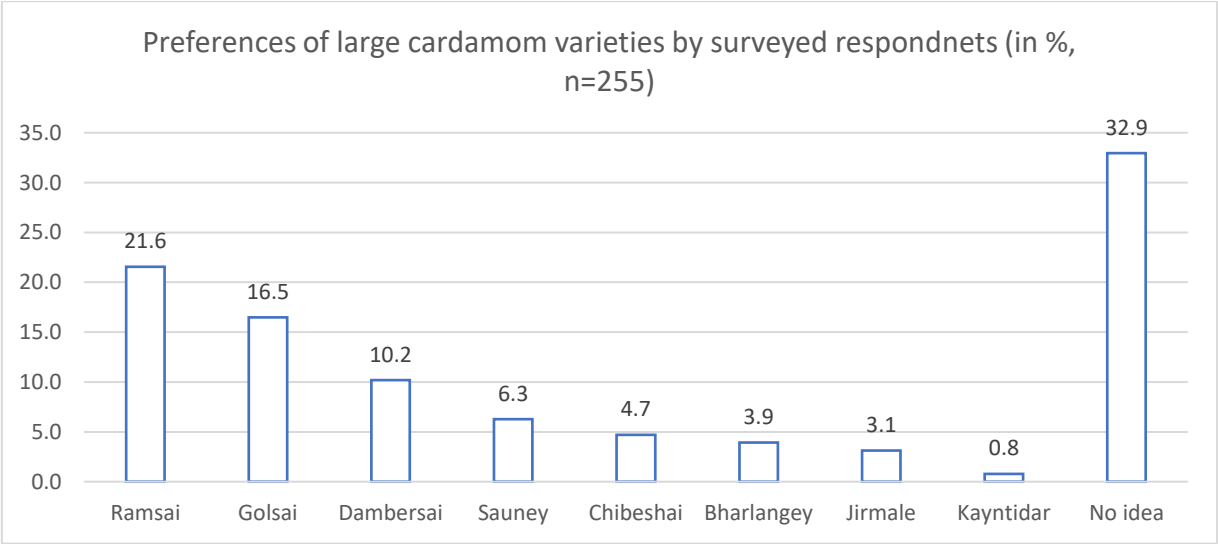

Fig. 3: Preference of large cardamom varieties by surveyed respondents

Table 7: WTP, knowledge, used and price of large cardamom

Characteristics (n=255)	Frequency	Percentage
WTP Nepalese large cardamom (Yes)	103	40.4
WTP Nepalese organic large cardamom (Yes)	141	65.3
Knowledge on Nepalese large cardamom price decreased since 3 years (Yes)	88	34.5
WT consume large cardamom form (value added product)		
Powdered form	88	34.5
Seed	101	39.6
Extracted oil	12	4.7
I do not know (No idea)	54	21.2
Knowledge on large cardamom varieties (Yes)	92	36.1

WTP of Nepalese Large Cardamom Price Premium

Average price paid by respondents on large cardamom was US$ 19.6 per kg whereas WTP additional amount for Nepalese large cardamom was US$ 6.92 per kg. If Nepalese large cardamom is organically certified, the additional WTP on organic certified Nepalese large cardamom was US$ 6.6 per kg (Table 8).

The percentage WTP of Nepalese large cardamom was 34.56% and if organically certified, the additional WTP of organic certified Nepalese large cardamom price premium was 33.02% (Fig. 4).

Table 8: Price paid for large cardamom and WTP price premium for Nepalese large cardamom

Variable	Mean	Std. Deviation
Price paid for large cardamom purchased (US$/kg)	19.60	7.88
WTP amount for Nepalese large cardamom (in US$ per kg)	6.92	10.19
Additional WTP amount for organic certified Nepalese large cardamom (in US$ per kg)	6.60	10.08

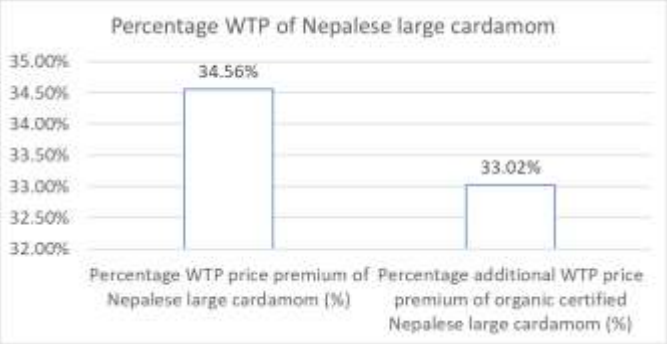

Fig. 4: Percentage WTP of Nepalese large cardamom by surveyed respondents

Econometric Models on Consumers' Preference and WTP of Nepalese Large Cardamom

Table 9 presents the Logit models for factors determining WTP of Nepalese large cardamom and additional WTP of organic certified Nepalese large cardamom price premium. Out of seventeen explanatory variables used to factors determine WTP, ten variables were found statistically significant on WTP of Nepalese large cardamom whereas seven variables were found statistically significance on additional WTP of organic certified Nepalese large cardamom (Table 9).

Location (19.2% at p<0.000), gender (26.6%), household size (10.9%), preference based on size (46.3%) and health benefits (17.3%) have found negative impact on WTP on Nepalese large cardamom whereas region (19.9%), annual household expenditure (25.8% at p<0.000), knowledge on Nepalese large cardamom (25.8%), part of large cardamom preference (25.9%) and preference based on color (59.7% at p<0.000) were found positively and statistically significant on WTP of Nepalese large cardamom.

Major determine factors on WTP of Nepalese large cardamom were preference based on color, size, household expenditure and knowledge on Nepalese large cardamom. If respondent preferred large cardamom based on color, the WTP will be increased by 59.7% whereas based on size, the probability of WTP will be decreased by 46.3%. If the HH expenditure increased by 1%, the probability of WTP will be increased by 25.8% and if respondents knew the Nepalese large cardamom the WTP will be increased by 25.8%. Urban city respondents WTP was found about 19% less than peri-urban and rural localities (location) whereas if respondents was male, the probability of WTP on Nepalese large cardamom will be decreased by 26.6%. In case of region, if respondents were Asian origin (from Nepal, India, Pakistan, Bangladesh and East Asia), the probability of WTP will be increased by 19.9% as compared to other continents while large cardamom is mainly consumed in Asian countries (Table 9, Model 1).

In case of factors determine additional WTP of organic certified Nepalese large cardamom (Table 8, Model 2), household size, annual household expenditure, preference based on size were found negatively significant while preference based value added type, part, preference based on health benefits and large cardamom flavor were found positively significance. Major determining factors were preference of large cardamom based on size, health benefits, flavor as well as valued added types and part on WTP of organic certified Nepalese large cardamom. If respondents preferred large cardamom based on size, the probability of addition WTP on organic certified large cardamom will be decreased by 42.3% which was found statistically highly significance (at p<0.000). The preference based on health benefits will increased probability of additional WTP by 27 % at 1 percent level of significance while if respondents preferred large cardamom based on its flavor, the probability of additional WTP on organic certified large cardamom will be increased by 20.7%. If respondents preferred the electric dried large cardamom, the probability of WTP will be increased by 19.1% as compared to fire dried once while if respondents preferred seed and extracted oil of large cardamom than whole capsule, the probability of WTP on organic Nepalese large cardamom will be increased by 18.4%.

In case of socio-demographic feature, the household size has negative impact on WTP whereas if household size increased by one member, the probability of additional WTP of organic certified Nepalese large cardamom will be decreased by 7.9% while if respondents' expenditure increased by 1%, the probability of WTP will be decreased by 11.7% (Table 9, Model 2).

Table 9. Logit model for factors determining WTP of Nepalese large cardamom

Variables	WTP Nepalese Large Cardamom (Yes=1)			Additional WTP of Organic Certified Nepalese Large Cardamom (Yes=1)		
	Model 1			**Model 2**		
	Coefficient	Std. Err.	dy/dx#	Coefficient	Std. Err.	dy/dx#
Location#	-0.864**	0.348	-0.192***	-0.388	0.330	-0.095
Region#	1.018*	0.710	0.199*	-0.835	0.736	-0.185
Age	0.009	0.023	0.002	-0.016	0.022	-0.004
Gender#	-1.116**	0.443	-0.266*	-0.040	0.390	-0.009
Education	0.068	0.066	0.0157	-0.061	0.064	0.015
HH size	-0.472***	0.156	-0.109***	-0.326**	0.137	-0.079**
Log Income	-0.117*	0.064	0.0397	-0.044	0.060	-0.010
Log Expenditure	0.171	0.180	0.258***	-0.481*	0.189	-0.117*
Consume large cardamom volume	0.0004	0.0004	0.0001	0.0003	0.0004	0.0008
Knowledge Nepalese large cardamom#	1.310**	0.605	0.258***	0.521	0.531	0.128
Prefer Type#	0.001	0.456	0.0003	0.948*	0.485	0.191**
Prefer Part#	1.096***	0.371	0.259***	0.783**	0.351	0.184**
Prefer Price#	0.499	0.435	0.118	0.029	0.392	0.007
Prefer Color#	2.839***	0.701	0.597***	0.835	0.615	0.199
Prefer Size#	-2.411***	0.645	-0.463***	-1.806***	0.591	-0.423***
Prefer Health Benefits#	-0.755*	0.403	-0.173*	1.135***	0.393	0.270***
Prefer Flavor#	-0.368	0.363	-0.085	0.854**	0.355	0.207**
Number of obs	254			254		
LR ch^2 (17)	85.00***			65.80***		
Pseudo R^2	24.78%			18.85%		
Marginal effect after logit (predict)	36.42%			57.70%		

Notes: ***, ** and * indicate 1%, 5% and 10% significance level, respectively. dy/dx# resembles the marginal effects after Logit. #resembles dummy variable having binary character (1/0).

Table 10 presents factors determine the WTP regression analysis of Nepalese large cardamom' price premium. Location, age, household size, preference based on size and health benefits were found statistically and negatively significance on additional WTP of Nepalese large cardamom (in US$/kg) whereas preference based on large cardamom part and color were found statistically and positively significance. Major impact factors were preference based on color, size and part on additional WTP of Nepalese large cardamom price premium. If respondents preferred based on color, the additional WTP of Nepalese large cardamom was US$ 10.99 per kg while preference based on size and health benefits, the additional WTP were - US$ 10.23 a kg and - US$ 3.24 per kg less, respectively. If respondents preferred the large cardamom seed and extracted oil than whole capsule, the additional WTP of Nepalese large cardamom was US$ 4.83 per kg. If respondents belong to urban city area, the additional WTP of Nepalese large cardamom was US$ 2.09 per kg less than those belonged to peri-urban and rural area while if household size increased by one member the additional WTP was decreased by US$ 1.22 per kg (Table 10, Model 1)

In case of additional WTP price premium of organic certified Nepalese large cardamom (Table 10, Model 2), knowledge, preference based on color and flavor and consumption of large cardamom where found positively and significant impact whereas age of the respondents and preference based on size had have negatively and significant impact. If respondents have knowledge on Nepalese large cardamom, the additional WTP on organic certified Nepalese large cardamom increased by US$ 7.63 per kg while respondents preferred large cardamom based on color and flavor, the additional WTP increased by US$ 9.29 and US$ 2.69 per kg, respectively. In case of gender, if respondent was male, the additional WTP increased by US$ 2.82 per kg than female whereas if age increased by one year, the additional WTP of organic certified large cardamom decreased by US$ 0.15 per kg.

The preference of large cardamom based on size has negative impact on WTP of organic certified Nepalese large cardamom price premium. If respondent preferred based on size of the large cardamom, the additional WTP decreased by US$ 5. 83 per kg (Model 2 in Table 10).

Table 10. Factors determine the WTP regression analysis on Nepalese large cardamom

Variables	Additional WTP Nepalese Large Cardamom (US$/kg)		Additional WTP Organic Certified Nepalese Large Cardamom (US$/kg)	
	Model 1		Model 2	
	Coefficient	Std. Err.	Coefficient	Std. Err.
Location#	-2.099*	1.276	-1.575	1.146
Region#	4.055	2.717	-3.532	2.461
Age	-0.144*	0.092	-0.158*	0.083
Gender#	-1.406	1.587	2.829**	1.438
Education	0.275	0.246	0.084	0.223
HH size	-1.224**	0.527	-0.318	0.478
Log Income	-0.170	0.242	-0.201	0.219
Log Expenditure	0.960	0.695	-0.787	0.629
Consume large cardamom volume	0.0005	0.001	0.007***	0.002
Knowledge Nepalese large cardamom#	1.907	2.201	7.632***	1.994
Prefer Type#	0.862	1.814	-2.597	1.644
Prefer Part#	4.839***	1.415	2.012	1.282
Prefer Price#	1.319	1.579	-2.263	1.431
Prefer Color#	10.997***	2.349	9.291***	2.128
Prefer Size#	-10.236***	2.195	-5.833***	1.989
Prefer Health Benefits#	-3.243**	1.523	2.000	1.380
Prefer Flavor#	-0.820	1.397	2.691**	1.2662
Constant	1.081	8.510	8.858***	7.710
Number of obs.	254		254	
R^2	23.55%		35.92%	
Adjusted R^2	18.08%		31.30%	
F-value	4.280***		7.780***	
VIF	1.78		1.78	

Notes: ***, ** and * indicate 1%, 5% and 10% significance level, respectively. #resembles dummy variable having binary character (1/0)

Conclusion and Policy Implications

Consumers were willing to pay price premium of 34.56 percent for Nepalese large cardamom while about 33 percent additional WTP for organically certified Nepalese large cardamom. About 40 percent respondents willingness to pay (WTP) of Nepalese large cardamom whereas 65 percent expressed their additional WTP on organic certified Nepalese large cardamom. Majority of respondents knew about Nepalese large cardamom (forth-fifth) and half of them consumed large cardamom rarely. Third- fourth of the respondents preferred large cardamom based on its flavor and forty one percent knew about essential oil extracted from large cardamom available in global market.

Average price paid by respondents on large cardamom was US$ 19.6 per kg. The WTP additional amount for Nepalese large cardamom was US$ 6.92 per kg whereas which was US$ 6.6 per kg additional if large cardamom can be organically certified. Major determine factors on WTP of Nepalese large cardamom were preference based on color, size, household expenditure and knowledge on Nepalese large cardamom whereas in case of factors determine additional WTP of organic certified Nepalese large cardamom, the household size, annual household expenditure, preference based on size were found negatively significant while preference based value added type, part, preference based on health benefits and large cardamom flavor were found positively significance.

Major impact factors were preference based on color, size and part on additional WTP of Nepalese large cardamom price premium. If respondents preferred based on color, the additional WTP of Nepalese large cardamom was US$ 10.99 per kg. In case of additional WTP price premium of organic certified Nepalese large cardamom, knowledge, preference based on color and flavor and consumption of large cardamom where found positively and significant impact whereas age of the respondents and preference based on size had have negatively and significant impact. If respondent has a knowledge on Nepalese large cardamom, the additional WTP on organic certified Nepalese large cardamom increased by US$ 7.63 per kg while respondents preferred large cardamom based on color and flavor, the additional WTP increased by US$ 9.29 and US$ 2.69 per kg, respectively.

The results may help the large cardamom producers, traders and policy makers to understand a diversified set of preferences for products and market attributes, so that they can make better decisions to achieve Nepalese large cardamom price premium in global market. The results can significantly contribute to improving the large cardamom producers, traders and consumer policy and developing effective large cardamom value added practices for global market. Furthermore, policy makers and researchers need to focus on significant factors determining WTP of Nepalese

large cardamom considering socio-demographic, institutional, economics and preferences variables.

Author's Contribution

R.R. Kattel designed the research plan, collected the required data from and analyzed the data. Mr. Kattel also prepared the manuscript. Prof. Dr. P.P. Regmi, Prof. Dr. M.D. Shrma and Adj. Prof. Dr. Y.B. Thapa advised and provided comments and feedback to finalize this manuscript. Final form of manuscript was approved by all authors.

Conflict of Interest

The authors declare that there is no conflict of interest with present publication.

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References

Acebron LB, Levy Mangin J-P and Calvo Dopico D (2000) A proposal of the buying model for fresh food products: the case of fresh mussels. *Journal of International Food & Agribusiness Marketing* **11**(3): 75-96.

Adhikari PA (2015) Activities of Cardamom Development Center and DoA in Large Cardamom Development. *Proceedings of the Stakeholders Consultation Workshop on Large Cardamom Development in Nepal* (pp. 33-39). Agricultural Research Station, Pakhribas, Dhankuta: Nepal Agricultural Research Council, National Agricultural Research Institute, Commercial Crop Division, Khumaltar, Lalitpur, Nepal .

Ahlgren M, Gustafsson I-B and Hall G (2004) Attitudes and beliefs directed towards ready-meal consumption. *Food Service Technology* **4**(4): 159-69.

Alberini A (1995) Optimal designs for discrete choice contingent valuation surveys: single bound, double-bound, and bivariate models. *Journal of Environmental Economics and Management* **28**: 287-306.

Ali J, Kapoor S and Moorthy J (2010) Buying behaviour of consumers for food products in an emerging economy. *British Food Journal* **112** (2): 109-124.

Aparna S (2011) Consumer Preference for Processed and Branded Spice Products- A Study in Bangalore. Bangalore.

Asp EH (1999) Factors affecting food decisions made by individual consumers. *Food Policy* **24**: 287-94.

Batra R and Sinha I (2000) Consumer-level factors moderating the success of private label brands. *Journal of Retailing* **72** (2): 175-191.

Brokaw S and Lakshman C (1995) Cross-cultural consumer research in India: a review and analysis. *Journal of International Consumer Marketing* **7**(3): 53-80.

Cardello AV (1995) Food quality: relativity, context and consumer expectations. *Food Quality and Preference* **6** (3): 163-170.

Chandrashekhar HM (2014) Consumers perception towards organic products - A study in Mysore city. *International Journal of Research in Business Studies and Management* **1**(1): 52-67.

Choo HJ, Chung J-E and Pysarchik DT (2004) Antecedents to new food product purchasing behavior among innovator groups in India. *European Journal of Marketing* **38** (5/6): 608-25.

Chung J-E, Yu J and Pysarchik DT (2006) Cue utilization to assess food product quality: a comparison of consumers and retailers in India. *The International Review of Retail, Distribution and Consumer Research* **16**(2): 199-214.

FLCEN (2016) Federation of Large Cardamom Entrepreneurs of Nepal.

Ghai S and Ramawat N (2016) A study of consumer perception and preferences towards organic tea in Delhi-NCR. *International Journal of Research in Applied, Natural and Social Sciences* **4**(7): 101-110.

GoN/ITC (2017) Nepal National Sector Export Strategy Large Cardamom 2017-2021. Government of Nepal (GoN)/ International Trade Centre (ITC).

Govindarajan VS, Narasimhan S, Raghuveer KG, Lewis YS and Stahl WH (1982) Cardamom — production, technology, chemistry, and quality, *C R C Critical Reviews in Food Science and Nutrition* **16**(3): 229-326

Goyal A and Singh NP (2007) Consumer perception about fast food in India: an exploratory study. *British Food Journal* **109** (2): 182-95.

ITC (2017) Trade map. Retrieved from Trade map website: www.trademap.org

ITC (2018) Trade map. Retrieved from Trade map website: www.trademap.org

Juric B and Worsley A (1998) Consumers' attitudes towards imported food products. *Food Quality and Preference* **9** (6): 431-441.

Kumari P (2018) Analysis of consumer preference for branded spice products in Bathinda. Applied Agriculture-Master Dissertation, Cental Univeristy of Panjab Bathinda, India.

Kupiec B and Revell B (2001) Measuring consumer quality judgments. *British Food Journal* **103** (1): 7-22.

Ling S-S, Pysarchik DT and Choo HJ (2004) Adopters of new food products in India. *Marketing Intelligence & Planning* **22** (4): 371-91.

MoAD (2017) Statistical Information on Nepalese Agriculture.

Singha Durbar, Kathmandu, Nepal.

MoAD (2018) Statistical Information on Nepalese Agriculture. Singha Durbar, Kathmandu, Nepal.

MoC (2016) Nepal Trade Integration Strategy. Kathmandu: Government of Nepal, Ministry of Commerce.

Nagla M (2007) Feeding the family in India: an approach to household food consumption. *International Journal of Consumer Studies* **31** (3): 295-302.

Ness MR and Gerhardy H (1994) Consumer preferences for quality and freshness attributes of eggs. *British Food Journal* **96**(3): 26-34.

Noor T, Begum M, Ahmed MR and Hossain MI (2017) Consumer's preference and acceptance of branded spice powder in Sadar Upazila of Mymensingh Distirct in Bangladesh. *Asian Journal of Agricultural Extension, Economics & Sociology* **19**(4): 1-13.

Rupesh Mervin M and Velmurugan R (2013) Consumer's attitude towards organic food products. *Discovery* **3**(7): 15-18.

Salma S and Ramakrishnan L (2017) Study on most frequently consumed spices in households and the consumer's knowledge and preferences to organic spices in Coimbatore district, Tamil Nandu, India. *International Journal of Herbal Medicine* **5**(3): 49-52.

Silayoi P and Speece M (2004) Packaging and purchase decision: an exploratory study on the impact of involvement level and time pressure. *British Food Journal* **106**(8): 607-628.

Singh AI and Pothula AK (2013) Postharvest processing of large cardamom in the Eastern Himalayan. *Mountain Research and Development* **33**(4): 453-462.

Sumi RS and Kabir G (2018) Factors affecting the buying intention of organic tea consumers of Bangladesh. *Journal of Open Innovation: Technology, Market, and Complexity* **4**(3): 1-15.

TEPC (2018) Trade Export Promotion Center. Government of Nepal, Ministry of Industry, Commerce and Supplies, Kathmandu, Nepal.

Vincent TN (2007) A study on brand conciousness among children and its effect on family buying behaviour in Banglore city. *Ushus Journal of Business Management* **6**(2): 91-107

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