



**Public Lecture  
On  
"Is our food contaminated with chemicals?"**

**Date: 27th November, 2013**

**Time: 6:30pm – 8:30pm**

**Organized by: Toxics Link**

**Venue: India International Centre, New Delhi**

Safety in the food we eat has become an area of controversy today. Our nutritional status, health, physical and mental faculties depend on the food we eat and how we eat it. The food we eat is meant to nourish our bodies, however to our dismay; it is often the cause of various health affliction and toxicity.

There is plenty of food in our platter that is harmful due to the presence of chemicals. The pesticides and chemicals used during the growing and processing of food, even in miniscule quantity adds to an unacceptable intake of poisons causing chronic diseases. Further, a great deal of modern foods are highly processed and stripped off their nutrients.

Although there are legal provisions to combat the growing menace like the Food Safety Act which covers the concerns related to food safety in India, however effective implementation has been a daunting task.

In this light Toxics Link in Collaboration with India International Center organized a Public Lecture on 'Is our food Contaminated?' on November 27<sup>th</sup> at India International Center. The panel included very eminent speakers like Dr. Meenakashi Singh (Scientist, Standards, Food Safety & Standards Authority of India) and Prof. Shri Ram Khanna (Dept of Commerce, Delhi School of Economics, University of Delhi & Managing Editor, Consumer Voice). The session was moderated by Mr. Satish Sinha (Associate Director, Toxics Link)

Mr Sinha, opening the discussion shared that Toxics Link as an organization has been working on Chemicals in Food and the organization has carried an extensive study on contamination of heavy metals in the vegetables grown in and around Yamuna. Another study was conducted in Benaras which also reflected the presence of high levels of heavy metals like lead and cadmium. Mr. Sinha pointed that it is not only pesticides that contaminate our food but it is being contaminated by a cocktail of chemicals and heavy metals. We tend to think that these chemicals are present in a minuscule quantity which might not affect our body however there is a need to realize that by consuming that miniscule quantity daily it can have serious implications. Although these issues have been taken to the courts and various kinds of directives have been passed by the courts and various bodies have been formed to regulate these there are huge gaps and slack standards which needs to be addressed.

Mr. Khanna briefing on the use of pesticides pointed the rampant and excessive use of pesticides which starts right from the reseller who is selling pesticides. Rampant use



of banned pesticides in fruits and vegetables put high risk on the life of the common man. The seller and manufacturers of these pesticides recommend larger and larger doses and quantity of pesticide use which is much beyond that is recommended or needed. Referring to the well known example of the Cancer Train he



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shared that cancer had become a critical problem and its association to the excessive use of pesticides in the state of Punjab cannot be denied. Our food is contaminated with chemicals which apart from pesticides includes other kinds of chemicals there are heavy metals, additives, preservatives, he added.

Throwing light on the work of 'Consumer Voice' and its objective Mr. Khanna said that the organization has been regularly doing comparative testing of products and services since 1991 to educate consumers. He further talked about the fruits and vegetable tested by the organization where high levels of banned pesticides and pesticides above Maximum Residue limits (MRLs) were found.

Over 200 samples of fruits and vegetables were purchased from markets and tested to examine the total level of pesticides used in individual vegetables as per MRL (Maximum Residual Limit) of permitted pesticides and identify the presence of pesticides which are banned due to their potential toxicity impacts. The results showed an alarmingly high level of pesticide residues in fruits and vegetables which included : Apple, banana, cherry, chikoo, grapes, khumani, kiwi, lichi, mango, musk melon, papaya, peach, pears, pineapple, plum, pomegranate and watermelon – all consumed by average Indian. In some samples residue level was much higher than legally permissible. While in some, banned pesticide residues were found. Others showed high levels of pesticides which were much above MRL global norms.

Mr. Khanna shared that DDT which is allowed only in Public Health Programs was found in mangoes. Cherry showed presence of 5380.90 ppb Endosulfan pesticide - Higher than the Indian and the EU (European Union) MRL. According to the EU Standards (European Union) cherry can have up to 50 ppb only; ironically the India level is 40 times higher. Indian apple can have Dimethoate pesticide up to 2000 ppb (parts per billion) where as EU (European Union) apple can have up to 20 ppb only however, the India Norm is 100 times more.

Mr. Knanna further explained that the legally permissible level for pesticides in India is a certain MRL which is a multiple of what is legally permissible around the world and the global standards. The Codex levels which specify MRLs for each pesticide are

the technical scientific consensus throughout the world in which the Indian government also participates yet quantity of pesticides found, violates both the Indian and the global norms. The study conducted showed alarming results where 72 violations out of 106 pesticides were found with respect to EU (European Union) standards for pesticide MRL (Maximum Residue Limit) and one violation was found respect to the relaxed Indian pesticide MRL.

The Indian Standard, Mr. Khanna said are enormously slack and have been created as a result of bargaining between different lobby groups like the pesticide manufacturer, farming, wholesalers, Food processors while the consumer interest is completely disregarded. There is a need to bring the Indian MRLs with the global MRLs to ensure that the risk to ordinary population is reduced, added Mr. Khanna. The Government agencies have not yet started to formulate methods to protect public health by control of pesticide levels in food items.

Mr. Khanna further elaborated on the harmful effects of some of the pesticides like **Chlordane, Endrin, Heptachor, Ethyl Parathion**. Pesticides are either sprayed or injected or ingested by the fruit plants directly from soil. Besides causing irreparable damage to human health, over use of pesticides contaminates the soil and water bodies. Presence of Carbide which is a banned chemical used for ripening of many fruits is clearly noticed and is a gross violation of law. However India exports huge quantities of fruits, mainly mangoes, apples and grapes, which follow strict standards of the importing countries. The agrarian practices need to change and the farmers, wholesalers and retailers have to find a way to fix the problem.

Some of the key recommendations made by Mr. Khanna included:

- Introduce strict standards for use of pesticides and ground level checks of mass cultivations, farms, supply chains, supermarkets and imports for monitoring.
- Re-evaluation and reduction of Maximum Residue Limit (MRL) to be done by FSSAI and Union Ministry of Health and Family Welfare, considering EU (European Union)/Codex Standards of pesticides for fruits.



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- Stringent provision of punishment besides fine to be incorporated in the Food Safety and Standards Act, 2006 for violation of MRL of pesticides
- Farmers to be educated for judicious use of chemical pesticides as they are the first casualties of pesticide use. Govt. should set up education centers at each district.
- Use of Bio-pesticides to be encouraged. This can be done by giving better procurement price, subsidies and loans to farmers.

While Dr. Meenakshi Singh took through the details of the Food Safety and Standard Act 2006, which lays down science based standards for food items and the food safety and standard Authority of India (FSSAI, established in 2008), which implements the act. Dr. Singh shared that various regulations for the act have been notified on licensing & registration, packaging and labeling, Food product and standardization, Food Additives, contamination, toxins and residues, laboratory analysis and sampling. FSSAI has been established for laying down size based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import. The authority ensures availability of safe and wholesome food for human consumption. Elaborating on the process of fixing the standards, Dr. Singh said that there are nine scientific panels. The scientific committee and







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scientific panel are responsible for providing scientific opinion to Food authority based on the risk assessment and the risk assessment is done based on international practices. Further, there are attempts to harmonize certain standards with the codex. However, we cannot harmonize everything and need to consider the importance of the India as well, added Dr. Meenakshi.

FSSAI is presently in the process of revising the standards with respect to the different MRLs. The Authority is reviewing the standards and is in the process of notifying those standards. The food authority may establish as many scientific panels as required.

She further informed that the Ministry of Agriculture and many scientists and independent scientific experts, representation from some of the consumer groups (in labeling panel), form a part of the panel. There are panels on GM Food, Fish and Fishery products, Labeling and claims, bio hazards, contaminants in food chain, food additives etc. The panel on contaminants primarily looks into the contaminants in food associated area and undesirable substances such as natural toxicants, micro toxins and residues of unauthorized substances, she noted.

Touching on the panel on Pesticide Dr. Meenakshi said that the mandate of the pesticide panel has been established for use of safe pesticide, veterinary drugs and antibiotics residues. The FFSCI is also carrying out various awareness programs on the issue.

Talking about some of the challenges faced she pointed that the Laboratory status is bad in many states, however in the 12<sup>th</sup> five year plan states that it will attempt to improve the status of the labs. Dr. Meenakshi further said that the problem in India is that the pesticide use is under the Ministry of Agriculture post harvest only the product comes under the preview of FSSCI and thus requires integration. There are huge gaps which need to be addressed and plugged.



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This was followed by a question and answer session where some pertinent questions and concerns were raised. Concerns were raised on the use of certain permitted pesticides which the farmers are using in large quantity because of lack of education which needs to be addressed.



Questions were raised on the procedure of choosing a product for testing, regulation for additives in food and if the European standard and the global

standard are the same for the Maximum residual value of any product. Participants recommended the need to establish a system of bar coding so that to establish traceability so that if anything went wrong one can go back to the source.

Mr. Sinha closing the session pointed the need to standardize food because most of the time it's not health based standard but a negotiated standard and there is a need to set standard setting body which will enforce these standards stringently. Mr. Sinha further pointed the need to improve the regulatory mechanism for testing in the country as the same product given to the same lab and there are two different results.

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