

## **PESTICIDES: ISSUES AND OPTIONS FOR THE FOOD MARKETING SYSTEM**

Thomas Worley<sup>1\*</sup>

### **Introduction**

Managers of food production, processing and marketing firms have grown increasingly aware of consumer concerns surrounding food safety. Pesticide use and residues are one of the most important issues facing today's food system. Public confidence traditionally placed in the food system has eroded because we do not fully know the health risks associated with pesticides. Consumers are especially concerned because they cannot control the perceived health risks posed by pesticides. *This article identifies food marketing issues associated with pesticide use.*

Marketings of certain fruits and vegetables have been interrupted recently for various lengths of time. These market interruptions resulted from food safety questions posed in the public media. Counter-balancing information disseminated through the news media, public meetings and markets only partially overcame consumers' initial negative perceptions.

---

<sup>1</sup> Extension Economist, Washington State University.

All food marketing participants have a stake in efforts to resolve questions surrounding pesticide use, food safety, and health. Efforts to regain consumer confidence, once lost, are lengthy and costly to the food system. Producers and marketers of food products not yet scrutinized cannot afford to be inactive since most food products are dependent on pesticides during production or processing. Pesticide use and residue questions therefore could be raised and markets interrupted for any particular food product with little advance notice.

### **Key Issue for Marketing**

Consumers are generally unaware of the process by which pesticides are developed, registered for use, applied to crops, and monitored for residues. Furthermore, most consumers have little knowledge of modern agricultural production and marketing practices. The lack of consumer awareness concerning overall food production and processing systems and specifically pesticide issues therefore emerges as a key issue for the marketing system.

Increased educational efforts are needed to raise consumer awareness of food risks and benefits before new crisis situations arise concerning other food products. Education is needed which addresses the risks from pesticides relative to other risks commonly born by consumers in our

society. Increased consumer knowledge of the total food system, including pesticides and their risks to health, will temper fear and emotional reaction as future questions arise about specific foods. A greater knowledge of agriculture in the larger context will aid consumers to weigh the beneficial aspects of pesticides as well as risks created by their use.

### **Education Through Food Marketing System**

Basic communication signals in food markets flow between consumers and producers through price differentials. Consumers signal their willingness to consume goods with varying characteristics through their willingness to pay for the added attributes. Food items also reflect the cost of producing various characteristics through pricing practices. This pricing process applies to products differentiated by the pesticide practices employed in production and processing.

The following section identifies five opportunities for educating consumers concerning pesticide issues through the marketing system: private certification programs, organically grown products, integrated pest management practices, biotechnology and food irradiation as alternatives to pesticides, and foreign produced foods. Each of these programs offers a vehicle for acquainting consumers with the costs and benefits involved in reducing health risks through alternative production and processing techniques.

**Certification programs**, such as the Nutriclean program in California have been initiated to increase consumer

assurance of safe food through a price differential. Private certification programs verify foods to be free of specified, detectable pesticide residues and use a label to tell this to the consumer. The testing procedures, the labeling process, and the added handling in the market channels all add to the retail price of foods carrying these certifications.

Organically produced crops and livestock are another marketing opportunity to satisfy consumer demands for pesticide-free foods through a price differential. Organically grown produce generally costs more to produce and market separately from other produce. Therefore, it is often priced at a premium to conventionally grown products. Recent progress on the 1990 Farm Bill includes federal standards for organic produce (Packer, 10-13-90). Such standards are needed to define what constitutes organically grown produce.

The message concerning the adoption of **Integrated Pest Management (IPM)** represents another marketing opportunity. The central message of reduced chemical dependency in agriculture through IPM must be conveyed to consumers. This will acknowledge that steps are being taken in all of agriculture, not just private certification and organic segments, to alleviate concerns over safety and yet provide an abundant, economical food supply.

Educating consumers about **biotechnology and food irradiation** in food production and processing is necessary if these practices are to be accepted as alternatives to pesticide use. Otherwise there is ample chance for

misunderstanding which could lead to rejection of these technologies. The benefits, risks, and costs of these methods must be explained so consumers can make informed judgments of new products resulting from them.

**Imported food products** represent another avenue to raise consumer awareness concerning the food system. Current law permits U.S. exports of pesticides to other nations which are not registered for use on crops in the U.S. Subsequently some produce exported back to the United States may contain residues of these pesticides. This practice points to the lack of uniform international standards regarding the registration and use of pesticides.

Limiting fruit and vegetable imports to those crops and nations adopting pesticide standards equal to U.S. regulations must be addressed. Consumers could face smaller overall supplies of higher-cost produce during shortened availability periods if such non-tariff barriers were established.

### **Marketing Issues Posed By Alternatives**

Major marketing problems are coupled with efforts to offer differentiated fresh produce items for consumers. These offerings require identification and labeling which is not traditionally used for fresh produce. Labels are required since the differentiated produce loses its identity at the checkout stands in large retail food stores. This lack of identity results in the differentiated items being priced the same as conventional produce. The additional markup necessary for the differentiated product is often not

charged to the consumer and is therefore not gained by the seller. Packaging and labeling are necessary for prices to reflect products actually purchased.

A subtle yet very important question related to differentiated products concerns the impact on conventional produce. It is extremely difficult to market alternative products on the basis of increased safety and health without raising doubt about the wholesomeness of conventional offerings. A significant marketing question is how to offer differentiated produce without creating negative connotations about conventional produce. This problem is not insurmountable however because many differentiated products currently are offered in other sections of large food stores.

### **Summary and Conclusions**

The marketing system must strive at every opportunity to educate consumers. The educational focus may include production agriculture, food marketing, and the role of pesticides in producing the food supply. Furthermore, the food and agriculture messages could be related to the role of environmental preservation in insuring a sustainable food production system.

The marketing system is a natural conduit of communication between consumers and producers and can serve as a valuable tool in consumer education. Private certification, organically grown produce, IPM, biotechnology, food irradiation, and imported supplies are important areas for further focus of educational efforts. The marketing system faces a challenge to communicate relative

risks, benefits, and costs of these alternatives to consumers in terms that they understand.

Consumer education through the marketing system could be considered one facet of an overall educational effort. Other efforts may need to start with children in elementary schools in order for long run success. Informed consumers can only result from an appreciation for the food production system as part of our overall environment. Media tours of production and processing systems are another way to indirectly reach consumers with useful information. Continuing discussion among all interest groups in organized forums permits exchange of ideas which can serve to broaden understandings of a complicated issue. Marketing interests have need to be active in such discussions to effectively and credibly contribute to the understandings.

## REFERENCES

1. Craigmill, A.L. "Food Safety Issues." *Environmental Toxicology Newsletter*, 9:1. Coop. Ext., Univ. of CA. 1989.
2. --. "Fresh Trends '90: A profile of fresh produce consumers." *The Packer-Focus*, Vance Publ. Corp., Lincolnshire, IL. 1990.
3. -- "Hearing traces pesticide cycle." *The Packer*, Vance Publ. Corp., Lincolnshire, IL. March 31, 1990.
4. Shewfelt, R.L. "Quality of Fruits and Vegetables: A Scientific Status Summary by the Institute of Food Technologists' Expert Panel on Food Safety and Nutrition." Rpt. *Food Technology* 44(6):99. 1990.
5. Turcsik, R. "Industry must unite as marketing grows complex." *Supermarket News*, 40:42. Fairchild Fashion and Merchandising Group, a Capital Cities/ABC, Inc. New York. 1990.
6. Winter, C.K., J.N. Seiber, C.F. Nuckton. "Chemicals in the Human Food Chain." *Univ. of CA Issues Ctr.*, New York: Van Nostrand Reinhold. 1990.

*Ken D. Duft*

Ken D. Duft  
Extension Marketing Economist