

QUALITY DEGRADATION OF FOOD MATERIALS AND ITS EFFECT ON HUMAN HEALTH

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Everyone have right to get good quality food material. Here word good quality food material food is very important because now a days what we are eating are good quality food are not this is big issue day by day food quality is degrade by harmful chemical and other substance.

Food and water are not only the elixir¹ of life but they are worshiped as GOD in India. India has been called the land of annapurna². In spite of this fact, the evil of food adulteration is not only present in the society to a great extent, but its history can be traced back to the times of kautilya³.

Recently, during deepawali⁴ festivities there was no dearth of news reports on the television and the local newspapers on how the adulteration is being done in the sweets by the businessmen. As it is the only time that the news channels are very active educating and informing the public, that it seems festival is the only time when such malpractice is on. But, the reality is that we hardily consume food on any day, which can be considered pure and unadulterated.

Now a day's India have facing problem of quality degradation in worldwide manner because so many European country do not like our Alphonso.⁵ European Union's ban on Alphonso Mangoes is a shameful incident for us. The crisis the 'king of fruits' finds it in, which may continue till December next year, has ensured that prices hit rock bottom.⁶

¹ An elixir is a liquid that is considered to have magical powers like Amrit and ab-e-zam zam

² Annapurna is a devi (Goddess) which gives food for all animals.

³ kautilya was also known as Chankya he mixed slow poison in Chandragupt meal because he want to made his body resistant for any poisonous substance.

⁴ Deepawali is festival for Hindus it is celebrate for win of Raja Ram on Ravana the great king of Lanka.

⁵ Alphonso is very good quality mango found India. It is also called king of fruits.

⁶ <http://www.ndtv.com/article/india/why-european-union-s-ban-on-alphonso-mangoes-is-a-sweet-deal-for-indian-buyers-517347>

The food items and the ingredients that we use to prepare food contain adulterants. During the parliamentary debates in the loksabha, one of the Members of parliament, Mr. Shailendra Kumar, shared his view on the seriousness of the problem, as follow: There is adulteration of Urea and oxitocin⁷ are mixed in milk which causes a great risk of early puberty, abortion and impotency.

I was just going through the report that adulterated biscuits in the name of glucose and other brands worth 25 crore were seized in Punjab. Likewise, I would like the remind the honorable minister that the adulteration in mustard oil in the year 1988 had resulted in spread of the disease cancer named dropsy mixing of coal tar dye in pulses, tea, and coffee lead to cancer lead chlorite is mixed in turmeric which results in serious disease like paralysis, anemia and abortion, etc. Copper salt is mixed in pickle which affects kidney. Rangoli is mixed in salt which causes stomach disease injection are being used in vegetables for their early growth injection to the cows and buffaloes to get more milk and profit Similarly, the sweets contain a material named Metabil Yelova road mill which carries the risk of cancer.⁸

Banana are ripe by harmful chemical that's occur cancer to our body. Maximum fruit is ripe by calcium carbide which is barred worldwide because it is harmful for our body. Ripening agents speed up the ripening process. They allow many fruits to be picked prior to full ripening, which is useful, since ripened fruits do not ship well. For example, bananas are picked when green and artificially ripened after shipment by being gassed with ethylene. Calcium carbide is also used for ripening fruit artificially in some countries. When calcium carbide comes in contact with moisture, it produces acetylene gas, which is quite similar in reaction to the natural ripening agent ethylene. Acetylene acts like ethylene and accelerates the ripening process, but is inadvisable because calcium carbide has carcinogenic properties. Industrial-grade calcium carbide may also contain traces of arsenic and phosphorus which makes it a human health concern. The use of this chemical for this purpose is illegal in most countries.

Use of fertilizers degrades quality of grains pulses and other material. Making process of honey by the honey bee. Honey is very useful to procure human health but now a days it is made by only

⁷ Oxitocin is a female hormone which is used for unusual milking of buffalos and cows and it is also used for making fast growth like bottelegaurd pumpkin and other cucurbitaceae families

⁸ www.papercamp.com/group/the-food-monetization.../page-60

flower of musterd flower it is not give compare with honey of sunder ban because in sunder ban many types of flower are available which makes it quality better.

Most important issue is ghee which is also elixir liquid for life and make our body strong and immune system. Nowadays ghee is making by butric acid in the lab and market it is make by animal fats which is not useful for for human body. It is very harm full and arose problem of colon cancer. A cow has 100 kg animal fat it is used in market for making ghee. So many animals are killed for making this type of ghee.

New world crop are also degrade the quality of food product these are tasteless but its production is very high in compression to traditional crop so it is used by our farmer. Use of DDT (Dichloro-Diphenyl-Trichloroethane) , BHC (Benzene hexa chloride) are ban worldwide but it is use by our farmer for treatment of termites. Chemical of this types make a positive legand which is not degrade in other chemical material it is stored in human body which create problem of bone cancer, osteoporosis etc. quantity of DDT in Indians body very high in Indians body. It Kathpal who spent two decades tracking down DDT contamination in animals and human beings said Indians now show a 22.8 parts per million (PPM) body burden of DDT compared to 4.3 for Japanese 3.70 for Australians and 2.24 for people in the United States. India is not only poisoning its people with DDT but also exporting large quantities of the stuff to neighboring countries in South Asia, where again it ends up in agriculture, according to the international environment group Greenpeace. With its 10,000 metric tons annual capacity, India ranks with China and Mexico as being among the last big manufactures of DDT, currently on a United Nations Environment Programmed hit list of 12 persistent organic pollutants. While green lobbies in the developed world are pressing for a complete global ban on DDT, public health officials in this country say there is no cheap option to DDT not only for India but also for many developing countries. But Greenpeace scientist Pat Costner argues that the disadvantages outweigh advantages. DDT and other POP chemicals pose a particular danger to infants in South Asian countries in that they interfere with lactation in mothers, she said.

"In South Asian countries, breast-feeding is not a choice but the only nutrition available to millions of newborns and the effect of POPs on lactation can be disastrous," Costner said. Things are not happier for babies who do receive breast milk. A government sponsored study in 1996 showed lactating mothers in the national capital of Delhi passing on an average 1.27 mg. of DDT in every litre of milk they produce. A three kg baby consuming 500 milligrams of milk everyday would be ingesting 0.21 milligrams of DDT per kg when the acceptable daily intake (ADI) laid down by the World Health Organisation (WHO) is 0.005 mg per kg of body weight, the study found. Infant milk formulas and bottled milk were no safer. Of some 186 samples of 20 commercial brands tested by the Indian Council of Medical Research (ICMR), 70 percent showed DDT contamination."⁹

Terminator seeds and new world crop which is also known as genetically modified crops like Bt brinjal, bran rice etc. it is not trusted for human body and what its prolonged effect on human body. Pomato is new world crop which have produce tomato and potato simultaneously but its genetically not grow second time in next generation. Milk is also adulterated by urea glucose kastic soda refined oil arrarote powder etc. Nowadays it is also made by white paint in our Gwalior railway station. Several tea makers are used this type of milk for making tea & coffee.

Lubricant oil and grease used for making fruit and vegetable fresh. Coloured is also used by farmer to give trendy look for fruit and vegetable. Some kind of green colour chemical are used for orka and parvel fresh. Water irrigation of any crop is big problem in India. The use of sewage water is arise problem of tumor in brain. Pig is carrier of kind of cyst which is mix with sewage water. Cauliflower and Cabbage is suitable vegetable for cyst. It is very common cause of epilepsy.

As food adulteration is done in so many ways, one must precisely know what the exact definition of the term is. The prevention of food adulteration Act 1954 defines the terms "adulterant" and "adulterated" in so many words. In layman's language it means debasing of food article with an inferior or deleterious substance. It is a kind of slow poisoning. It is destruction of human life. It is the gravest of socio-legal crime because it is done with the purpose of attaining profit. It has the tendency to erode national health, character and economy, in equal measure. The adulteration, by affecting the human resource of a nation, has direct impact on national progress and production of a country

⁹ Url=< http://www.chem.unep.ch/POPs/POPs_Inc/press_releases/pressrel-2k/pr27.htm Date 05.02.2014

particularly India which is a developing country. This may be the reason why food Safety and standards act, 2006 defines the term “unsafe food” instead of adulterated food.

The serious problem before the nation in the form of a conundrum¹⁰ is that if the evil practice of adulteration can be traced back to antiquity, then so is legal remedy, that has always been in place. Unfortunately, one remedy was replaced by the other with the passage of time, without any change in the situation

TYPES OF FOOD ADULTERATION-

In India the most common types of food adulteration is of following types:

Milk- it is adulterated by the addition of water, starch, skimmed powder and removal of cream.

Ghee- it is adulterated with vanaspati ghee and animal fats Such as pigs fat. In order to improve the flavour of adulterated ghee tributyrin is added.

Cereals-rice and wheat are mixed with stones sand grit and mud to increase the bulk.

Flour-wheat flour is mixed with soap stone and Bengal gram flour is adulterated with khesari dal or lathyrus flour

Pulses-they are adultrated with kesari dal stones are added to pulses such as Moth,Urad and Masoor. Toxic chemical such as metanil yellow or added to old stocks of pulses to improve their colour appearance.

Edible oil- they are mixed with cheaper oil, and mineral oil.

Honey- it is adulterated with sugar and Jaggery.

Even M.S. Swaminathan, the Rajya Sabha MP known widely as the ‘Father of the Green Revolution,’ whom the delegation met in New Delhi, concurred with the traders’ opinion and voiced his concern with the Union Health Minister.

¹⁰ A conundrum is a problem or puzzle which is difficult or impossible to solve

The Act, which replaced the Prevention of Food Adulteration Act, levied penalties in the range of Rs. 1 lakh to Rs. 10 lakh besides prescribing jail terms ranging between six months to 10 years. The Act was framed in 2006 but notified in 2011 and yet, the Government did not utilise the five intervening years to create awareness among the business community.”

He also noted that Tamil Nadu was being considered as being in the forefront of implementing the Act by officials in New Delhi even as several States were yet to establish the offices for implementing agencies.

Further, Mr. Jeyapragasam said, the standards of food produce would surely vary from region to region and sometimes within the region itself depending upon rains or lack of it, fixing one quality for all was not a practical move.

Legal provision related to food safety:-

An Act to consolidate the laws relating to food and to establish the Food Safety and Standards Authority of India for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption and for matters connected therewith or incidental thereto.¹¹On the above concept we make our Food Safety and Standards Act, 2006

Suggestions-

After thoroughly going through the provisions, I have following suggestions to submit

1. As the number of hawkers cannot be denied in India, there should be representation from their association as well, in the food authority.

¹¹ <http://www.fssai.gov.in/portals/0/pdf/food-act.pdf>

2. The definition of food expressly excludes the animal feed from its purview. The fact is that whatever pesticides, insecticide etc. Gets into the animal feed and consumed by the animal (cow, goat, etc.) becomes a part of the definitions.
3. As there is lack of proper training of procedure, both legal and scientific or technical, there has usually been problem taking the sample in the adequate manner and quality required for testing. For this purpose, the ministry of HRD can think over role of universities, which can, after looking at seriousness of the affair, provide for the courses on food testing.
4. A separate ministry must look after the matter of food adulteration being a serious matter that affects the affects the health of the citizens. In fact it should continue to run under the ministry of health rather than of the food processing, which has to deal with and look into other relevant affairs.
5. Food adulteration is a very serious offence. Therefore, it should make the CEOs of the company liable.
6. There should be laboratory in each district.
7. Hawkers should be brought under the ambit of the act, as they do the major part of the commerce. The method of testing in their case should be made simple and non technical (not involving so many formalities).
8. Food recall should be issued in the media to inform the citizens and make them aware about the unsafe food.
9. The act should have compulsory provisions for black-listing of the companies or even publication when held guilty of the offence. It should be made part of the punishment. Provisions for publication the name of the culprit is there but not in every case. So, it should be done in every case.
10. The codex and the communities have suggested confidence building measures among the consumers. This can be done by attaching the logo displaying that products are safe. This logo that can be understood by literature or illiterate person should be made mandatory

Conclusion-

The adage goes that it is easy to find fault than to appreciate the thing. I don't completely disagree with it, especially in case of the particular Act, which has yet to come into force. The Act is answer to many problems that previously existed but the implementation part raises many speculations. Among the prominent features is the sanction part which provides for fine as well as imprisonment.

First of all, the evil food adulteration being a socio-legal crime generates a lot of wealth and therefore the perpetrator would easily be able to pay the fine for which he becomes liable. Be it 10 lakh rupees which are the highest.

Secondly, the distribution of the punishments also seems odd. The manufacturing, storing selling, distribution or importing of unsafe food carries the maximum punishment of life imprisonment and 10 lakh rupees if the activities result in death while the maximum penalty for the death of the consumer is 5 lakh rupees.

Thirdly, as the socio-legal crimes on one hand are considered to be harming the public to maximum extent and on the other hand they hardly carry the social stigma that is usually a feature in other forms of offence. The penalties will hardly solve the purpose. There for, along with this there should be provision for publication of the conviction so that people come to know about the perpetrator and at the same time they are also excluded from the syndicate that was working together with him. The extreme step could be blacklisting the manufacturer or seller, so that he cannot carry the business anymore. Power given to the consumer to take the sample is not a new feature. There are already a set of problems that he faces and that is the reason why hardly find such steps being taken. The bigger problem is to detect or find the difference between a pure and adulterated food. General public finds it difficult to distinguish between the two.

Therefore, these provisions had been or rather no use in the past and there was no point in its retention. Instead, there should be special branch of police and inspectorate with wide power of search and seizure, which should be a strict vigil all the time.

Again there is an appreciable feature of setting the tribunal at appellate level. Such tribunals are much required for the expeditious remedy it would have been better if the same procedure was given for the court of first instance. There is also need to reconsider the number of times the person is given the chance of appeal. There is also a provision for the special courts, where the burden of proof should be shifted from the prosecution. There would be a good coordination between the investigation team and prosecution because most of the escapes in past were because of the poor link between the two.

Likewise, there are speculation regarding other features too, such as the number of inspectors or their qualification and training, etc. the biggest doubt that arises is the adaptability of the act that has been framed by taking features from other countries and especially the codex¹². Are the provisions suited for the Indian condition especially will regard to the unorganised sector? For example, section 3 says about food safety safety management system which means “adoption of good manufacturing practices, good hygienic practices, hazard analysis and critical control point” for the food business these terms are not explained in the definition clause though they are extensively dealt with in the codex Alimentation on food hygiene basic text.

There are high standards laid in the text while defining the term as “food hygiene”, “hazard analysis and critical control point. The codex says about the environmental hygiene where the food production should not be carried in areas where there is presence of potentially harmful substances. The equipments used should be disinfected; there should not be contamination from the soil and air; the persons working in the establishment should not be infected with any disease, personal hygiene, air ventilation, lighting, temperature control etc. with this background we can find very few establishments that fulfill the requirements if we don’t consider the multinational set ups. These guidelines work in the western countries because they have a strong enforcement mechanism. There are businessmen have the means to maintain such guidelines as they are rich. In India the position of traders is not so good. Moreover they don’t have the sense of hygiene.

Therefore, in spite of the best of the legislation, the result seems to be with no big change in the practice. It is because one cannot change the mindset of the people who are illiterate and have little to think of others. This cannot be done all of a new legislation but to see whatever the provisions are;

¹² A codex is an ancient type of book which was written by hand, not printed

they should be strictly adhered to. At the same time the need of the hours not an integrated law but the integrated approach that includes the contribution from the public and NGOs 84as well. At the same time taking note of the spate of the crime, a separate Ministry should be assigned the enforcement and control.

True that the utopia¹³ of a society totally free from socio-legal crime as food adulteration is mere wishful thinking and impossible to achieve. But every step forward can be made by multiplying the efforts both in the legal. Extra-legal planes and at the governmental level. Honest implementation is the key word.

¹³ Utopia means Ram Rajya in which society is perfect and everyone is happy, but which you feel is not possible.

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