Green Food

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ABSTRACT: Food is an integral part of human existence. Industrialization, climate change, and rising population have made evident the precarious balance between sustainable food production practices, a healthy environment, and a healthy population. Producing green food meets the growing need to save our environment from destruction. Green food refers to food that is high-quality, safe, and healthy to be consumed. This paper provides a brief introduction to green food.

KEY WORDS: Green food, organic food, food industry, agriculture

I. INTRODUCTION

Food is basic to human survival, health and nutrition. Our daily food and drink consumption makes up a noticeable proportion of global greenhouse gas emissions. Rising demand means we have to produce and consume in more efficient and less damaging ways.

There are three kinds of food in terms of environmental friendliness [1]: normal, green and organic. Normal food has measurable standards of quality and sanitation. Green food implies planting under zero environmental pollution conditions. Organic food develops slowly due to its unclear market positioning. Organically produced food is often regarded as healthier and more nutritious than normal food. Sometimes, the terms green food and organic are used interchangeably, but the two are not the same. Green food is "middle way" between chemical and organic farming. Green food production is part of green agriculture.

Green products in general are known as environment-friendly products. Green foods refer to foods that are produced under the principle of sustainable development. They are safe for consumption; they are of suitable quality, nutritious, healthy, safe, and environmentally friendly [2]. Green food with lower chemical residuals have become more popular around the globe.

II. BACKGROUND

The concept of "green consumption" was introduced by the International Organization of Consumer Unions in 1963 [3]. Since then sustainable farming awareness has increased. The concept of green food was born in response to various needs including the Green Revolution, environmental pollution, pesticide and other contaminations, food insecurity, climate change, biodiversity, and water availability. Providing food that is sustainable will be one of the most important challenges facing the agriculture sector and the food industry. This is not something which can be achieved by just the agriculture and food sector. A realistic strategy towards sustainable food growth requires the cooperation and coordination of the entire food chain. Government has a major role to play in sustainable food issues, providing leadership and setting priorities. Government must take bold steps to encourage the development of a healthier and more sustainable set of choices. To promote the development of green food, regulatory authorities must create a green food environment worthy of the public trust.

III. CONSTRUCTING GREEN FOODS

Green food is understood as fresh, chemical-free, nutritious, natural, and produced in an environmentally-sustainable manner. A green-growth strategy for the food and agriculture sector, encompasses agriculture, fisheries, and the food supply chain.

Green food processing techniques include preservation, transformation, and extraction. Different methods can be used for this purpose, e.g. frying, drying, filtering, and cooking. Some food products are known to be thermally sensitive and vulnerable to chemical, physical, and biological changes [4].

One way to reduce environmental footprint in food processing is the use of enzymes, which speed up reaction rates. Enzymes in foods may produce extended shelf life, improved textures, functionality, and yield. Drying is used for processing of many bulk and packaged food products and ingredients [5]. Some plants may need the supply of sufficient fat-soluble vitamins for long continued and vigorous growth [6].

Some have suggested that the best way to improve the sustainability of human food is to consume less. Highly processed food is easy to over-eat. In restaurants, foods are often served in large portion containers and are intended to be totally consumed [7].

IV.   BENEFITS AND CHALLENGES

Some benefits of green foods are illustrated in Figure 1 [8]. Green food consumption can guarantee the life quality of consumers. It can promote green food production. The wide variety of foods available to consumers poses a huge challenge for eating less and improving sustainability. There are challenges associated with carbon footprint for food items. The primary challenge is that food production is inherently dependent on nature. Another challenge is related to the emission intensity of the production process and the supply chain. The green revolution was confined to certain crops (rice, wheat) at the expense of others. Culture often dictates the extent of accepted change. There are problems with the traditional marketing of green food, but web marketing has been effective. For green food, safety remains a great concern. Green food processing techniques need standardization.

V.   CONCLUSION

The concept of green food is developing in developed nations but it is still at their infancy stage in developing nations. Although green food consumption is a global trend, it is not an easy task. Environmental value of consumers is necessary to motivate green food consumption intention since this influences customer satisfaction of green food products [9]. Green food will improve the future health of our families. For more information on green food, one should consult several books in [10,11] and other books on the subject available on Amazon.com.

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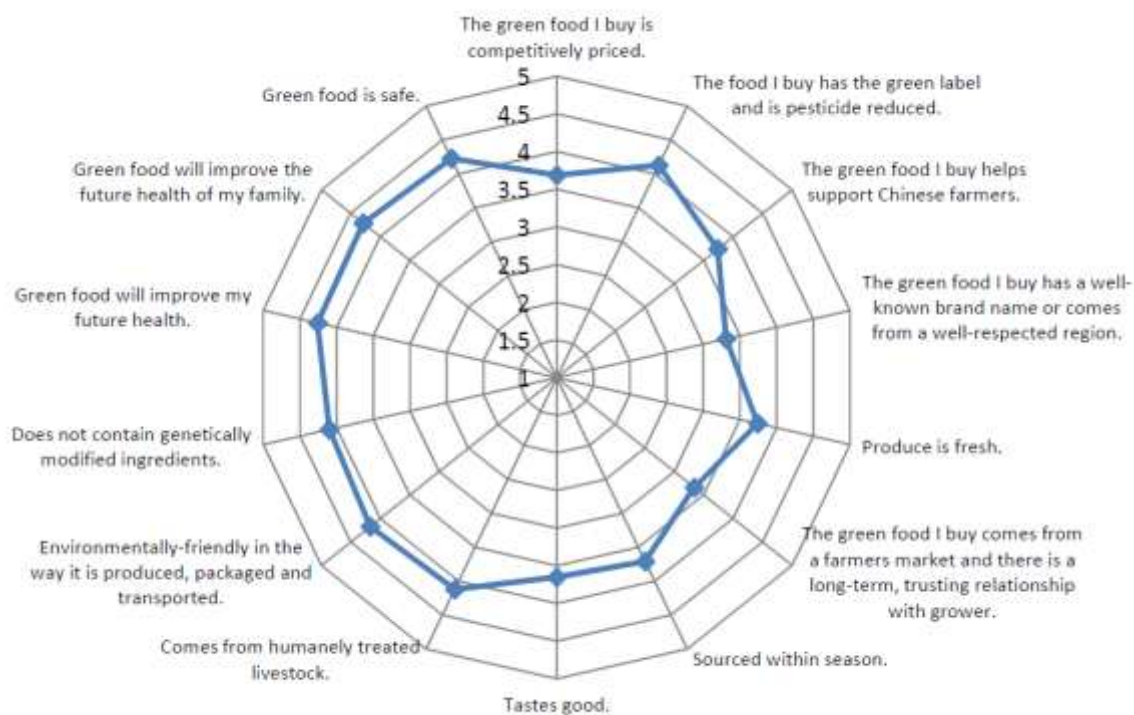
Figure 1. The benefits of green food [8].