

Why Improve Food Safety Through Good Agricultural Practices (GAP's)?

Donald W. Schaffner, Ph.D., Extension Specialist in Food Science & Kristin M. Jackson, Assistant

Introduction

Few would dispute the importance of the role played by fresh fruits and vegetables in the American diet. Health experts encourage us to eat more of these particular foods, at least five servings every day. In response to this increased demand, farmers are now providing traditional fruits and vegetables as well as “new” products that have not historically been familiar to U.S. consumers (FDA 1998).

Produce from well over 100 countries is now available in U.S. markets year round. Several factors contribute to this varied selection. Production and distribution of these items now take place on a global scale; better marketing and merchandising techniques, and vast improvements in packaging now allow produce to be transported over extended distances (Beuchat and Ryu 1997).

The Corresponding Rise in Foodborne Illness

As fruit and vegetable consumption has increased over the past decade, so has the number of cases of foodborne illness associated with eating these foods (Beuchat and Ryu 1997). The food products suspected of causing these illnesses are numerous: cantaloupe, tomatoes, green onions, unpasteurized juices, lettuce, raspberries, sprouts, and strawberries (Altekruse *et al.* 1997). There are many reasons for this increase in illness:

Changing Food Industry Practices – Current technology lends itself to larger, more centralized production. A similarly complex food distribution system then disperses shipments of these items over a widespread geographic area (Altekruse *et al.* 1997). This means that if one batch of product is contaminated, a great many people are exposed, thus increasing the number who could possibly get sick.

Increase in Global Trade – Food is now available to us from all over the world. This also broadens our exposure to an increased number of unfamiliar microorganisms as they are introduced into new geographical areas (Beuchat 1998).

Consumer Demand for Convenience – Ready-to-eat salads and pre-cut fresh vegetable pieces can reduce preparation time in the kitchen, but because these items are only partially processed, any microorganisms already present on them have a greater potential to multiply and increase the risk of disease.

Changing Social Demographics – The U.S. population is comprised of an increasing proportion of elderly and immunocompromised individuals, as well as those suffering from chronic disease. All of these conditions increase one’s chances of becoming severely sick and dying from foodborne illness (Altekruse *et al.* 1997). Pregnant women and young children are also more likely to become dangerously ill after an exposure that could leave the average healthy adult unaffected.



Changes in Consumer Food Preferences – Two important trends in consumer behavior have been concerning the food industry in recent years. One is the increased use of salad bars, and the other is the greater number of meals prepared and eaten outside of the home. Both of these practices allow increased opportunity for contamination (Beuchat 1998).

Concerns of the Consumer

Consumption of contaminated fresh produce always involves the possibility of severe illness and some cases have resulted in death. These incidents often make media headlines, and have raised the concern of the public. To address these concerns and “calm” consumers’ fears, experts in science, agriculture and health are working to develop strategies that would reduce the occurrence of microbial contamination. Farmers can play a pivotal role in these strategies. One of the most important things farmers can do is review, evaluate and reinforce the Good Agricultural Practices (GAPs) followed in their day-to-day operations.

Sources of Contamination

Because production, harvest, and distribution in commercial agriculture are very large and complex operations, it is impossible to know exactly how and at what point fresh fruit and vegetable products may become contaminated. It could happen almost anywhere in the process.

Contamination can come from soil treated with improperly composted manure or from wash or irrigation water that has been polluted by wild or domestic animals. Harvesting, soaking, or packing equipment can also contribute to contamination if not properly cleaned. Contamination can occur during transport when produce contacts dirty surfaces or contaminated ice, air, or dust. The personal hygiene and sanitation of workers in the field also contributes significantly to the possibility of pathogen exposure (Beuchat and Ryu 1997).

Food Safety is Everyone’s Responsibility

In the course of the journey from farm to table there exist any number of opportunities for fresh produce to become

contaminated. Each person at every step in the process needs to do his/her part to reduce the chances of this happening. As the primary producer, every farmer needs to be aware of the microbiological hazards lurking within his operation and the very real potential threat that exists to the consumer. By implementing a risk reduction program, farmers are not only protecting public health but safeguarding their businesses as well. The financial losses from any litigation in the wake of an outbreak could be devastating.

Even with today’s technology, it’s impossible to completely eliminate the threat of bacterial contamination. Preventative measures can certainly reduce the risk, and every little bit helps. The practices and guidelines recommended by the FDA may seem somewhat burdensome. However, if Good Agricultural Practices appropriate to a particular crop, economic situation, and physical surroundings are adopted, farmers will be doing their part to ensure the safety of their customers. The consumer depends on the farmer for their well being, and provides the farmer, in turn, with his livelihood. Good Agricultural Practices will help to safeguard that livelihood.

References

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