

Biosecurity – Safeguarding our Food Supply from Intentional Contamination

Mushroom News. 50(3): 8-12. March 2002

Luke LaBorde

Department of Food Science

Penn State University

University Park, Pennsylvania 16802

The devastating attacks by terrorists in New York, Washington DC, and Pennsylvania have prompted the nations lawmakers to reexamine the security of the nation's food supply. The White House has asked Congress for \$106 million in emergency spending for food and agriculture security including \$61 million to hire 410 more FDA food inspectors and technicians. Congress may respond by proposing even more stringent security measures.

New security procedures would require foreign and domestic food processors to register with the FDA and provide more controls on products entering U.S. ports. Proposals before Congress would give FDA new powers to inspect the records of certain manufacturers, to trace the source and chain of distribution of food, and to temporarily detain food if it is believed to present a threat of serious adverse health consequences or death to humans or animals.

FDA is encouraging operators of food establishments to review their current procedures and controls in light of the potential for criminal or terrorist actions and make appropriate improvements. In order to assist the food industry, FDA has compiled a list of preventive measures for controlling criminal tampering or terrorist actions. Implementing enhanced preventive measures requires the commitment of management and employees to be successful and, therefore, both should participate in their development and review.

The threat of terrorism aimed specifically at the mushroom industry is a small one. A greater threat would be product tampering from employees. In either case, intentional contamination of food products is a potential hazard that must be evaluated in your company's food safety plan and for which control measures must be developed.

Below are some key security areas and control measures identify by FDA. Mushroom growers and packers would be well advised to consider them as they review the security of their operations.

Personnel Security

- Know your employees and their backgrounds
- Screen new employees by obtaining and verifying work references, addresses, and phone numbers, and police record; especially for seasonal, temporary, contract, and volunteer employees
- Check immigration status with U.S. Immigration and Naturalization Service when appropriate
- Supervise employees as needed, including cleaning and maintenance staff, contract workers, and especially new employees
- Conduct daily security checks of the premises for signs of tampering with product or equipment, other unusual situations, or areas that may be vulnerable to tampering
- Limit access so employees enter only those areas necessary for their job functions
- Issue photo identification badges to employees. If you dismiss an employee, make sure keys, access cards and company identification cards are returned.
- Prevent workers from bringing personal items (e.g., lunch containers, purses) into food handling areas
- Permit only wire-mesh lockers that are secured with company issued locks.
- Inspect contents of employee lockers, bags, and vehicles when on company property
- Watch for unusual behavior by new employees or workers (e.g., workers who stay unusually late after the end of their shift, arrive unusually early, access files/information/areas of the facility outside of the areas of their responsibility; remove documents from the facility; ask questions on sensitive subjects; bring cameras to work)

Visitors

- Require proof of identity and issue visitors badges to contractors, suppliers, truck drivers, customers, couriers, third-party auditors, regulators, reporters, visitors, etc. Collect them upon departure

- Inspect incoming and outgoing vehicles for suspicious, inappropriate or unusual items or activity
- Restrict access to food handling, storage areas, and locker rooms
- If you have cleaning crew or pest control company come in after operating hours, have an employee accompany the individuals or at least monitor their activities

Facilities and Premises Security

- Limit access to your facilities with fencing or other appropriate deterrents
- Secure doors (including freight loading doors), windows, roof openings/hatches, vent openings, trailer bodies, and compressed gases to the extent possible
- Keep all facility doors and gates locked at night and on weekends.
- Use metal or metal-clad doors to the extent possible, especially when the facility is not in operation
- Minimize the number of entrances to restricted areas
- Account for all keys to buildings
- Provide adequate interior and exterior lighting, including emergency lighting
- Implement a system for controlling vehicles authorized to park on the premises
- Maintain any floor or flow plan in a secure location

Storage and use of hazardous chemicals

- Maintain an up-to-date inventory of hazardous chemicals
- Secure storage areas for hazardous chemicals (e.g. cleaning and sanitizing agents, pesticides, processing aids) using locks, seals, alarms, intrusion detection sensors, guards, monitored video surveillance
- Investigate missing chemicals and alert local law enforcement about unresolved problems

Security of water and air supply

- Secure water wells, storage tanks, and handling facilities
- Ensure that water systems are equipped with backflow prevention
- Test for potability of your water on a regular basis as well as randomly and be alert to changes in the profile of the results

- Identify alternate sources of potable water (e.g., trucking from an approved source, treating on-site or maintaining on-site storage)
- Secure access to air intake points for your facility, to the extent possible using fences, sensors, guards, or video surveillance and routinely examine air intake points for physical integrity

Raw materials and packaging

- Use only known and trusted sources for all ingredients, compressed gas, packaging, and labels
- Take steps to ensure that suppliers and transporters practice appropriate food security measures
- Inspect incoming ingredients, compressed gas, packaging, labels, and product returns for signs of tampering such as abnormal powders, liquids, or odors
- Supervise off-loading of incoming ingredients, compressed gas, packaging, labels, and product returns
- Destroy outdated or discarded product labels

Security Strategies in Response to tampering or a criminal or terrorist event

- Develop a crisis management policy and procedure.
- Identify critical decision-makers and identify a media spokesperson
- Identify management that employees should alert about potential security problems
- Identify 24-hour contact information for local, state, and federal government agencies and police, fire, and rescue services (FDA's 24-hour emergency number is 301-443-1240. FDA District Office telephone numbers are listed at http://www.fda.gov/ora/inspect_ref/iom/iomoradir.html)
- Have a generic press statements and background information

Recall strategy

- Identify the person responsible and a back-up
- Provide for proper disposition of recalled product
- Identify customer contacts, addresses, and phone numbers

- Make employees aware of internal, fire, and police emergency phone numbers
- Become familiar with the emergency response system and the Emergency Command Center operations in the state in which the facility is located
- Make employees aware of the company officials to alert about potential security problems, and where they can be reached

For more information on biosecurity issues and recommended food safety practices for mushroom growers and packers, visit the Penn State Food Safety Web Site at

<http://foodsafety.cas.psu.edu/>.