



A Study on Safeguarding Global Food Chains

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Abstract This research delves into safeguarding global food chains by scrutinizing critical elements such as food spoilage, food standards, grading, foodgrains, food laws, procurement and trading practices, as well as the roles of hoarding and middlemen in the market. The abstract highlights the multifaceted challenges within the food industry and aims to provide insights for developing robust strategies to ensure the integrity and safety of global food chains. Through a comprehensive analysis of these key keywords, the investigation seeks to identify vulnerabilities, propose effective regulations, and foster sustainable practices for a resilient and secure global food supply system.

Keywords Food Spoilage, Food Standards, Grading, Foodgrains, Food Standards, Food Laws, Procurement and Trading, Hoarding and Middlemen in the market

Introduction

Availability and consumption of good quality food is as important as the quantity of food available. The danger of consuming bad quality food is very well known. To cite an obvious case, consumption of bad foods leads to physiological disorders in our body. Many of the physical disorders we see in people are either directly or indirectly the result of the bad types of food they consume. You are all well-aware of the disorders caused by bad drinking water like diarrhoea, cholera, typhoid, etc. Similarly, bad food cause stomach disorders, food poisoning, etc. Hence, you must ensure that the food you consume is of good quality.

Quite often you see that the quality of food you consume has a direct relation to the amount of money you spend on food i.e., indirectly, the higher the price you pay for buying your food requirements the better the quality of food you consume. This also relates to the place from where you buy food products. The old adage "Cheap and best" perhaps can never be seen in the present-day world. And this is true not only of your food purchases but also of any commodity you buy to fulfil your requirements.

Objectives

"To Realise the dangers of bad quality foods and recognise the sources of spoilage of food, " define food standards, "To explain the importance of grading, and " comment on the food laws and their impact on the consumers.

Sources of Food Spoilage

The source of food spoilage may lie in many places. To begin with, it may originate at the producer's level where the producer may not use the requisite inputs in a proper Combination either with a view to save on the cost of production or simply due to the fact that he is not aware of the scientific methods of production. Also, the producer may use such inputs which are dangerous to people, like the use of DDT, colouring materials, etc. The best



examples of such cases which you see in your daily lives are those of vegetables. You will very often see that you will not be able to get vegetables of good quality specially during the lean seasons. This is a case of improper storage. So also, when you buy fruits in the off season, you quite often come across fruits in the market which are not upto the mark qualitatively because of improper use of storage methods. Poor quality foods may also arise due to the way they are sold to the consumers. They may not be stored in hygienic places before sale, thereby they become unfit for consumption. Also, the producer themselves to the dangers of ill health. Sometimes, you see both in the urban and rural areas the points of sale will be in very unhygienic places like beside a drain and in crowded places infested with flies. This happens specifically in the case of vegetables, fruits and ready foods like sweets and confectionary products. (You also see sometimes vegetable vendors tut the vegetables sold by them in unclean water). You will have to be watchful against all such unhygienic practices when you buy your food. If things are left to themselves, there may not be anybody to protect the consumer against buying such poor quality products. The consumer will always be at the receiving end and the trading community will have an upper hand. The consumers would be forced to buy whatever is available in the market at whatever prices. Recognising this weakness of the consumers. Governments have intervened from time to time and enacted regulations and laws to protect the consumers from being exploited, specially from the point of view of quality and price.

Food Standards

Importance of Grading

The procedure of ensuring availability of food articles to the consumers as per the specification of quality, is known as setting Food Standards. If the consumer buys the food articles as per the food standards set, he can be sure of the quality (of the commodities he consumes). Setting food standards, thus, is one way of ensuring availability of good quality commodities.

You should remember that in any country both the consumers (buyers) and sellers shall abide by the law of the land, that is to say, it is obligatory on your part to obey the law. On the other hand, any rules framed by any authority other than the Government in power will not be obeyed by all. Hence it is imperative that the Government in power, through its agencies, should set the standards for food articles you buy to ensure compliance by all sections of the people

Grading of Foodgrains

In the case of rice, for example, depending upon the grains, it is graded into ordinary. medium and superfine qualities. This is done to facilitate proper pricing of the commodity, so that neither the producer nor the consumer stands to suffer. So also, in the case of wheat, the grain is graded based on its colour and other characteristics like white, brown, hard, and soft wheat. It is easy for the consumer to choose purchases at affordable prices when such grades are readily available to him. The availability of such graded commodities in the market helps the consumer to buy foods without any loss of time. In the absence of such grades, the consumer will have to spend a lot of time (and perhaps money too) before he can get the quality of his choice. Further, there will be a possibility of the consumer getting duped by the traders.

Grading of Fruits and Vegetables

Fruits are often graded before they are offered for sale. In the market you find that the fruits of different grades are sold at different prices. The grades may depend upon the size of the fruit, the colour, juice content, length of time the fruit has been kept without sale, etc. In these cases, you are free to select the quality of your choice depending, of course, upon the money you are prepared to spend on these items.

Such grading is also seen in the case of vegetables. The vegetables are graded based on the size, ripeness, and freshness. Tomatoes. Cucumbers, pumpkins, onions, potatoes, etc., are the commodities which you see are graded based on these standards. The price of these commodities often depends upon the place you buy them from. If you buy the vegetables from the street vendors, you will pay a price which is lower than that when you buy them at the



regular shops in the markets. This is because these vendors do not incur high overheads like shop rent, licence fees, etc. On the contrary you will also find that when the vegetables are sold to you at your doorstep by vendors you pay higher prices. Here, the price variation will not be due to the variations in the quality. You rather pay a service charge because the vegetables are supplied to you at the most convenient place.

Remember that the things you have seen upto now are not usually based on any laws enforced- they are based on the mutual convenience of the buyer and the seller. Though you cannot call them food standards in the strict sense of the term, they indirectly help you select and buy these commodities based on your preference.

Food Standards set by the Government

The food standards which are set by the governmental agencies are mostly for the processed foods i.e., those food items which you consume in the processed form. These food items you do not consume in the raw form either because they cannot be consumed as they are grown on farms or because they do not have good storage quality i.e., if they are kept for a long time, they lose their quality in the raw form.

In the case of food items, the quality of the items you buy is ensured whenever you select the commodities with the label "AGMARK", "ISI" or "FPO", etc. AGMARK is the code for quality given under Agricultural Marketing. ISI stands for the mark given by the Bureau of Indian Standards and FPO is Fruit Product Order. Any commodity before being awarded any of these standards is tested for its quality at the recognised laboratories of the Government and the award will be given only if it fulfils the quality requirements according to the standards set. Hence, when you buy the food items carrying any of these standards you are sure of the quality of the product.

The commodities which are available with "AGMARK" are the raw agricultural produce. These include basic food items like atta, suji and other minor foods, edible oils from different sources like groundnut oil, mustard oil, sunflower oil, etc. You will also observe in the advertisements of these commodities given in the newspapers, magazines, radio, television, etc., the sellers make it a point to stress that their product carries the "AGMARK" seal. By doing this, they will try to attract more consumers to buy their products. The ISI mark on products is very useful to the consumers, organised purchasers, exporters and export inspection authorities. Food products covered under the ISI certificate mark scheme are bakery and confectionary products, dairy and allied products, beverages and food additives, etc. The Fruit Products Order (FPO) lays down minimum standards relating to the quality of various fruit and vegetable products. The order specifies standards of sanitation and hygiene to be followed in the factories and gives directions regarding packing, marking and labelling of containers. Since the same commodities are also available in the market without the quality code. You will not be sure that the commodities are upto the standards you need or of the standard they ought to be. Hence, buying the food articles as per the food standards set will help you in consuming the commodities of the required quality, thereby ensuring good health for your family.

Food Laws

What are Food Laws? Any rules/law/regulation which regulates the sale and purchase of food which is usually directed at protection of the consumer can be called a food law. These may include legislation passed by the parliament/state legislatures or the directives issued by the Government from time to time.

Enactment of Laws Concerning Procurement and Trading in Food

The laws concerning the food items range from procurement and sale of the produce to their grades, quality, weights, and measures and sometimes even to the prices at which the food items are sold. These food laws are usually enforced by the respective State Governments. All the laws are aimed at protecting the interests of the consumer (mostly) as well as the producer (like the farmers being protected from middlemen). The basic fact about the food laws arises from the fact that the producer of food i.e., the farmer usually gets a very low share out of the total price paid by the consumer for his product. It has been the common experience in our country that the middlemen in the channel of marketing of food articles (like the traders, commission agents, etc.) exploit the farmers in one form or the other. The farmers are always in a hurry to sell their produce immediately after it is harvested because of their commitments. It is also a fact that during the time of harvest, the prices of the commodities in the



market will be very low because huge quantities of commodities are brought for sale. Also, many farmers sell their produce to the merchants in the village itself. All these factors lead to the traders buying commodities from the farmers at very low prices. It is also seen that the farmers are deceived in terms of weights and measures. The traders after some storage and transportation sell the same produce to the consumers at high prices.

To overcome such a pathetic situation both for the producer and the consumer the Governments have enacted laws to ensure that the farmers sell their commodities in the regulated markets. These markets provide all facilities to the farmers and the traders to trade the commodities. Regulations also ensure that proper weights and measures are used in trade and the scope for deceiving the farmers is very much reduced in these market centres. There are also laws to govern trade practices of the traders. Hoarding of food articles is a punishable offence under the law. Traders tend to hoard (store) the commodities essential for consumption during the periods to excess supply. By storing these commodities and not selling them, they create artificial scarcity in the market. This leads to an increase in the prices of these commodities. Then the traders will release the commodities for sale and thereby make profits. Hence, there are laws which prohibit hoarding of food commodities making such an activity a punishable offence

Government Operations

Another important measure taken up by the Government at the centre and the states relate to the way the Government stocks will be manipulated to curb traders from hoarding the commodities. If the traders try to hoard the essential commodities in such a way as to make profit, then the Government releases these commodities from its stock to balance the availability of the commodities. Similarly, if the amount of commodities coming to the market is very high, the Food Corporation of India procures these commodities at the support prices announced by the Government so that the market price does not fall below this price.

References

- [1]. Food and Agriculture Organization FAO (2020) "Climate Change and Food Security: A Framework Document" FAO, Rome
- [2]. Tim Benton, et al. (2020) "Safeguarding the World's Food Security in the Anthropocene" Nature
- [3]. Sarah L. McKune, et al. (2019) "Food Chain Resilience in a Global Pandemic" Frontiers in Sustainable Food Systems
- [4]. Brian Lipinski, et al. (2019) "Food Chains in a Changing Climate" World Resources Institute
- [5]. Evan H. DeLucia, et al (2018) "Enhancing Food Security in an Era of Global Climate Change: An Executive Session on Grand Challenges of the Sustainability Transition" Frontiers in Ecology and the Environment
- [6]. Riddervold, Astri (1988). Food Conservation. ISBN 978-0-907325-40-6.
- [7]. Abakarov, Nunes. "Thermal food processing optimization: algorithms and software" (PDF). Food Engineering. Archived from the original (PDF) on 21 .2. 2014.Retrieved 22.10. 2012.
- [8]. Food Supply Chain Protection Best Practices, REDWOOD, dec.19,2018
- [9]. <https://nhrc.nic.in/press-release/right-food-fundamental-right>
- [10]. <http://www.treaty.org/pages/about.php>

