

CONTAMINANTS IN THE FOOD SYSTEM : THE CONSUMERS' RESPONSE

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Summary

Public concern over toxicants and contaminants in food is a major and growing issue. This is an international concern. Even consumers in the poorest countries are concerned about contaminants in food. This paper addresses the following four points : (1) What are contaminants ?, (2) Consumer concerns, (3) Reasons for consumer's concerns (4) Addressing consumer concerns.

I. WHAT ARE CONTAMINANTS ?

In Australia, the food industry, producer and some government departments work to a different definition of food quality than consumers. 'Contaminants' are usually regarded as chemicals of concern. Pesticides currently head the Australian Consumers' Association's top ten list of consumer concerns. Other chemicals of concern include those seen as 'unnatural' and potentially unsafe farm practices, such as the use of antibiotics and hormones in meat production; lead and other heavy metals such as mercury in fish; aflatoxins and other mycotoxins; chemicals from industrial waste and how they find their way into food system via water supply; additives that cause allergic and intolerant reactions and possible long term health hazards; and chlorinated hydrocarbons. Surveys show that consumers recognise the benefits of preservatives but question the need for cosmetic additives, like colours, especially in staple foods like fruit juice and meat products (1). Consumers' concept of contaminants stand to change over time. The concept of quality food or clean food is the more fundamental concern for consumers. When consumers who have sufficient food and can afford to choose about quality food they mean food which is safe to eat. Safe means a number of things. It can be defined as without residues of pesticides, growth hormones, antibiotics and heavy metals. It contains mineral additives and is free of microbiological and other contaminants (2).

II. CONSUMER CONCERN

Worldwide pesticide production is well over two million tonnes and worth more than \$25 billion. Despite the growing awareness of problems associated with pesticide use, worldwide sales continue to grow mainly in developing countries as well as Australia (3).

Consumer concerns include :

- Residues of almost all widely used pesticides have been detected in individuals. Residues from chemicals banned for many years on food crops can be found in soils and in cattle grazed on contaminated soil.
- The long term effects of pesticides on health such as some form of cancer.
- A number of chemicals banned or restricted overseas are still permitted in Australia despite the NHMRC considering similar data to their colleagues in overseas regulatory agencies.

Consumer concerns (cont'd) include :

- The complex regulatory system.
- Product information is restricted in the interests of commercial confidentiality.
- Toxicity data is generated by the manufacturers presenting a conflict of interest.
- Public information about agrochemicals is a low priority for most regulatory agencies and there is little consumer involvement in their decision making process.- There are limited resources within State departments responsible for monitoring proper use of chemicals.
- The lack of a co-ordinated registration procedure for pesticides means a lack of information about the prevalence of pesticides in this country.
- The NHMRC's Market Basket Survey -
 - does not consistently test for the same chemicals
 - suffered recent suspension
 - omits many widely consumed foods
 - is not well publicly disseminated, particularly in rural areas
 - lacks standardisation of methods between States
 - does not allow for trace-back if residues detected
- Residues have been detected in a wide range of foods
- Many pests have developed resistance to certain chemicals
- Many crops require artificial fertilizers which may be contaminated with heavy metals such as cadmium and copper
- The validity of the LD 50 approach for toxicity testing is questionable (3).

III. REASONS FOR CONSUMERS' CONCERN

Food chemicals and a new technologies can offer great potential benefits to consumers, so food technologies and regulators are often exasperated by what they see as illogical consumer concerns. But consumers' worries about contaminants, the safety of additives and residues, and their distrust of high technology deserve examination. Consumers do have some concrete reasons for being concerned about food.

These include :

- consumers pay for the food and regulation systems and bear the consequences of any chemicals contaminant-related ill health
- genetic engineering and biotechnology
- Disasters of technology such as Bhopal, Chernobyl and thalidomide have highlighted consumers' distrust of certain types of technology
- Consumers tend to believe 'natural' is better than 'synthetic' or 'artificial' and are more prepared to put up with natural hazards rather than man-made ones. The food industry have heavily promoted that natural equals safe.
- Food can be produced without most chemical treatments and viable alternatives are available for most treatments that cause concern

IV. ADDRESSING CONSUMER CONCERNS

The good news is that there are alternatives to the continued use of many chemical contaminants. There is now an urgent need for regulators and industry to take action to restore consumer confidence by :

- strengthening government capacity to promote food quality and safety

- developing human resources in food safety and food handling
- consumer education and information as well as consumer involvement in decision making
- further research
- adopting higher safety and quality standards

Alternatives to chemical methods of pest control include ;

- biological control
- integrated pest management
- genetic engineering and biotechnology
- transgenic pesticides
- genetic manipulation of pests
- organic farming

V. CONCLUSION

In conclusion, there can be enormous areas of common ground between producers, other players in the food system and consumers. All sides need to listen to each other without mistrust and work our way towards a food system that is sustainable and of high quality.

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