Original Research Article

Tea Quality and Value-Added Marketing Potential of Safe and Sustainable Tea in Indian Domestic Market: Consumers Choice for Conventional *vis-a-vis* Sustainable Tea

Abstract:

Now a days consumers are more intended to sustainable products. Especially when it is promoted as health drinks, its quality and sustainable background specially the environment in which it is produced have special significance to present day consumers. The study showed that, adoption of Inhana Rational Farming Technology towards safe and sustainable tea initiatives called 'Clean Tea Program' has influenced tea quality specially polyphenols which have specific health relevance. On the other hand study of value added marketing potential of safe and sustainable tea in Indian domestic market was done among people representing diversity of our social cluster in terms of age, education, professions and income. However irrespective of this variability, most people prefer ecofriendly products whereas pricing of the sustainable tea also plays a major crucial factor for final decision-making process. Education and age group have also significant influence on decision making process and at the same time different other factors viz environmental concern, health aspects, effect of electronic and social media, promotional activities and marketing offers influence consumers towards their purchasing decision.

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Key Words

Clean Tea, Polyphenols, IRF Technology, Tea consuming behavior, Purchasing decision

Introduction

Today's dynamic business environment is continuously changing because of globalization, regulatory changes, increasing intensity of competition, increasingly demanding customers, new information technology, ~~and~~ mergers and acquisitions. This has resulted in markets that can be characterized as increasingly turbulent and volatile and has caused many organizations to seek competitive capabilities that enable them to exceed customers" expectations and enhance market and financial performance. Firms are increasingly adopting value addition strategies in order to reduce costs, increase market share and sales, and build solid customer relations.

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In modern marketing management, sustainability plays a vital role in competitive business environment. Green products convey the information to the consumer about the eco-benefits

about using product and these green products also ~~to~~ aid to inspire and fetch the alteration in consumer buying behavior positively (Carlson & George, 1995). As consumers prefer sustainable product widely, sustainable products are becoming market leader day by day. Thus, it is raising the demand for the eco-friendly product around the world (Rahbor & Wahid, 2011). The movement for sustainability is observed to be increasing all over the world. Consumers are also showing right activities and responsive behaviors regarding environmental movement. Because of the changes in consumer behaviors due to environmental awareness and intentions to do better for ecology, more and more eco-friendly products are launching to market (Shruti, 2014). Green marketing (Offering sustainable products) concept incorporates a wide range of activities for establishing the consumer rights, saving the environment and meeting the consumer needs or wants and preferences.

Tea, one of the major case crop in India face challenges from many fronts from crop sustainability to price realization. Quest for sustainability in the Indian tea industry starts on a serious note in the backdrop of several key issues such as impact of climate change on crop productivity, higher intensity of pest and diseases, rampant use of agrochemicals, issue of pesticide residues, increasing man-days cost etc. (Seal *et al*, 2016). Now to sustained and compete with global players in tea, Indian tea industry is need to adopt policy not only sustainable initiatives in tea production but at the same time value added marketing.

In this background, Inhana Organic Research Foundation, pioneering sustainable organic tea in India bring forth the concept of Clean Tea. Clean Tea is outcome of safe and sustainable tea initiatives which is produced in a nature friendly environment through adoption of 'Inhana Rational Farming (IRF) Technology'- an ecologically sustainable and economically viable organic package of practice. It is a 100% safe package and concept as it does not use any carcinogenic chemicals and is analytically tested with colorimetric assay test to ensure 100 % higher compliance with respect to the European Standards. At the same time, it is sustainable to both producer and consumers. Sustainable for the consumer means available at the conventional market price range or in other words no premium price for availing the uniqueness. To the producer, sustainable means this unique product without any crop loss or hike in COP. This is because the adoption of IRF Technology enables natural reduction in the chemical dependency, which increases the competiveness of the end product.

At the same time, reduction of chemical inputs especially N fertilizers and synthetic pesticides have a positive impact on tea quality. Pesticides influence levels of secondary metabolites like flavonoids, hydroxycinnamic acids, anthocyanins, tropane alkaloids, and volatile terpenoids by non-specific mechanisms or interfering the key biosynthesis steps (Hancianu, and Aprotosoaie, 2012). Also, pesticides are able to modulate plant metabolism affecting assimilation rate of

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micronutrients. At the same time, sole dependence on chemical fertilizer and excessive N application may decrease tea quality. Synthetic N additions affected tea quality by altering the relative content of chemical constituents. Shoots free amino acid contents can affect the taste of prepared tea, especially the slightly sweet taste of green tea products (Lvova *et al*. 2003). Besides that, free amino acids and polyphenols are key metabolites in plucked shoots, and the polyphenol/free amino acid ratio (PP/AA ratio) is generally used to evaluate the quality of prepared tea and the taste of tea infusions (Wang et al. 2010). Increasing the N supply enhances the formation and accumulation of free amino acids in plucked tea shoots (Okano et al. 1997; Ruan et al. 2007) while enhancement of polyphenol concentration is not in same order or even decreases as seen in same cases (Venkatesan and Ganapathy 2004; Mudau et al. 2006), resulting in decrease in PP/AA ratios and therefore quality of tea. Also, the relative decrease in the PP/AA ratio of tea shoots induced by N additions might also alter the oxidization and fermentation during the manufacturing process and alter the quality of tea products (Qiao, 2018).

At the same time, synthetic N additions might play an important role in modifying the biochemical properties of tea shoots and affecting the quality of specific manufactured tea products (Ruan 2005). Also soil acidification caused by N fertilization exacerbates the severity of aluminum toxicity and nutrient imbalance for tea plants and threatens tea production and quality. (Qiao, 2018). Thus adoption of any sustainable initiatives towards reduction of chemical fertilizers and pesticides without compromising tea yield can contribute to its quality.

The present study aimed at comparative analysis of tea quality and consumer awareness and behavioral pattern regarding **'Sustainable Tea Consumption'** towards developing effective strategies for value added marketing.

Pic 1 : Landscape view of Lakhipara Tea Estate, Dooars, West Bengal.

Materials and Methodology:

The study was undertaken after introduction of safe and sustainable tea initiative by **'Inhana Organic Research Foundation (IORF)'**, Kolkata at **'Lakhipara Tea Estate'**, a flagship garden of **'Goodricke Group of Company' (GGL)** at Dooars, West Bengal. Under this program, Development of Plant Health and Restoration of Soil Quality through adoption of Inhana Rational Farming (IRF) Technology – A comprehensive and Scientific organic package of practice, for crop sustainability & enabling reduction in pesticide usage.

Framework based on previous survey findings by different Research Workers:

Consumer choices increases towards sustainable products which are produced sustainably with taken care of environment and workers safety. Some studies have indicated that assessment of environmental concern are made by product features, the exactness of product promise to perform, information on the products and its facilities (Forkink, 2010; Luchs *et al*., 2010). Specially tea, which has been promoted as health drink -food safety, environmental protection, workers benefit has become important factors for value added marketing and access to certain consumer base. Value addition with such factors has been noticed with increase of 'Fair-trade', 'Rainforest Alliance (RA)', Ethical Tea Partnerships (ETP) etc. certifications in tea sectors which help to promote 'Tea' as a sustainable product.

Hypothesis 1: There is a significant relationship between consumers' awareness and food safety. Sustainable products using less harmful inputs having lower risks of pesticide MRL residues which influence consumers decision making behavior having fair idea about the subject.

Hypothesis 2: There is a significant relationship between consumers' environmental concern and awareness regarding eco-friendly production of specific products specially promoted as health drinks. Awareness and knowledge play effective role in different types of consumer behaviors (McEachern & Warnaby, 2008; Hartlieb & Jones, 2009; Donoghue & De Klerk, 2009). Eco-packaging helps to build positive image and judgment of consumers (Siddique & Hossain, 2018). Thus, it creates awareness about green products by enhancing knowledge of different critical aspects and also influences consumers' decisions or behaviors. Knowledge can be related to awareness and effect consumers purchasing choices or movements (McEarchern & Warnaby, 2008).

Hypothesis 3: There is a significant relationship between consumers knowledge and awareness regarding sustainable products. Consumer prefers to buy an environment-friendly product from popular and renowned firms (Suki, 2013). Eco-friendly products change the thinking of buying

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decisions. Positive thinking is established on the mindset of people by eco-friendly products (Suki, 2013).

Hypothesis 4: There is a strong relationship between pricing of the product and consumers decision making. It is also true for sustainable products.

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Research Methodology

Analysis of Tea quality: Conventional tea samples were collected from twelve different tea estates in Dooars. The samples were analyzed for quality parameters *viz.* pH, Electrical Conductivity (EC), Total Soluble Salts (TSS), Total Dissolved Solids (TDS), Free Amino Acids, Total Polyphenols and Total Flavanoids in the laboratory of IORF, Kolkata as per standard methodology (Yemm & Cocking, 1955; Singleton *et al*. 1999). Statistical analysis in terms of standard error (± S.E.) was performed using SPSS software (version 7.2).

Pic 2 : Sustainable initiatives taken under Sustainable Tea Concept at "Lakhipara Tea Estate", Doors, West Bengal

Research Methodology of Market Survey: The resource methodology was primarily adopted from the work done by Siddique & Hossain, (2018). This study is quantitative in nature. For collecting primary data, the personal interview has been conducted with 200 respondence randomly chosen from different sector primarily exposed to present lifestyle and awareness level. From the secondary sources, the literature review has been developed. Structural questions have prepared consists of 45 items for data collections.

Six issues are related to demographic variables such as name, age, gender, occupation, education and monthly income. Three questions are related to tea drinking such as likeliness, frequency etc.

Thirty questions are about level of awareness regarding sustainable Low/No MRL Tea which influence consumers purchase decision. Thus section 2 is composed of awareness measures by using five point Likert scales (from 1= 'Strongly disagree' to 5= 'Strongly agree'). The first question with five value propositions which are linked to awareness regarding food safety and environmental concern (pesticide residues in tea, health issues, relationship among pesticide residue and health etc. The second question with five value propositions which are linked to awareness and knowledge regarding conventional tea and health issue (risk of pesticide MRL residues in conventional tea, possibility of health hazards, ecology and environment, usage of pesticides in cultivation etc. The third question with five value propositions which are linked to the sustainable products (health benefit, environmental concern, workers safety, consumers responsibility and quality). The fourth question with five value propositions which are linked to the digital media (have learned from Facebook, twitter, Instagram etc. other social medias, websites, blogs, other platforms like digital newspaper etc. The fifth question with five value propositions which are linked to promotional activities (ads with sustainable themes & messages, labels sustainable, better health, creating awareness and enough information to buy). The sixth question with five value propositions which are linked to consumers interest towards buying sustainable products (buying interest, shift from regular tea, buy with more price etc

Five multiple items scale questions deal with the consumer sustainable product purchasing behaviors. Applying the convenience and judgmental sampling techniques, primary data is collected through the personal interview. Cronbach's Alpha, which is a measure that assesses the internal consistency, of a set of scale or test items scored 0.874 for 30 items of variables. This suggest that the examination instrument is reliable to evaluate all hypotheses reliably and free from random error. Data collected from questionnaires are analyzed by using different statistical tools like mean, standard deviation and regression analysis by using SPSS 10.0.

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Results and Discussions:

Tea Quality Analysis

To assess the impact of safe and sustainable tea initiatives ("Clean Tea Program") towards making tea quality a comparative study was taken up using conventional tea samples (under chemical farming) and tea produced under Clean Tea program. Table 1 represents tea quality under conventional (chemical) and sustainable farming practice in Dooars.

Table 1: Comparative Evaluation of CTC Black Tea Quality under Conventional (Chemical) and safe and sustainable tea initiatives (Clean Tea Program) in Dooars.

Quality Parameters	Dooars CTC Black Tea					
	Conventional Tea			Clean Tea Program (under IRF)		
	Range value	Mean	Standard Error	Range value	Mean	Standard Error
pH (1:100)	4.12 – 5.29	4.53	± 0.03	4.07 – 5.06	4.42	± 0.04
Electrical conductivity ($dS.m^{-1}$) 1:100	0.32 – 0.55	0.44	± 0.02	0.34 – 0.57	0.47	± 0.01
Total soluble salts (%)	2.11 – 3.63	2.94	± 0.04	2.17 – 3.66	3.01	± 0.05
Total dissolved solids (%) dry basis	33.58 – 43.10	37.84	± 0.83	30.29 – 51.16	39.05	± 0.78
Total Polyphenol content (mg/g)	79.40 – 106.00	94.04	± 1.25	84.4 – 113.4	97.9	± 1.24
Total Flavanoid content (mg/g)	66.70 – 89.04	79.00	± 1.07	70.91 – 95.28	82.23	± 1.04

In all the cases mean pH value of the made tea brew was lower (4.42) in case of Clean tea samples as compared to conventional ones (4.53), which might indicate higher presence of phenolic compounds and free amino acids in the former. Higher percentage of amino acids meant higher concentration of theanine (in general theanine comprises 50 to 60 percent of total free amino acid content), which inhibits the activity of enzymes that are primarily responsible for

the deactivation of polyphenol oxidase activity. This might prevent loss of phenolic compounds during the process, thereby leading to expressed tea quality (Bera *et al*, 2013).

Electrical Conductivity (EC) and Total Soluble Salts (TSS) in made tea samples reflect the nutritional and mineral management of tea plants. Under ideal conditions high TSS content is always accompanied by high Total Dissolved Solids (TDS) percent, higher polyphenol content and the corresponding high flavanoids. EC (0.44 and 0.47 dSm^{-1}), TSS (2.94 and 3.01 percent) and TDS (37.84 and 39.05 percent) values of conventional and Clean tea samples respectively indicated comparatively higher values (on an average) for all the three parameters in case of Clean Tea (under IRF) samples. Total polyphenol and flavonoid content in made tea are of major interest, considering that they reflect its antioxidant/ health giving potential. Total polyphenol content in conventional and Clean tea (under IRF) samples varied from 79.40 – 106.00 mg/g and 84.4 – 113.4 mg/g respectively. The results indicated comparatively higher quality component in Clean Tea in comparison to conventional tea in the tea agro-ecological regions of Dooars and Safe and Sustainable initiatives with Adoption of IRF Technology might play a pivotal role towards quality enhancement of the tea.

The Demographic Profile of Respondents:

Table 2- represents the different frequency and percentages of the demographic profile of respondents. Most of the respondents are **males (62.5%)** while **females** are **36.5%.** It is observed that respondents are mostly in the age groups **26–50 years old (51.5%),** known as young & middle age. Besides, these groups have decision making and purchasing power within the family and react to different situations faster than any other age class. So this study considers maximum number of participants from this group. The second highest number of respondents are in the age categories **51-60 years (21.0 %).** These age group people tend to have been more concern about the green environment ecosystem and influence a purchasing decision. With regards to educational qualification, **49.0% of respondents are graduate, 19.5 % of respondents are postgraduate, 18.5 % of respondents are undergraduate, and 9.5 % of the respondents are doctorates.** Also about employment status, the majority of respondents are in-**service (69.0 %)- professionals,** the second highest of respondents are **house wife's (11.0 %),** and the third highest of the respondents are **own business owners (9.0%).** It represented that respondents are the majority in the income level of **50,000 – 75,000 (34.5%),** the second highest of respondents are of income level **20,000-50,000 (24.0%),** the third highest of respondents are income level below **20,000 (19.5 %) per month.**

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Pic 3: Novcom Composting and In-house Organic Concoction making at Lakhipara Tea Estate as part of Sustainable activity at Lakhipara Tea Estate, Dooars, W.B

Table 2. The demographic profile of respondents:

Parameters	Frequency	Percentage
Gender		
Male	125	62.50
Female	73	36.50
Others	2	1.00
Age		
18 - 25 years	35	17.50
26 - 40 Year	49	24.50
41 - 50 year	54	27.00
51 - 60 years	42	21.00
> 60 Years	20	10.00
Educational Qualification		
Undergraduate	37	18.50
Graduate	98	49.00
Post graduate	39	19.50
Doctorate	19	9.50
Others	7	3.50
Employment Status		

Student	16	8.00
Housewife	22	11.00
Business	18	9.00
IT-sector	17	8.50
Medical Sector	14	7.00
Teaching	19	9.50
Tea People	18	9.00
Agriculture	19	9.50
Doctors	13	6.50
Government Service	18	9.00
Private Sector	20	10.00
Others	6	3.00
Monthly income		
Below 20 thousand	38	19.00
20,000 - 50, 000	48	24.00
50,000 - 75,000	69	34.50
75,000 - 1,00,000	29	14.50
> 1,00,000	16	8.00

Tea consuming behavior:

Table 3 represented the tea consuming behavior of the respondents. The study showed that most of the respondents **(49 %)** took daily **3 to 5 cups of tea**, where as **35.5 %** respondents take daily **1 to 2** cups of tea. Most of the respondents took tea as part of their **Food Beverage (61.5 %),** where as **20.50 %** considered it as a Health Drink. As per as type of tea considered, no clear trend is there. **34.50 %** respondents liked blending of both liquor and flavor followed by **23.50 %** favored **'Assam CTC type'** for Strong liquor and **19.50 %** liked **'Darjeeling type'** for flavor. In case of type of tea preparation, **44.50 %** respondents liked tea with milk, whereas liquor without milk was the choice of **36 %** respondents.

Table 3: Tea consuming behavior

Parameters	Frequency	Percentage
Frequency of taking Tea		
1 - 2 cup in a day	71	35.50
3 - 5 cup in a day	98	49.00
More than 5 cup in a day	26	13.00
sometimes & not regularly	5	2.50
~~**Why**~~ **Drink Tea**		
As food beverage	123	61.50
As Energy Drinks	41	20.50
As Health Drinks	36	18.00
~~**What type of Tea you like**~~		
Darjeeling type for flavor	39	19.50
Assam CTC type for Strong liquor	47	23.50
Orthodox Tea	23	11.50
Want mix of color and flavor	69	34.50
Green Tea	20	10.00
Any other specialized tea like white tea, Oolong etc.	2	1.00
~~**What type of tea preparation you like**~~		
Only Liquor	72	36.00
Tea with Milk	89	44.50
Lemon Tea / Masala Tea	28	14.00
Not any single type	11	5.50

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Sources of Consumers Awareness:

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Table 4 reveals awareness level of consumers regarding sustainable tea by expressing respondents' opinion on various components related to sustainability issue. Majority of respondents have agreed that Promotional activities on eco-friendly products (M=4.016 & SD=0.762) become one of the most significant factors in sources of consumers awareness regarding Sustainable Tea. Pricing of the sustainable tea is the second essential factor (M=3.679 & SD=0.744) in sources of consumer's awareness regarding sustainable tea. Information of electronic and social medial also influence the purchasing behavior of the consumers which became (M=3.540 & SD=0.870) third most important factor. Awareness regarding conventional tea & health issue (M=3.388 & SD=0.981) is the fourth significant factor.

Table 4 : Statistical analysis of consumers response regarding sustainability issue

	Questioner	Mean	Sample Std. Dev.	Population Std. Dev.	Sample Variance	Population Variance
Awareness regarding Food Safety and Health Concern						
Q1	Pesticide residue in tea have relation with Human Health	3.085	1.219	1.216	1.485	1.479
Q2	Pesticide residue in my tea should be a major concern	3.023	0.929	0.927	0.864	0.859
Q3	Pesticide contaminated food increases risk of critical diseases	3.475	0.817	0.814	0.809	0.899
Q4	MRL in tea is more important than Tea quality	2.960	1.151	1.148	1.325	1.318
Q5	Eco-friendly produced tea is not a marketing gimmick	3.078	1.023	1.021	0.862	0.854
	Average	**3.124**	**1.028**	**1.025**	**1.069**	**1.082**
Awareness regarding Conventional Tea & Health Issue						
Q6	More use of chemical fertilizer/pesticide during cultivation	3.021	1.002	1.001	0.824	0.829
Q7	Conventional Tea have higher chances of having pesticide residue	3.240	1.331	1.328	1.771	1.764
Q8	Conventional tea production harms	3.300	0.951	0.949	0.904	0.901

	ecology and environment					
Q9	Conventional tea have higher risk of violating food safety	4.265	0.899	0.897	0.892	0.893
Q10	Taking conventional tea increase risk of health hazard	3.115	0.724	0.722	0.525	0.521
	Average	**3.388**	**0.981**	**0.979**	**0.983**	**0.982**
Sustainable Tea (Low / No Residue tea) and Consumer Awareness						
Q11	Sustainable Tea can only be produced under eco-friendly process	3.06	0.824	0.822	0.679	0.675
Q12	Sustainable tea is good for health benefit	4.021	0.725	0.721	0.621	0.618
Q13	Sustainable Tea consumption will help to protect tea workers from pesticide pollution	3.05	0.856	0.851	0.649	0.647
Q14	Sustainable Tea have more Nutritional value/taste/appearance than Conventional tea	3.012	1.021	1.020	1.325	1.323
Q15	Consumer can influence maintenance of ecology and Biodiversity by choosing Sustainable Tea	3.2418	0.879	0.875	0.762	0.758
	Average	**3.277**	**0.861**	**0.858**	**0.807**	**0.804**
Source of Information						
Q16	I believe in branded tea & pesticide in tea is not an issue	3.885	0.738	0.721	0.662	0.654
Q17	I know from TV program / news paper about Pesticide issue & food safety	3.014	0.902	0.894	0.836	0.833
Q18	I know from different social media like face book, Twitter, YouTube, etc	3.525	0.924	0.919	0.876	0.871
Q19	Information regarding sustainable food is readily available	2.960	1.142	1.140	1.319	1.312
Q20	I got information from friends &	4.315	0.646	0.645	0.417	0.416

	colleagues, family members					
	Average	**3.540**	**0.870**	**0.864**	**0.822**	**0.817**
What you think regarding Promotional Activities on Eco-friendly Products						
Q21	Ads with sustainable themes & message about saving environment	4.305	0.765	0.763	0.585	0.582
Q22	Product levels with information of sustainable products	3.085	1.218	1.216	1.485	1.478
Q23	Creating awareness about green products	4.102	0.622	0.625	0.543	0.541
Q24	celebrity dampening & intensified market campaigning	4.382	0.621	0.618	0.542	0.541
Q25	Discount and Special Offer	4.204	0.582	0.579	0.521	0.518
	Average	**4.016**	**0.762**	**0.760**	**0.735**	**0.732**
Consumer Interest in Sustainable Tea vs Pricing of the Products						
Q26	I am looking for sustainable tea in market	2.860	1.152	1.148	1.369	1.362
Q27	Willing to change my regular tea brand if sustainable tea is available	3.825	0.675	0.674	0.456	0.454
Q28	Willing to pay more in terms of Health Safety concern related to tea	3.221	0.825	0.823	0.724	0.721
Q29	Will take if only come with a reliable brand	4.010	0.539	0.538	0.291	0.289
Q30	Will consider if available in same / low price in the market	4.479	0.531	0.528	0.512	0.509
	Average	**3.679**	**0.744**	**0.742**	**0.670**	**0.667**

Pic 4 : Novcom Jambo compost at Lakhipara Tea Estate

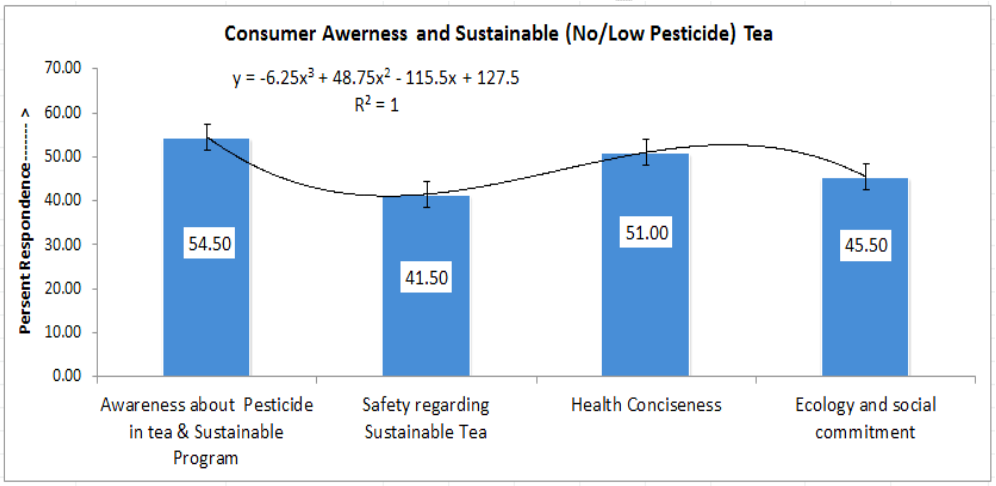

Fig 1 : Consumers Awareness towards different aspects of Sustainable Tea

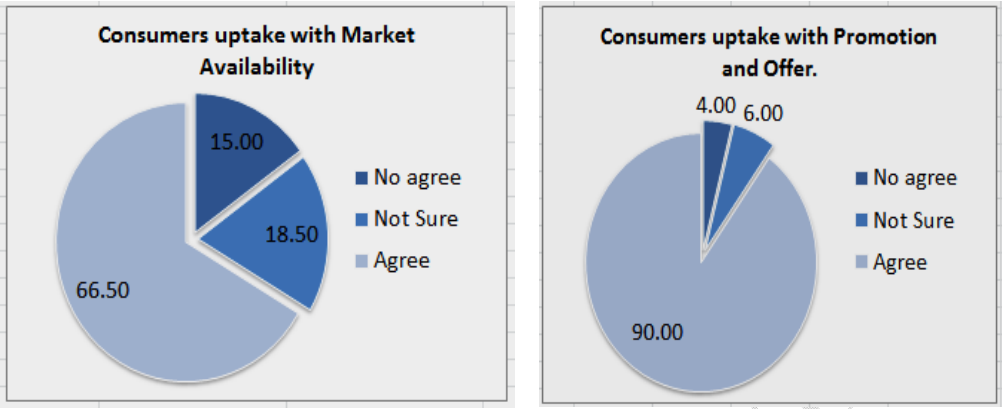

Fig 2 : Consumers Behavior and market potentials of Sustainable Tea

Purchasing Behavior of Sustainable Tea;

Table 5 presents that most of the respondents (39.00 % agree & 27.5 % strongly agree) will purchase sustainable tea in future with market availability. With market promotion and related offer, this percentage raised up to 90 % (47.00 % agree & 43 % strongly agree). And most encouraging fact is that more than 50 % respondents related to the buying of sustainable tea with health conciseness. So, consumers showed positive attitudes towards purchase of sustainable tea.

Table 5: Awareness regarding sustainable tea and consumer adoption potential

Consumers Response	Strongly Disagree		Disagree		Not Sure		Agree		Strongly Agree	
	f	%	f	%	f	%	f	%	F	%
Risk of Pesticide in tea	17	8.50	23	11.50	51	25.5	87	43.5	22	11.00
Safety regarding Sustainable Tea	29	14.50	36	18.00	52	26.00	63	31.50	20	10.00
Sustainable tea & Health Conciseness	10	5.00	35	17.50	53	26.50	82	41.00	20	10.00
Ecology and social commitment with	22	11.00	35	17.50	52	26.00	64	32.00	27.00	13.50

Sustainable Tea										
Consumers uptake with market availability	4	2.00	26	13.00	37	18.50	78	39.00	55	27.50
Consumers uptake with promotion and offer.	4	2.00	4	2.00	12	6.00	94	47.00	86	43.00

Pic 5 : Spraying of IRF Plant Health Management Solutions at Lakhipara Tea Estate

Relationships among socio-economic status with awareness level and purchase behavior of Sustainable Tea:

Influence of Educational qualification on awareness level and purchase behavior

The following cob-web diagram (fig 3) showed a relationship among educational qualification, awareness level and purchase behavior. Highest number of people **(94.7 %)** under doctorate category aware about the sustainability issue and among them most of the people **(89.47 %)** ready to purchase sustainable tea subject to market availability. This was followed by post graduate category, where **82.05 %** respondents aware about the issue and among them **69.23 %** wanted to buy Sustainable Tea if available in the market.

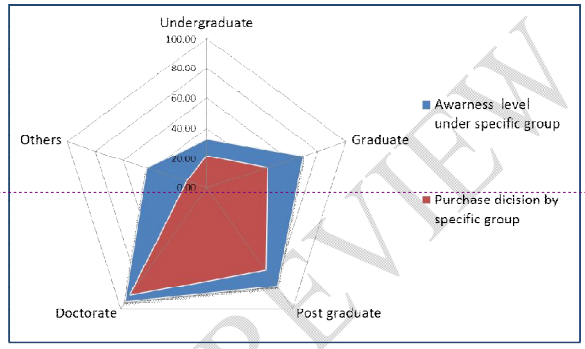

Fig 3 : Cob-web diagram showed relationship among educational qualification, awareness level and purchase behavior

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Influence of 'Age Group' on awareness level and purchase behavior

The following cob-web diagram (fig 4) showed a relationship among age, awareness level and purchase behavior. The study showed awareness level was highest in **41 – 50** age group **(75.93 %)** closely followed by **26 -40** age group **(71.43 %)** and **51-60** age group **(66.67 %).** However as per the purchase decision was concern, **100 % of > 60** years age group who are aware about the issue wanted to buy the product as soon as available in the market. This was followed by **26-40** age group, where **65.31 %** respondent expressed interest to buy Sustainable Tea.

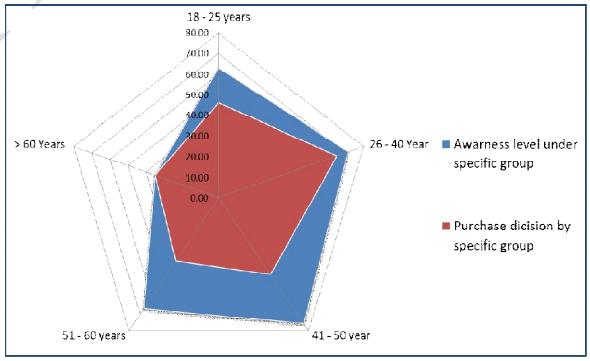

Fig 4 : Cob-web diagram showed relationship among age, awareness level and purchase behavior.

Influence of 'Employment Status' on awareness level and purchase behavior:

The following cob-web diagram (fig 5) showed a relationship among employment status, awareness level and purchase behavior. The study showed a mixed trend with highest number of respondents from medical sector **(74.07 %)** had shown interest about Sustainable Tea followed by respondents from **Education and IT sectors (66.67 %)** .

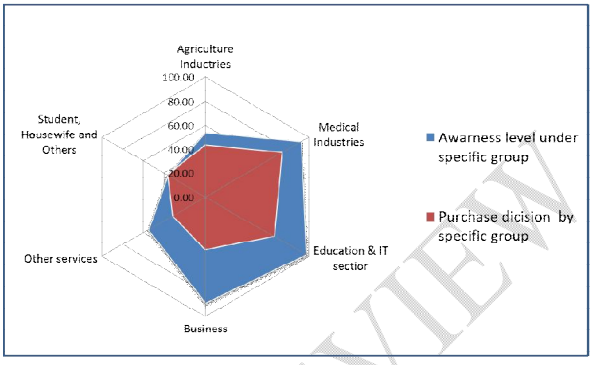

Fig 5 : Cob-web diagram showed relationship among employment status, awareness level and purchase behavior.

Conclusion and Implications:

The survey has been conducted with an objective to explore consumers' awareness regarding Sustainable Tea and purchasing behavior. This study examines environmental concern, health aspects, effect of electronic and social media, promotional activities and marketing offers influence consumers towards awareness regarding Sustainable Tea and its impact on their purchasing decision. The study reveals that promotional activity along with competitive price range might be the most important factor apart from awareness regarding pesticide impact on health issue to influence consumers purchasing decision.

Comment [u30]: 's

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