



Adapted from information provided by the
U.S. Department of Agriculture
Food Safety and Inspection Service

**GUIDE TO
DEVELOPING A FOOD DEFENSE PLAN
FOR
Food Processing Plants**

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**BY COMPLETING PAGE 11 IN THIS GUIDE, FOOD
PROCESSORS WILL HAVE A FOOD DEFENSE PLAN FOR
THEIR OPERATION**

What is Food Defense?

Food defense is putting measures in place that reduce the chances of the food supply from becoming intentionally contaminated using a variety of chemicals, biological agents or other harmful substances by people who want to do us harm. These agents could include materials that are not naturally-occurring or substances not routinely tested for in food products. A terrorist's goal might be to kill people, disrupt our economy, or ruin your business. Intentional acts generally occur infrequently, can be difficult to detect, and are hard to predict.

Food defense is *not* the same as food safety. Food safety addresses the accidental contamination of food products during storage and transportation and focuses on biological, chemical or physical hazards. The main types of food safety hazards are microbes, chemicals and foreign objects. Products can become contaminated through negligence and contamination can occur during storage and transportation.

Some of the information you will use to create your Food Defense Plan will already exist in your Sanitary Standard Operating Procedures (SSOPs), Hazard Analysis and Critical Control Point plan (HACCP) and other documents relating to emergency response procedures. Make sure to consult these documents for information. There is no need to “reinvent the wheel” when developing your Food Defense Plan.

Why Develop a Food Defense Plan?

A Food Defense Plan helps you identify steps you can take to minimize the risk that food products in your establishment will be intentionally contaminated or altered. A plan increases preparedness. Although the plan should be in place at all times, it may be particularly helpful during emergencies. During a crisis, when stress is high and response time is at a premium, a documented set of procedures improves your ability to respond quickly. **A Food Defense Plan will help you maintain a safe working environment for your employees, provide a safe product to your customers, and protect your business.**

To help owners and operators of food processing plants, we have created this guide to assist you in developing a cost-effective Food Defense Plan for your facility. This guide was adapted from USDA guidance for warehouse and distribution center establishments.

By using this guide, you will be able to develop a food defense plan specific to your facility. **Complete page 11 and you will have your plan.** Keep in mind that not all of the guidance contained in this document may be appropriate or practical for every plant. We recommend you review the guidance and assess which preventive measures are suitable for your operation. You should determine the most cost-effective way to achieve food defense goals based on your facility's situation. **It is important to remember that there is no “one size fits all” approach to creating your Food Defense Plan. The plan can be as long or as short as is appropriate for your operation.**

Who Might Adulterate a Food Product?

Below are some examples of the types of individuals who might be motivated to intentionally adulterate food products. You should contact your local law enforcement community for additional information about potential local threats to your facility.

Examples of Threats

- Disgruntled current or former employee
- Members of terrorist or activist groups posing as:
 - Cleaning crew
 - Contractors
 - Temporary employees
 - Truck drivers (shipping and receiving)
 - Visitors
 - Utility Representatives

Individuals that want to intentionally adulterate product and do not have authorized access to your facility are considered intruders. Another threat may come from an internal source, such as disgruntled current or former employees and other insiders, who typically know what procedures are followed in the facility and often know how to bypass many security controls that would detect or delay an outside intruder.

Steps in Developing a Food Defense Plan

We recommend using the following three steps when developing a Food Defense Plan. If you follow and complete these steps and use the forms provided as a template, you will have developed a food defense plan for your facility.

Should you need help using or have questions about this guidance, please contact the FSIS Office of Food Defense and Emergency Response (OFDER) at 866-395-9701.

Step 1 – Conduct a Food Defense Assessment

Begin by choosing a person or team to be responsible for the security of your plant. The team or responsible person will answer the questions in the assessment below to help you understand which parts of your facility may be more vulnerable. When completing this assessment remember to consider both potential internal and external threats. The results of the assessment should be kept confidential so that they do not provide a roadmap for future attacks.

To use the following Food Defense Assessment, read each question and check the response that best describes how your business operates. **Keep in mind that not all questions will be appropriate for all facilities.** If a question does not apply, check “N/A”. A “Yes” response for every question is desirable but not expected. **A “No” answer on a question does not necessarily mean there is a serious problem with security at your plant. A “No” should trigger some thinking about whether additional security measures are needed.** Some questions provide a website address for additional information that might help you formulate your plan.

Outside Security

1. What food defense measures does your plant have in place for the exterior of the building?

	Yes	No	N/A
Are the facility's grounds secured to prevent entry by unauthorized persons (e.g., by locked fence, gate or entry/exit doors, guard service)?			
Is there enough lighting outside the building to properly monitor the plant at night/early morning?			
Do emergency exits have self-locking doors and/or alarms?			

2. Are the following secured with locks, seals, or sensors when unattended (after hours/weekends) to prevent entry by unauthorized persons?

	Yes	No	N/A
Outside doors and gates?			
Loading dock doors?			
Trash compacting chutes?			
Windows?			
Roof openings?			
Vent openings?			
Trailer (truck) bodies?			
Truck hatches?			
Railcars?			

3. Does your plant have food defense procedures for people and/or vehicles entering the facility and/or parking in your lot?

	Yes	No	N/A
Does the property have a controlled or guarded entrance?			
Are <u>employee</u> vehicles identified using placards, decals, or some other form of visual identification?			
Are authorized <u>visitor/guest</u> vehicles identified using placards, decals, or some other form of visual identification?			

General Inside Security

4. Does your plant have food defense measures inside the facility?

	Yes	No	N/A
Is there an emergency lighting system in the facility?			
Does your plant have <u>monitored</u> security cameras (CCTV)?			
Does your building have an emergency alert system that is tested regularly?			
Are the locations of controls for emergency alert systems clearly marked?			
Are all restricted areas (<i>i.e.</i> , areas where only authorized employees have access) clearly marked?			
Are visitors, guests, and other non-employees (<i>e.g.</i> , contractors, salespeople, truck drivers) restricted to non-product areas unless accompanied by an authorized employee?			
Does local law enforcement (including the fire department) have up-to-date copies of facility layouts/blueprints?			
Are procedures in place to check toilets, maintenance closets, personal lockers, and storage areas for suspicious packages?			
Do you regularly take inventory of keys to secured/sensitive areas of the facility?			
Are ventilation systems constructed in a manner that provides for immediate isolation of contaminated areas or rooms?			

5. Are the controls for the following systems or areas restricted (*e.g.*, by locked door/gate or limiting access to designated employees) to prevent access by unauthorized persons?

	Yes	No	N/A
Heating, Ventilation, and Air Conditioning systems?			
Propane Gas?			
Water systems?			
Electricity?			
Refrigeration systems?			
Volatile chemicals used in refrigeration?			
Engine/compressor rooms?			
Ingredient storage areas?			
Product batching areas			

6. Does your facility have food defense procedures in place for its computer systems?

	Yes	No	N/A
Is the access to the system password-protected?			
Are firewalls built into the computer network?			
Is the system using a current virus detection system?			
Are back ups kept off-site?			

7. Which of the following food defense procedures does your facility have in place for the storage of hazardous materials/chemicals such as pesticides, industrial chemicals, cleaning materials, and disinfectants?

	Yes	No	N/A
Is the access to inside and outside storage areas for hazardous materials/chemicals such as pesticides, industrial chemicals, cleaning materials, and disinfectants restricted in some manner to allow use by designated employees only?			
Is a regular inventory of hazardous materials/chemicals maintained?			
Are discrepancies in daily inventory of hazardous materials/chemicals (in excess of household use) immediately investigated?			
Is a procedure in place to receive and securely store hazardous chemicals?			
Is a procedure in place to control disposition of hazardous chemicals?			

Shipping and Receiving Security

8. Does your facility have food defense procedures in place for handling outgoing shipments?
 (Helpful information is provided at the following website:
<http://www.fsis.usda.gov/oa/topics/transportguide.htm>)

	Yes	No	N/A
Are outgoing shipments sealed with tamper-evident seals?			
Are the seal numbers on outgoing shipments documented on the shipping documents?			
Do you keep records of the above-referenced inspections?			
Is a bill of lading maintained for all outbound activity?			

9. Which of the following food defense procedures does your facility have in place for handling incoming shipments?

	Yes	No	N/A
Is access to loading docks controlled?			
Are loaded trailers and/or rail cars on the premises maintained under lock and/or seal?			
Are trailers and rail cars inspected prior loading and unloading?			
Is a bill of lading maintained for all inbound activity?			
Is advance notification from suppliers (by phone, e-mail, or fax) required for all incoming deliveries?			
Are suspicious alterations in the shipping documents immediately investigated?			
Are all deliveries checked against the roster of scheduled deliveries?			
Are unscheduled deliveries held outside facility premises pending verification?			
Are off-hour deliveries accepted?			
If off-hour deliveries are accepted, is prior notice of the delivery required?			
If off-hour deliveries are accepted, is the presence of an authorized individual to verify and receive the delivery required?			
Are less-than-truckload (LTL) or partial load shipments vehicles checked?			
Are incoming shipments of products required to be sealed with tamper-evident or numbered seals (and documented in the shipping documents)? Are these seals verified prior to entry?			
Are transportation companies selected with consideration of the company's ability to safeguard the security of product being shipped?			
Do the transportation companies perform background checks on drivers and other employees who have access to products?			
When choosing your compressed gas vendor do you consider whether or not they have implemented general security measures?			

10. Does this facility allow returned goods, including returns of U.S. exported products, to enter the plant?

Yes

No [GO to Question 12 under Mail Handling Security]

11. Which of the following food defense procedures does this facility have in place for returned goods?

	Yes	No	N/A
Are all returned goods segregated in the plant for evidence of possible tampering before salvage?			
Are records maintained for returned goods?			

Mail Handling Security

12. Which of the following food defense procedures does this facility have in place to ensure mail handling security?

	Yes	No	N/A
Is mail handling activity conducted outside operations? (For example, in a separate room or facility away from operations?)			
Are mail-handlers trained to recognize and handle suspicious pieces of mail using U.S. Postal Service guidelines? (Helpful information is provided at the following website: http://www.usps.com/news/2001/press/serviceupdates.htm)			

Personnel Security

13. Which of the following food defense procedures does your facility have in place for ensuring that personnel adhere to the security requirements?

	Yes	No	N/A
Are background checks conducted on all employees and contractors (both permanent and seasonal) who will be working in sensitive operations?			
Do all employees receive training on security procedures as part of their orientation training?			
Are employees, visitors, and contractors (including construction workers, cleaning crews, and truck drivers) identified in some manner at all times while on the premises?			
Does your facility control access by employees and contractors entering the plant during <u>working</u> hours (e.g. coded doors, receptionist on duty, swipe card, etc.)?			
Does your facility control entry of employees and contractors into the plant during <u>non-working</u> hours (e.g. access limited by key card or code number)?			
Does your facility have a way to restrict temporary employees and contractors (including construction workers, cleaning crews, and truck drivers) to areas of the plant relevant to their work?			
Is an updated shift roster (i.e., who is absent, who the replacements are, and when new employees are being integrated into the workforce) kept by management for each shift?			
Do you inspect employee lockers?			
Are employees and/or visitors restricted as to what they can bring (cameras, etc.) into the plant?			
Are employees monitored when removing company-provided clothing or protective gear from the premises?			

Step 2 – Develop a Food Defense Plan

Now that you have identified the aspects of your food processing plant that may be vulnerable you will need to **identify cost-effective preventive actions that can be taken to minimize those vulnerabilities.**

At a minimum, your Food Defense Plan should address:

- inside security
- outside security
- storage security
- shipping and receiving security

Some examples of potential vulnerabilities and food defense measures are listed below. Additional defense measures may be found in trade association guidance material.

General Inside Security	
Sample Vulnerabilities	Potential Food Defense Measures
Unescorted visitors with access to storage areas	Limit visitor access through the use of checkpoints and badges. Restrict visitors from congregating/waiting in close proximity to outside dock areas.
Personnel security- contractors	Require contractors to screen and train their employees. Provide plant supervision or oversight of contract staff working in the facility.

Storage Security	
Sample Vulnerabilities	Potential Food Defense Measures
Cleaning supplies, pest control chemicals and other hazardous material may be used as contaminants.	Secure access to all points of building entry during non-operating hours. Control use and storage of hazardous materials by locking in area away from other inventory. Allow access to only those who should have access.

Shipping and Receiving Security	
Sample Vulnerabilities	Potential Food Defense Measures
Unscheduled deliveries	Accept receipt of only scheduled deliveries. Inventory packages against manifest and order forms and examine package integrity.
Contaminants placed in products awaiting loading/unloading	Make periodic checks of integrity of packaging. Require personnel identification badges. Increase employee awareness of this risk. CCTV may also be used.
Truck drivers on dock with access to plant	Have drivers sign in and escort them at all times while inside the facility.

General Outside Security	
Sample Vulnerabilities	Potential Food Defense Measures
Open perimeter, allowing access to facility	Secure all entry ways, windows, vents, loading bays, and other access points.
Exterior access to storage areas, loading docks, on site trailers used for cold and dry storage	Fence exterior access points to storage structures. Secure all access points, including loading areas. Install exterior lighting. Use tamper-evident locks or seals on trailers.

Using the above information, you are now ready to complete your plan. **After completing the following pages you will have successfully developed a Food Defense Plan for your specific facility. Congratulations!**

Food Defense Plan

(Your facility's name) _____

Step 1. Begin by answering the self assessment questions in this guide to determine if changes should be made to your current practices.

Step 2. Copy the possible areas of vulnerability you found you may have into the column called "Vulnerability" below. Then in the column beside it, list what food defense solutions you plan to use to reduce them. If you do not know of possible solutions, you may contact the FSIS Office of Food Defense and Emergency Response (OFDER) at 866-395-9701. You may also find help through your trade association.

Outside Security

Vulnerability	Food Defense Solutions
Example: There is no outside surveillance system.	Example: Install a security system.

Inside Security

Vulnerability	Food Defense Solutions
Example: No record of customers to contact in case of a food recall.	Example: Keep a list of major customers, how to contact them and what foods they generally buy.

Shipping and Receiving Security

Vulnerability	Food Defense Solutions
Example: Deliveries are never on a schedule.	Example: Set up a delivery schedule with supplier and stick to it.

Personnel Security

Vulnerability	Food Defense Solutions
Example: Employees do not know that intentional food poisoning could occur	Example: Discuss intentional food poisoning with employees and what they should do if they suspect it.

If you suspect someone has tampered with food at your facility consult your emergency contact list (see page 14).

Step 3 – Implement the Food Defense Plan

Once you have a written Food Defense Plan, these questions will help you to ensure that it is functional and up-to-date

	Yes	No	N/A
Is there a designated person or team to implement, manage and update the Food Defense Plan?			
Have appropriate personnel been trained in food defense?			
Are the details of food defense procedures kept confidential?			
Is the emergency contact information for local, state, and federal government homeland security authorities and public health officials included in the food defense plan?			
Is the contact information reviewed and updated regularly?			
Have you or someone in your facility initiated contact with these authorities?			
Are employees encouraged to report signs of possible product contamination, unknown or suspicious persons in the facility, or breaks in the food defense system?			
Does the plan contain evacuation procedures? (Helpful information is provided at the following website: www.osha.gov/dep/evacmatrix/index.html)			
Are procedures in place to restrict access to the facility to authorized personnel only during an emergency?			
Does the facility have a documented recall plan that is updated regularly and ensures the segregation and proper disposition of recalled products?			

As discussed above, key elements of effective plan implementation include assigning responsibilities, training staff, developing contact lists, and checking your recall plan.

Assigning Responsibilities

Individual employee’s food defense responsibilities should be defined and documented in your plan. Assign overall responsibility for food defense to a single employee, if possible, who has an understanding of the security requirements.

Staff Training

Train staff in all provisions of the plan. The purpose of food defense awareness training is to ensure your employees know their responsibilities. Training should address access control procedures, access to restricted areas, protecting critical components, and procedures for reporting suspicious activities. Understanding the threat of intentional adulteration and the potential consequences should help employees consistently execute preventive measures, increasing the overall effectiveness of the plan. Encourage the “neighborhood watch” concept - employees can be your “eyes and ears”.

Food Defense Plan Assessment and Revision

Review your plan and revise it, as needed, at least annually or when there is a change in your process. You may need to revise the plan to address changing conditions such as adding a new customer; adding a new technology; etc. Record the fact that you have done so in the space below.

Date	Reason for Assessment	Signature

Emergency Contact Numbers

In addition to plant employees, current local, state and federal government Homeland Security contacts and public health officials should be listed in the plan. Local law enforcement and FBI offices should also be included in the contact list. Update the list regularly. You may wish to keep this list near your phones for a ready reference.

Person, Agency or Organization	Phone Number
Plant Emergency Contact/Crisis Management Team	
Local Police Department	
Local FBI Office Weapons of Mass Destruction Coordinator http://www.fbi.gov/hq/nsb/wmd/wmd_home.htm	
City/County Department of Health	
State Department of Health	
State Department of Emergency Response or Homeland Security	
USDA FSIS OPEER	
USDA FSIS Office of Food Defense & Emergency Response	866-395-9701
FDA	
Customers	
Insurance Carrier	
Other	

Product Recall Procedures

You probably already have Product Recall Procedures developed and included in some other plan in your operation. Please review your recall procedures and determine if any updates need to be made to address food defense concerns. If you do not have established recall procedures in place, please contact an industry trade association for additional information.

List of Resources

Here is a list of sources of helpful information to consult when developing your facility's food defense plan.

FSIS “Safety & Security Guidelines for the Transportation & Distribution of Meat, Poultry & Egg Products”

http://www.fsis.usda.gov/PDF/Transportation_Security_Guidelines.pdf

FSIS “Guidelines for the Disposal of Intentionally Adulterated Food Products and the Decontamination of Food Processing Facilities”

http://www.fsis.usda.gov/PDF/Disposal_Decontamination_Guidelines.pdf

**World Health Organization (WHO) – “Terrorist Threats to Food – Guidelines for Establishing and Strengthening Prevention and Response Systems”
(ISBN 92 4 154584 4)**

<http://www.who.int/foodsafety/publications/general/terrorism/en/>

U.S. Food and Drug Administration (FDA) – Food Defense & Terrorism

<http://www.cfsan.fda.gov/~dms/defprog.html>

U.S. Food and Drug Administration (FDA) – “Retail Food Stores and Food Service Establishments; Food Security Preventive Measures Guidance”

<http://www.cfsan.fda.gov/~dms/secgui11.html>

U.S. Food and Drug Administration (FDA) – ALERT: The Basics

<http://www.cfsan.fda.gov/~dms/alert.html>

Center for Infectious Disease Research and Policy (CIDRAP), Academic Health Center, University of Minnesota

<http://www.cidrap.umn.edu/cidrap/content/biosecurity/food-biosec/guidelines>

County of San Diego, Department of Environmental Health, “Guidelines for Food Safety and Security”

http://www.sdcountry.ca.gov/deh/fhd/pdf/food_safety_security_217.pdf