



Securing the food chain

FAO is developing a comprehensive strategy to help countries ensure a "safe and nutritious" food supply...

In March 2005, 27 children at a school in the central Philippines died after eating cassava sweets that may have been contaminated with pesticide. A week earlier, 16 holidaymakers in Taiwan, Province of China, collapsed with severe stomach pains after a buffet dinner, and American singer Whitney Houston was rushed to hospital in Paris with gastroenteritis after a trans-Atlantic flight. In London, a consumer sued a restaurant for US\$ 2 million claiming a meal gave her salmonella poisoning, and Britain's Food Standards Agency broadened an already massive recall of food products contaminated by the cancer-causing red dye, sudan-1. And in China, media reported that sudan-1 had been detected in foods in 12 provinces and municipalities across the country.

Those reports, gleaned from a simple search of internet news sources, illustrate why food safety has become a serious concern for consumers, farmers, food processors, food retailers and governments alike. They represent just the tip of a worldwide public health menace that largely eludes disease reporting systems. WHO estimates that almost two million children in developing countries die each year from diarrhoea, caused mainly by microbe-contaminated food and water, while in industrialized countries, as much as one-third of the population suffers from food-borne disease every year.

"Food chain" approach. FAO says food safety systems in both developed and developing countries face unprecedented challenges arising from rapid urbanization, globalization of food trade, shifts in food consumption patterns, and more intensive food production techniques. To help its member countries respond to those challenges, FAO is developing a comprehensive strategy that would enable countries to ensure a "safe and nutritious" food supply. The strategy, presented in a paper to be discussed by FAO's Committee on Agriculture this month, calls for control measures at key points in the food chain to ensure that food meets international or national norms, and extends this approach to



include questions of nutrition. It addresses both formal and informal food chains and outlines measures for step-by-step implementation according to countries' particular needs, resources and capacities.

"For the purpose of food safety," the paper says, "it is now generally accepted that food chains cover all inputs into the production of food, including feed for animals, chemical treatments at the production and post-harvest stages, and even the land or water from which the food is harvested." Reducing risks in food depends on effective legal, technical and administrative frameworks. Traditionally, food safety has relied on enforcement mechanisms that remove unsafe products from the market "after the fact", rather than concerted efforts to prevent food safety problems. "As a result, the orientation of many regulatory food safety systems has tended to be reactive and defined by enforcement criteria instead of using a preventive approach to risk assessment and reduction."

However, several countries are moving towards a food chain approach by applying regulatory controls at the point where they are most effective. For example, governments frequently require - both for domestic and international trade - preventative measures that follow models developed by Codex Alimentarius, such as Good Agricultural or Good Manufacturing Practices and the Hazard

Analysis and Critical Control Point (HACCP) system. Preventative measures are also being used to reduce levels of environmental and industrial contaminants at the production stage.

There is also a wide variety of non-regulatory interventions that can be used as part of a food chain approach. Foremost among them are food and agriculture management systems that improve efficiencies, reduce losses, enhance quality and, where possible, create added value for food products. The strength of such systems is that, being implemented by producers, processors and marketers rather than by official food control services, their technical feasibility, cost-effectiveness and economic viability are enhanced.

Mitigating costs. Although a "whole-of-chain" approach is necessary for identifying and assessing risks and undesirable effects, interventions need to be focused on scientifically determined points in the food chain where they are the most effective. FAO's food chain approach is, therefore, a matrix of targeted interventions carried out by a variety of actors, including food regulatory agencies, agricultural extension services, rural radio, producers, processors, vendors and, finally, consumers.

Under the proposed strategy for a safe and nutritious food supply, FAO would provide normative, policy and technical advice to its member countries for implementing current international norms through regulatory and

non-regulatory measures. Implementation of the strategy foresees enhanced technical assistance and capacity building activities, policy advice to mitigate increased costs, and improved investment by both public and private institutions at appropriate stages in the food chain. The strategy foresees a major role for communication and extension services and enhanced cooperation with other international agencies working in the same or related fields.

FAO's work on international standards would be expanded to include consideration of "expected nutritional value", based on FAO/WHO scientific assessments of human nutritional requirements. Coordinated studies on food composition and on the nature and effects of different post-harvest handling and processing technologies and practices would aid in determining the expected nutrition value of specific foods, especially local and traditional foods that are marketed through informal or semi-formal food chains.

"FAO already has major regular and field programme activities that are directed towards ensuring a safe and nutritious food supply," the paper concludes. "The development of a strategic food chain approach offers the opportunity to draw upon the strengths of FAO's wide-ranging programmes, improve coordination and include activities that to date have not been considered as part of this overall framework."