

Study of Organic Agricultural Practices for Improving Environment Sustainability in India

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Abstract- Product “environment friendliness” is relative, however, which results in a spectrum of products, features, benefits and trade-offs that consumers must weigh before making purchase decisions. The Societal Marketing Concept is advocated as being more able to meet both business and social objectives for the long-term. The concern with environmental degradation favoured the sprouting of a new segment of consumers: the green consumers. This type of consumer has been described as one who avoids products that are likely to endanger health or cause significant damage to the environment. As organizations have recognized the strategic importance of marketing in finding responses to these consumers’ “environmental needs”, the green marketing has become a prominent field of study. Companies are motivated to use sensory appeals more to be eco-ready, reasons including increased consumer demand, pressure from partners across the supply chain and risk to the brand simply by being redundant. Organic Agriculture is one of the most critically successful factor in building ecological balance. For example, an awareness campaign should include both branded, category and product-specific keywords. Marketers should refresh this list frequently as the entire category is still very much in flux. To intensify the research on the new trend is of great significance for improving the capacity of eco-marketing and participating in the competition in the world marketplaces. Lacking familiarity with environment friendly products, consumers turn to credible information sources to learn about products, compare features and validate choices. By focusing on significance in the Indian retail market about the new trend of Naturally environment friendly goods, especially food items, study can offer insights on how India can meet the challenges of the new trend “green” and grasp opportunities to develop and boost “eco-friendly marketing” through Organic Agriculture. This new trend has been exerting strong impact on the traditional way of marketing and will be in the mainstream of marketing for the next century.

Index Terms- Environment, Sustainability, Organic Products, Neuro-Sensory Appeal, Food, Nutrition, Health, Green Markets, Consumer Behaviour

I. INTRODUCTION

Health Friendly agriculture is viewed in as sustainable Agriculture. It is large protective health shield encompassing different methods of balancing the eco-system via, production, products, philosophies, permanent culture creation, Nutritional Organic Health Friendly, agro-organic agricultural processes follow inherent ecological non-interference and total integrity. Certified Organic Health Friendly production is a market-based arrangement in which farmers certify to consumers that their farm products have followed standardized set of guidelines from

NOHFCA (Organic Health Friendly certification agency). The classification is either “natural” or of “synthetic” origin. Finally, there is good reason to understand how Organic Health Friendly agricultural practices in general are right on track towards providing the necessary soil conditions that promote foods with good, and sometimes even superior, nutritional qualities. It should be clear from the novel qualitative tests and concepts outlined herein, that alternative agriculture has made significant contributions to non-traditional concepts and practices relating to soil health and food quality. There have been many studies of what influences consumers in their decisions to purchase or consume Organic Health Friendly foods, mainly concerned with fresh Organic Health Friendly foods. These show a discrepancy between attitudes and behavior with people being positive about Organic Health Friendly foods but often not purchasing them. This discrepancy seems to be explained by the fact that consumers do not consider “Organic Health Friendly produced” to be an important purchase criterion, that Organic Health Friendly foods are not perceived to surpass conventional foods regarding taste and shelf life (two qualities rated to be of great importance), and because of the perceived premium prices of Organic Health Friendly foods. Health Friendly agriculture may be viewed in much the same way as sustainable agriculture; i.e., a large umbrella under which many different methods of production, products, and philosophies exist. The goal — permanent culture, deep Organic Health Friendly, farming systems designed to take advantage of inherent ecosystem integrity, farms which exist on current and non-polluting resources, etc. — may be viewed as a continuum that encompasses a broad spectrum of agricultural concepts and practices that strive towards ecological health rather than one pre-determined production system set in stone for all time. On the other hand, certified Organic Health Friendly production is somewhat arbitrary. It is a market-based arrangement in which farmers certify to consumers that their farm products have followed an approved set of guidelines set forth by an Organic Health Friendly certification agency. Such guidelines assume the production of pesticide-free or otherwise healthy products because they are based on a list of approved versus restricted fertilizers and pest control products. However, the classification of these products — whether they are of “natural” or “synthetic” origin — is arbitrary. That is, a farmer may be certified if he or she meets the specified guidelines. The assumption is that an Organic Health Friendly farm will by necessity follow good husbandry practices such as humus management and mineral supplementation that result in good quality foods, but that is not always or necessarily the situation, especially on early-transition Organic Health Friendly farms. Secondly, in a discussion of “Organic Health Friendly versus conventional” production as it relates to food nutrition, one should not lose sight of the many farms and alternative farming systems that follow the principles

of Organic Health Friendly agriculture, but do not follow certified Organic Health Friendly production practices. Finally, there is good reason to understand how Organic Health Friendly agricultural practices in general are right on track towards providing the necessary soil conditions that promote foods with good, and sometimes even superior, nutritional qualities. It should be clear from the novel qualitative tests and concepts outlined herein, that alternative agriculture has made significant contributions to non-traditional concepts and practices relating to soil health and food quality. There have been many studies of what influences consumers in their decisions to purchase or consume Organic Health Friendly foods, mainly concerned with fresh Organic Health Friendly foods. These show a discrepancy between attitudes and behavior with people being positive about Organic Health Friendly foods but often not purchasing them. This discrepancy seems to be explained by the fact that consumers do not consider "Organic Health Friendly produced" to be an important purchase criterion, that Organic Health Friendly foods are not perceived to surpass conventional foods regarding taste and shelf life (two qualities rated to be of great importance), and because of the perceived premium prices of Organic Health Friendly foods. Deteriorating Environment and Shortage of Resources, has weakened its capabilities to combat natural adversities and incurred many droughts and floods year after year.

While the term "sustainability" is not a household word yet, it is an umbrella term for six key values: healthier, local, social responsibility, environmental responsibility, simple living and control. Each value has unique sentiments that evolve as consumers' experiences with the external world change over time. While affluent regions and social classes struggle with surplus production and surplus consumption, close to one fifth of the global population lives in a state of constant undernourishment. In many regions subsistence production of basic foods is restricted by lack of access to capital, land and water. At the same time, more favored growing areas within the same countries are used for commercial production of specialty crops or animal feed destined for export to affluent regions. Thus the major constraints to achieving universal food security, now enshrined as one of the Millennium Development Goals (MDGs) are found in social, economic and political conditions more than in problems regarding productive capacity. The main solutions to

food security problems will therefore be found in social, economic and political improvements. Nevertheless, demand for food will increase in the future, and choices about production methods do also influence access to food, so there are reasons why production issues need to be addressed.

II. MATERIALS AND METHODS

Research included study of trends in the food industry, and interviews with distributors, retailers, food service representatives and farmers. The study examined the processing, logistical, and distribution, challenges for small-to-midsize companies; and makes recommendations for farmer-owned or farmer-involved businesses.

This research examined the markets in the food service sector to identify:

1. Potential growth opportunities,
2. Product categories with the most market demand and potential,
3. Requirements needed to meet customer expectations, and
4. Lessons learned from other grower-owned businesses.

Shift to Values-based Purchasing

In addition to health, 'values' are also an increasing factor in consumer purchase decisions. Recent consumer research conducted by The Hartman Group indicates there is a very large consumer segment, as high as 75%, showing at least some preference for products that represent their values. These consumers seek emotional validation from the products they purchase, and want to demonstrate their values through their purchases. This shift towards values-based purchasing is occurring in consumer markets around the world. In response to pressure, companies have introduced new product sourcing criteria and management policies. Some companies are taking a proactive stance on issues in order to promote a positive public image, reduce risks, reduce costs, introduce new brands and capitalize on emerging markets.

III. ANALYSIS & REPORTING

1. Non eye-tracked Accompanied Shop (AST) screener (adapted for eyetracking shopping quotas)

**FSA non eye tracked ASTs
 Recruitment Screener**

CLASSIFICATION

<p>SEX OF RESPONDENT</p> <p>Female Male.....</p> <hr/> <p>Max: 3/4 female</p>	<p>Code</p> <p>1 2</p>	<p>Route</p>	<p>OCCUPATION OF CIE Occupation _____ Industry: _____</p>
<p>AGE: (WRITE IN) _____</p> <p>18 and under..... 1 26 – 35 2 36 – 45 3 46 - 60 yrs 4 66+ 5</p> <p>GOOD MIX OF AGES</p> <p>GOOD MIX OF LIFESTAGES:</p> <p>Pre family Family Post family (Empty nesters)</p>	<p>1 2 3 4 5</p>	<p>CLOSE</p> <p>CLOSE</p>	<p>OCCUPATION OF RESPONDENT _____</p> <p>SOCIAL GRADE (UK)</p> <p>A 1.....) B 2.....) C1 3.....) C2 4.....) D 5.....) E 6.....) Close</p> <p>ALL RESPONDENTS ABC1C2 E- A GOOD MIX PLEASE</p>

**FSA
 FSA non eye tracked ASTs
 SCREENING QUESTIONNAIRE**

Good morning/afternoon/evening, my name is from Ipsos MORI, an independent market research agency based in London. We are conducting a project with consumers, and I wonder if you would like to take part? Could I ask you a few questions to see if you would be eligible for the study? If you are, we'll be inviting you to participate in this research.

Female 1 Male 2

Q.1 Do you or anyone in your family / close friends work in any of the following fields?

	YES	NO
ADVERTISING AGENCY	CLOSE	
MARKET RESEARCH	CLOSE	
JOURNALISM / PRESS	CLOSE	
MARKETING	CLOSE	
PSYCHOLOGY / SOCIOLOGY / ANTHROPOLOGY	CLOSE	
WHOLESALE/RETAIL/MANUFACTURE OF FOOD OR ALCOHOLIC DRINKS	CLOSE	
Any medical field, St John's, doctor, pharmacist, etc	CLOSE	
Any nutritionalist or dietician	CLOSE	
Any graphic design or package design field	CLOSE	

→ IF RESPONDENT OR ANY FAMILY OR CLOSE FRIENDS WORK OR ARE INVOLVED IN ANY OF ABOVE FIELDS OR PROFESSIONS → CLOSE

Q.2a What is your current occupation, and in which field?

WRITE IN: _____

Q.2b And the occupation of your partner / spouse? And in which field?

WRITE IN: _____

Q.3a. Have you ever participated in a group discussion, interview or accompanied shop for market research?

- YES GO TO Q.2B, C, D
- NO GO TO Q.3

Q.3b How many times have you participated in a group discussion / interview / accompanied shop?

NOTE NUMBER _____

IF 3 OR MORE ASK. How long ago were these?

Q.3c When did you last participate in a group discussion / interview / accompanied shop?

NOTE _____

NB = NON ELIGIBLE IF HAVE PARTICIPATED IN ANY GROUP DISCUSSION / INTERVIEW / ACCOMPANIED SHOP WITHIN THE PAST 6 MONTHS

Q.3d What was the subject of the last group discussion / interview / accompanied shop you took part in?

NOTE _____

NB= NON ELIGIBLE IF PARTICIPATED IN GROUP DISCUSSIONS/INTERVIEW ON RETAILERS/SUPERMARKETS OR FOODSTUFFS

Q.4 Can you tell me which of the following represents your current life stage?

- Single, living with parents
 - Single living in flat/house share
 - Single/married/cohabiting with no children
 - Single/married/cohabiting with children
 - Single/married/cohabiting – all children adults and living away from home
- Pre family
Pre family
Pre family
Family
Post family

Check quotas

Q.5a Who is responsible for the bulk of your household's grocery shopping?

- Me, principally ALL MUST CODE
- My partner / other household member and I jointly CLOSE

- My partner, exclusively* CLOSE

Q.6a (For info)
Is this store, the store that you ...

- currently use most regularly for the bulk of your grocery shopping
(i.e. where you tend to spend the most on food and groceries i.e. weekly /fortnightly / monthly shop)

 - currently use most regularly for top-up grocery shopping?.....

 - Store you occasionally/ infrequently use for the bulk of your grocery shopping
(i.e. where you tend to spend the most on food and groceries)
- What store(s) do you use most regularly/frequently for the bulk of your grocery shopping
NOTE _____
- Store you occasionally / infrequently use or top-up grocery shopping?
- What store(s) do you use most regularly/frequently for your top-up grocery shopping
NOTE _____

Q.6b Today are you doing a...

A main grocery shop

A Top up shop

CHECK QUOTAS

Q.7 I will now read a list of different types of purchases you can make on a grocery shop. Please tell me which types you regularly shop for, sometimes shop for and rarely shop for.

PRODUCT TYPE	REGULARLY	SOMETIMES	NEVER
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- Milk, cream and cheese (including dairy desserts and yoghurt)
- Meat, fish and eggs (including ready meals)
- Fats and oils including spreads
- Sugar and preservatives including honey
- Fruit juices & processed fruit
- Processed vegetables including processed potatoes, frozen vegetables and salads
- Bread including rolls and sandwiches
- Cereals and cereal products including breakfast cereals, pasta and pizza
- Miscellaneous foods (including mineral water, soups, pickles, sauces, ice cream, milkshake mixes, and pot noodles)
- Confectionary including chocolate
- Beverages including tea and coffee
- Soft drinks

Many studies regarding consumer preference and attitudes have taken place internationally. The Soil Association provided a classification of the Organic Health Friendly consumer based on eight attributes; frequency of purchase, the number of categories sought, frequent consumers, who were generally older, more affluent however, research shows the highest spenders are younger and more affluent. However, price is a top barrier for consumers not purchasing Organic Health Friendly products however other barriers include availability of products, price perception, merchandising techniques and the visual product quality (Padel& Foster, 2005). Tsakiridou, Boutsouki, Zotos, and Mattas (2007) study looked at Greek consumers and their

preference for Organic Health Friendly products. Six hundred and sixty consumers were surveyed to explore attitudes and behavior of Organic Health Friendly products. The findings indicate majority of the respondents showed a favorable attitude toward purchasing Organic Health Friendly products. Seventy-seven percent are not satisfied with the variety of Organic Health Friendly products at their supermarkets. Quality was found to be the single more important attribute in purchasing Organic Health Friendly products. (Tsakiridou et al., 2007).

Consumer motivation to purchase Organic Health Friendly food products comes in many forms. One's health is one of the major reasons. Baker, Thompson, and Engelken (2004) study

reveals as an adult, choosing an Organic Health Friendly diet may reduce the risk of Parkinson's disease. Furthermore, in a study of over 600 people (Baker, Thompson, & Engelken, 2004), those exposed to pesticides had a 1.6 times greater risk of developing Parkinson's disease. Another study published in Environmental Health Perspectives in 2009 found substituting Organic Health Friendly fruits and vegetables in children ages 3-11 years old had lower organophosphorus pesticides in their urine. By choosing to feed a baby an Organic Health Friendly diet is said to have many health benefits including lowering a babies' risk of asthma and allergies, decreasing chances of parents having selective or picky eaters, improving baby's digestion and immune system and decreasing exposure to toxic chemicals (Protecting the next generation, 2009). In Germany, the main reason for consumer motivation to use Organic Health Friendly products stems from distrust in conventional foods (Baker et al., 2004).

Honkanen, Verplanken, and Olsen (2006) investigated ethical motivations in 1,643 Norwegian consumers' choice for Organic Health Friendly foods. The three motives studies were political, religious, and ecological. It appears that the more people are concerned with animal welfare and animal rights; there was a strong influence on attitudes toward purchasing Organic Health Friendly products. Therefore, the demand for Organic Health Friendly products may be enhanced by appealing to consumers ecological and ethical beliefs. The authors believe ethical values are an important consideration when explaining consumer attitudes toward the purchase of Organic Health Friendly foods. This study investigated the differences between gender and attitudes toward Organic Health Friendly products both fresh and packaged. Descriptive statistics for the study included an analysis for variance (ANOVA), t-test calculations, and chi square was used to determine if there was a significant difference in attitudes toward Organic Health Friendly products and international consumers. On the Organic Health Friendly products survey, questions thirteen and fourteen used a Cronbach's Alpha to check for bias in the respondents' answers. The instrument in the study was a fifty five question survey that examined a series of demographic variables ranging from age, income, educational levels, ethnic groups, and college major, and the preference of Organic Health Friendly products, spending on groceries, understanding the costs associated with purchasing Organic Health Friendly foods and the types of products purchased when grocery shopping.

A convenience sample of Respondents as per profile chosen, was drawn upon from a large private University from campuses located in four states in the United States of America. The student body sample was selected from the main campus with over 10,000 students from at least sixty countries with an international student population over 900 students. The majority of students are from China, South Korea, India, Thailand, Saudi Arabia and Turkey. The survey was sent out to the entire population in order to collect as many international students. The 56 questions survey instrument on consumers' purchasing preferences for Organic Health Friendly products was administered online using SNAP Survey Software (proprietary software) to administer an online survey. The survey responses obtained though SNAP were converted to SPSS for data analysis. In total, two hundred and sixty nine surveys were completed for

this study. The surveys were administered via a web link for respondents to fill out. There were two incentives for completing the survey; two respondents had the opportunity to win a twenty-five dollar gift card to Barnes & Noble. The two winners were randomly selected based on using a random number generator though Excel. The two winners were contacted via email.

The research hypotheses are as follows:

H1: There is association between demographic factors and attitude.

H1a: There is a negative relationship between age and attitude.

H1b: There is a positive relationship between women and attitude.

H1c: There is a positive relationship between education level and attitude.

H1d: There is a positive relationship between income and attitude.

H1e: There is a positive relationship between presence of children in household and attitude.

H2: There is association between demographics factors and the frequency of Organic Health Friendly food consumption.

H2a: There is a negative relationship between age and the frequency of Organic Health Friendly food

The Proposed Framework

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Demographic Factors

a. Age

b. Gender

c. Education Level

d. Income

e. Presence of

Children in household

Health

Consciousness

Organic Health Friendly Food

Knowledge

Attitude

Consumption of Organic Health Friendly products

Environmental Concerns consumption.

H2b: There is a positive relationship between women and the frequency of Organic Health Friendly food consumption.

H2c: There is a positive relationship between education level and the frequency of Organic Health Friendly food consumption.

H2d: There is a positive relationship between income and the frequency of Organic Health Friendly food consumption.

H2e: There is a positive relationship between presence of children in household and the frequency of Organic Health Friendly food consumption.

H3: There is a positive relationship between attitude and the frequency of Organic Health Friendly food consumption.

H4: There is a positive relationship between health consciousnesses and the frequency of Organic Health Friendly food consumption.

H5: There is a positive relationship between environmental concerns and the frequency of Organic Health Friendly food consumption.

H6: There is a positive relationship between Organic Health Friendly food knowledge and the frequency of Organic Health Friendly food consumption.

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a. Age

b. Gender

c. Education Level

d. Income

e. Presence of

Children in household

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Consciousness

Organic Health Friendly Food

Knowledge

Attitude

Consumption of Organic Health Friendly products

Environmental Concerns consumption.

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H5: There is a positive relationship between environmental concerns and the frequency of Organic Health Friendly food consumption.

H6: There is a positive relationship between Organic Health Friendly food knowledge and the frequency of Organic Health Friendly food consumption.

A structured questionnaire will be used which employed with true-false questions, multiple-choice questions and Likert scale questions.

Part 1 is aimed at identifying Organic Health Friendly food buyers and non-buyers, and their consumer behaviour. Statements are extracted from 2 similar reports done in Hong Kong by the Hong Kong Organic Health Friendly Resources Centre (2005, 2008).

Part 2 consists of statements developed by previous research (Tsakiridou et al., 2008) to assess attitudes towards Organic Health Friendly food. The statements are short listed and slightly modified from the original 23 statements to be better suit in gauging attitudes.

In Part 3, a six-item Likert-type scale to measure health consciousness was adapted from Kraft and Goodell (1993) and expanded to 10 items with another research (Cheung, 2005) to examine personal health and diet.

The ten-item Likert type scale to measure environmental consciousness was selected from Shepherd et al. (2005) and expanded based on the reference from the Green Power in Part 4. Page 13

In Part 5, 10 true or false questions is used to test knowledge of Organic Health Friendly products with reference to the statements developed by the Agricultural, Fisheries and Conservation Department (2008). A "Do Not Know" option is created to avoid unreliable answers.

Finally, in Part 6, demographic information of gender, age, occupation, marital status, presence of children in household, members in household, income and educational level are collected.

To analyze the collected data, the statistical analysis of Statistical Package for Social

Science (SPSS) was applied. Different data analysis methods are as follow:

1. Reliability Test was employed to determine the Cronbach's alpha of attitude towards Organic Health Friendly food, health consciousness and environmental concerns. The resulting alpha coefficients of the three variables are 0.835, 0.830 and 0.840 respectively, which all above the minimum acceptable threshold of 0.7 suggested by Nunnally (1978). The reliability test is contained in Appendix 4.1 for reference.

2. Frequency counts and descriptive statistics were used to summarize the result of respondents.

3. Regarding attitudes towards Organic Health Friendly food, One-way ANOVA was employed to find out the significant differences between each of the five demographic factors.

4. One-way ANOVA, independent sample T-test and Linear Regression were used to Page 14 examine the relationship between the independent variables (demographic factors, health consciousness, environmental concerns, Organic Health Friendly food knowledge) and dependent variable (frequency of label usage).

5. Chi-square analysis and independent sample T-test were applied again to investigate the significant differences between users and non-users on their demographics, health consciousness, environmental concerns and Organic Health Friendly food knowledge.

For all analysis, a probability level of <0.05 was considered significant.

IV. ANALYSIS AND FINDINGS

4.1 Demographics

In this research, a total of 330 questionnaires were collected. A description of respondents' demographic profile is shown in Table 1.

The samples consist of 147 male (44.5%) and 183 female (55.5%). The age group 16-25 constitutes the largest proportion of the sample with 122 respondents (37.0%), while "66 or above" has the smallest number with 5 respondents (1.5%). Most of the respondents are well educated, with 174 of them (52.7%) having obtained at least higher education or above. In terms of occupation, students with 89 respondents have the biggest share (27.0%). In the sample, 152 respondents (46.4%) are married while 169 (51.2%) are single. 220 of the respondents (66.7%) live with their children and 112 (33.96%) has 4 members in a household. Besides, 125 respondents (37.9%) fall into the personal income group of earning less than \$5,000 per month. Yet, 138 respondents (41.9%) indicated that their family monthly income is more than \$30000.

In terms of Organic Health Friendly food consumption frequency, 265 respondents (80.3%) claimed that they are buyers of Organic Health Friendly food. Of those 252 users, the majority of respondents, with the number of 166 (50.3%) stated that they "sometimes" use the label, which indicate the consumption of Organic Health Friendly food has not yet become a usual practice for general consumers.

V. RESULT & DISCUSSIONS

The majority of the respondents have a positive attitude towards Organic Health Friendly food.

However, over 50% of them indicated that they seldom consume Organic Health Friendly food. Despite the fact that a portion of the consumers claimed that they will spend more on Organic Health Friendly food in the future, most of them spent only \$51-\$200 on Organic Health Friendly food in a year, which reflect Organic Health Friendly food, still, as a niche market in Hong Kong.

The socio-demographic profile of Organic Health Friendly food buyers are revealed as women buying more frequently than

men. Although age is not an important factor, consumers aged between 36-45 shows the highest frequency in the consumption of Organic Health Friendly products (Davis et al., 1995). It was explained by some studies that although younger consumers has a higher willingness to buy due to their greater environmental concerns, they cannot always afford it, and therefore being replaced by the mid-age group who has higher financial power (Fotopoulos and Krystallis, 2002, Baker et al., 2002, Solomon et al., 1999). Households with the presence of children are also found to consume Organic Health Friendly food more often. The reason behind may be perceived as a higher level of concern in food safety with the presence of children, especially for women.

As expected, people who are more health conscious, environmental friendly and have higher level of Organic Health Friendly food knowledge are also confirmed to purchase Organic Health Friendly food more frequently. The item "I worry that there are harmful chemicals in my food" has the highest mean value of 3.93 in the health consciousness scale implies a general high awareness in the threat of food safety. Together with the 3 highest-mean-valued attitudes of Organic Health Friendly food of being "healthier", "safer and more reliable" and "are of higher quality", an opportunity in the expansion and raise of the Organic Health Friendly food market can be seen. In term of price premium, nearly 70% of the consumers denoted a willingness to pay a premium for Organic Health Friendly food. Among them, the most bearable price premium is evaluated at a 1/4 price level higher than non-Organic Health Friendly conventional food. All these seem contradictory to the phenomenon that Organic Health Friendly food is surprisingly consumed at a low frequency level. The reason behind can possibly be explained by some of the findings of the survey. Among the attitudes towards Organic Health Friendly food, the statements "it is difficult to identify real Organic Health Friendly products", "Organic Health Friendly products labels in the market are confusing" and "Organic Health Friendly products are very expensive" scored the lowest in mean values. They can be interpreted as the main reasons failing Organic Health Friendly products in becoming popular, which coincide with rationalizations in past researches (Dent and McGregor 1994, An BordGlas 1991, Stopes and Woodward 1988, Dixon and Holmes 1987, von Alvensleben and Altmann 1987). This suggests a space for development or improvement in areas of price competitiveness and Organic Health Friendly food labeling certification.

Other negative attitudes towards Organic Health Friendly food include "few Organic Health Friendly products available in the market", "small variety of Organic Health Friendly products" and "few selling locations for Organic Health Friendly products". These negative attitudes act as barriers for consumption of Organic Health Friendly products (An BordGlas 1991, Stopes and Woodward 1988; Jolly et al. 1989).

While talking about the difficulty in identifying real Organic Health Friendly food products and labels, the study about Organic Health Friendly knowledge brings a lack of knowledge on Organic Health Friendly food into light. The average score of 4.98 out of 10 reveals lack adequate information in identifying real Organic Health Friendly food products and labels. Over 70% of the respondents mixed up the product management certification ISO9001 with Organic Health Friendly

certification and did not know that Organic Health Friendly-certified labels represent real Organic Health Friendly products. There is also a serious misunderstanding about a higher nutrition content and the use of animal excretion as fertilizers in Organic Health Friendly food which are both actually false. Past studies have pointed out that such a misunderstanding in Organic Health Friendly ways of production will prevent consumers from buying Organic Health Friendly food (Verdurme et al., 2002, Worner and Meier-Ploeger, 1999) In environmental aspect, the overall mean of environmental concerns is 3.44 which represent a fair to moderate level of environmental concerns of the general public. The same association has been captured by Fotopoulos and Krystallis (2002). However, it is generally recognized that there are also numerous barriers to the diffusion of environmentally friendly products, like Organic Health Friendly food, despite the green trend in consumer values and attitudes. The most common barriers stressed in the marketing literature include consumer's reluctance to pay higher costs, both in terms of money and in time and effort, their skepticism regarding the higher quality of these products (Vindigni et al., 2002) and the lack of availability of these products (Lea and Worsley, 2005). Therefore, marketing should be carefully handled to avoid collision of such barriers.

Eight independent factors were considered to examine the relationship between demographics of gender, major, age, income, level of education, and ethnic groups of Respondents as per profile chosen, consumers with their preference for the use of Organic Health Friendly foods. Out of eight hypotheses, many yielded significant findings for the demographic variables analyzed. There were significant findings for gender for their preferences to eat fruits and vegetables often and their preference for recycled products. For the majors in the study, the areas of significance included their preference for Organic Health Friendly foods over non-Organic Health Friendly foods, and the location they prefer to do their grocery shopping. For the year at college, the significant findings included preference for Organic Health Friendly foods, and the reasons for consuming Organic Health Friendly foods. For income levels, the areas of significant findings included the reasons for purchasing Organic Health Friendly products, and product characteristics. For age, the significant findings included the times they've purchased Organic Health Friendly foods in the last month, reasons for consuming Organic Health Friendly foods and lifestyle characteristics. For education, the significant findings included the perception of whether it's worth it to pay more for Organic Health Friendly products over non-Organic Health Friendly products, reasons for consuming Organic Health Friendly products, and the food they most often consumed. For ethnicity, the significant findings included their cost perception of Organic Health Friendly foods over non-Organic Health Friendly foods and the types of food most often consumed. The final hypothesis, environmental science showed a significant finding food safety and product characteristic such as product appearance and certification of its production methods.

The following are significant findings across specific survey questions related to the demographics of the study:

Shopping: Older more educated graduates with high income are solely responsible for family grocery shopping. (p=.001)

Preference: High income American graduates majoring in accounting or management or marketing and retail or culinary and technology prefer Organic Health Friendly grown produce and other Organic Health Friendly foods over non-Organic Health Friendly foods. (p=.045)

Worth paying: Graduates with high income that are older with more education that are either Black (African American) or Asian feel it's worth paying more for Organic Health Friendly products and for the types of products consumed (fruit, vegetables, milk, yogurt, cheese and cereal). (p=.026)

Taste: Graduates with high income who are more educated indicated their reason for consuming Organic Health Friendly products was because the Organic Health Friendly taste better. (p=.044)

Environmental: Older more educated graduates indicated their reason for consuming Organic Health Friendly products was because they are environmentally conscious. (p=.019)

Fruit: Graduates that are older more educated who were White, Caucasian, Asian and Hispanic/Latino indicated the types of foods most often consumed, Organic Health Friendly fruit. (p=.026)

Vegetables: Graduates that are older more educated who were White, Caucasian, Asian and Hispanic/Latino indicated the types of foods most often consumed, Organic Health Friendly vegetables. (p=.037)

Milk: Graduates that are older more educated and White, Caucasian, Asian and Hispanic/Latino indicated the types of foods most often consumed, non-Organic Health Friendly milk. (p=.037)

Cheese: Undergraduates who are between 20-24 years old and more educated that are White, Caucasian, Black, African American and Hispanic/Latino indicated the types of foods most often consumed, non-Organic Health Friendly cheese. (p=.016)

Cereal: Undergraduates that are under twenty years old with high school and some college and White, Caucasian, Black, African American and Hispanic/Latino indicated the types of foods most often consumed, non-Organic Health Friendly cereal. (p=.008)

Eggs: Graduates who are older more educated and White, Caucasian and Asian indicated the types of foods most often consumed, Organic Health Friendly eggs. (p=.029)

Additives: Undergraduates under twenty years old and with high school and some college indicated the following lifestyle characteristics; I try to eat foods free of artificial additives sometimes. (p=.015)

Country of Origin: Undergraduates with high school and some college and are White Caucasian indicated the product characteristic, country of origin as moderately important. (p=.008)

VI. CONCLUSION

To summarize, the study contained a large number of hypotheses in the hopes of getting a deeper understanding of demographic factors of Respondents as per profile chosen,. Almost 100% of the sample knew about Organic Health Friendly products which is promising for marketers looking to capitalize on the Organic Health Friendly movement in the fresh and packaged goods areas. This study attempted to advance the

knowledge of Respondents as per profile chosen, and their choice for Organic Health Friendly products. A recommendation to future researchers would be to narrow the choices of Organic Health Friendly products. The findings showed a strong preference for milk, eggs, and fruit but lacked any significant findings for other product categories such as pasta/rice, snack foods and meat.

The recommendations for the study of Respondents as per profile chosen, and their choice for Organic Health Friendly products would include a number of suggestions. The study was based on a convenience sample in New England. A number of limitations also hindered the outcome of the survey including; too many single participants which did not allow for analysis on the demographic variable; marital status, too many participants live on campus which deter students from going to purchase groceries since they are able to eat all meals seven days a week on campus. The majority of the sample was women. One suggestion to overcome these limitations would be to include a bigger sample outside of New England to a national scale. In order to prove or disprove the gender hypothesis, more males were needed in the sample as well as a large population of international students and more ethnic groups.

Moreover, the data collection period would be during the school year when students are checking their email on a daily basis. One major issue is when students do not check their email on a regular basis, the emails are returned undeliverable due to the size allocation of each student's email account. One of the keys to generating the successful sample size was offering an incentive to the bookstore on campus. Two gift cards in the amount of \$25 were offered to two random survey participants. Therefore, it is recommended that more studies would be necessary to understand the impact of gender and Respondents as per profile chosen, 's choice for Organic Health Friendly products.

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