



Idaho Produce Safety Video Series

Brought to you by:
Idaho State Department of Agriculture
University of Idaho Extension



Animal Intrusion

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****websites and links, CTRL+click to follow link****

Introduction:

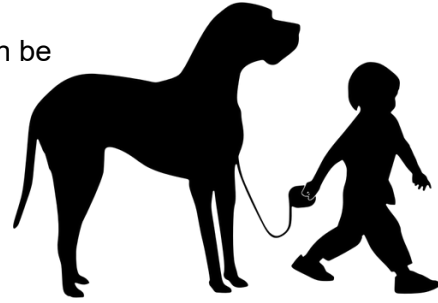
Hello! This video will cover requirements of Subpart I of the Produce Safety Rule, Domesticated and Wild Animals. Before we get started, let's review how the FDA Produce Safety Rule is laid out.

The Food and Drug Administration Produce Safety Rule is one part of the FDA Code of Federal Regulations (CFR). This database includes a codification of the general and permanent rules

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published in the Federal Register by the Executive departments and agencies of the Federal Government.

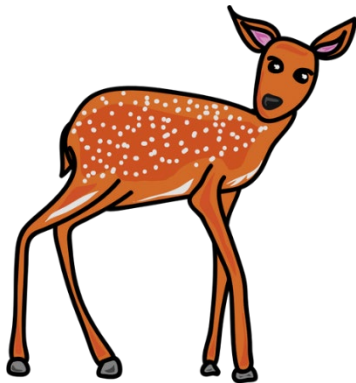
The domesticated and wild animals section requirements can be found in CFR 21 Part 112. The requirements of this subpart apply when a covered activity takes place in an outdoor area or a partially enclosed building and when there is a reasonable probability that animals will contaminate covered produce. The requirements of this subpart do not apply to covered activities that take place in a fully enclosed building or to fish used in aquaculture operations.



Today we'll review:

- Contamination Routes Associated with Domesticated and Wild Animals
- How To Evaluate The Likelihood Of Animals Contaminating Produce In Your Operation
- The Importance of Performing Pre-Harvest Assessment of Produce Fields
- Animal Deterrents and Co-Management
- Employee Training
- Takings and
- Recordkeeping

There will be definitions of important terms included on-screen throughout this video. Feel free to pause the video at any time. Pay attention to the word **MUST** and **SHOULD**... **MUST** indicates that it is required by the Produce Safety Rule. **SHOULD** indicates suggested good agricultural practices.



You may print out this presentation at any time. This will be available for viewing on the Idaho State Department of Agriculture (ISDA) and University of Idaho Extension (UI) websites. It is a good idea to have a copy of the [Produce Safety Rule](#) when you view this video so you can reference the rule throughout this presentation. You may pause this video at any time. Okay, let's get started!

How Domesticated and Wild Animals can Contaminate Produce:

Domesticated and wild animals present unique risks because they are a natural part of farming and their presence on the farm is unavoidable. Domesticated and wild animals can serve as reservoirs for human pathogens; therefore, can contaminate produce.

These pathogens can survive for long periods of time in the environment including in soil and water. Domesticated and wild animals spread human pathogens by depositing fecal matter in fields. Humans can spread this fecal matter throughout the produce operation by way of clothing, shoes, tools, and hands.

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Domesticated animals such as dogs, cats, and livestock, because of their close proximity with humans, are more likely to be a route for human pathogens of public health significance thus transferring those pathogens to humans and produce. Some wild animals are also migratory and gather in large numbers thus can spread pathogens to other animals, produce fields, and waterways in close proximity.

The Produce Safety Rule does not require farms to eliminate or exclude domesticated and wild animals from outdoor areas, but simply monitor their presence and activity and take steps to minimize the risk of contamination to produce.

Now that you know how domesticated and wild animals can contaminate produce, the first step is to evaluate your operation to determine HOW and IF Subpart I applies to your operation.

How to Evaluate the Likelihood of Animals Contaminating Produce in Your Operation:

A good time to evaluate for the presence of animals is before the growing season, when you have some downtime to assess the risks and hazards. This could be done while conducting normal daily duties, such as checking irrigation pipes or lines or while pulling weeds throughout the fields. Creating a map of your operation is a very useful tool in evaluating your risks to ensure you include all areas of your farm.

First, identify all outdoor areas and partially-enclosed buildings on your property where covered activities take place. To assess these areas, you might walk the perimeter of fields, property and buildings, look for animal tracks and feces. If produce is growing at the time, also look for destruction or contamination of produce.

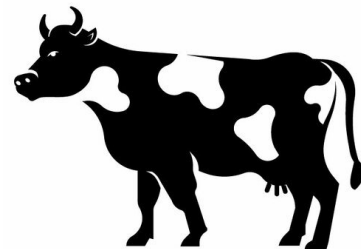
Second, determine whether there is a reasonable probability that animals will contaminate produce in these areas. There are many things to take into consideration when determining this.

Evaluate and monitor types of animals that are present on and adjacent to your farm. Every farm has a unique layout with different types of animal risks to their produce. These risks include the family farm dog, neighboring subdivisions or homes, composting operations on or next to your farm, working animals, cattle, and more.

Once you have determined what types of animal risks you have, next evaluate why the presence of those animals are a potential risk to your fresh produce.

For example, cattle next-door to or part of your operation may pose a risk if the cattle are grazing in your produce fields or

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runoff from the cattle operation is draining into your produce field or water source used for your produce fields. Or a composting operation may attract many birds. Or a packing shed may be the perfect home for pigeons and rodents. Or an irrigation pond used to water your produce fields has become the perfect watering hole for elk, deer, and birds.

When evaluating types of animal risks, it is important to remember there is a significant difference between one deer or bird drinking from your water source versus an entire herd of deer or flock of birds. The risk increases significantly with a herd or flock.

Other things to consider include harborage areas such as overgrown brush, waste piles, wooded areas, and nesting areas.

Land topography or land features should also be considered. Including the slope of your land, water runoff locations and areas prone to flooding. Do you have ditches, mounds or vegetative buffer strips? All of these can be great habitats for wild and domesticated animals, and may create unforeseen problems if they are not monitored. A vegetative buffer may stop the blowing of manure from a composting operation, but if overgrown, can create the perfect home to many species of birds or other wildlife.

Last but not least, consider the seasonal presence of animals and why they may be resting in that particular area. Such as part of an animal's seasonal migration pattern.

Now, you have evaluated whether there is a reasonable probability of animals contaminating your produce by assessing:

- Type of animals
- Habitats
- Migratory patterns
- Movement trends and/or
- Topography

If you find significant evidence of potential contamination you **MUST** evaluate whether the covered produce can be harvested. Significant evidence includes observations of animals in your produce fields, animal excreta or crop destruction.

For example, if you determine your produce packing house has been a harborage area for owls or birds and you have observed bird droppings on or around the inside of the building, then there is a reasonable probability that the owls or birds will contaminate your fresh produce. If this happens you **MUST** determine and implement appropriate measures to prevent the owls or birds from nesting in your packing house and correct the situation.



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Before removing wildlife from your farm it is imperative that you work with your local authorities to ensure you are meeting State and Federal laws.

The Importance of Performing Pre-Harvest Assessment of Produce Fields:

In addition to your overall farm assessment, you **MUST** conduct a pre-harvest assessment to determine whether it is safe to harvest your produce. A pre-harvest assessment **MUST** be done immediately prior to harvest.

Section 112.112 states you **MUST** take all measures reasonably necessary to identify, and not harvest, covered produce that is reasonably likely to be contaminated with a known or reasonably foreseeable hazard, including steps to identify and to not harvest covered produce that is visibly contaminated with animal excreta.

At a minimum, you **MUST** immediately prior to and during harvest activities conduct a visual assessment of the growing area and all covered produce to be harvested, regardless of the harvest method used.

You should establish a plan and a monitoring schedule to follow throughout the growing season and just prior to and during harvest to ensure your assessments are done properly and in accordance with the Produce Safety Rule.



Your Plan Should Include:

- Identifying who is responsible for monitoring
- Monitoring frequency
- Looking for common signs of intrusion
- Reporting observations and
- Correction of potential contamination of produce

Monitoring for animal presence throughout the growing season is beneficial to help prevent contamination of produce as well as crop loss. It is a good plan to assign someone who is responsible for monitoring to ensure monitoring is conducted correctly and all relevant growing areas are monitored frequently and if needed appropriate corrective action takes place to prevent contamination of produce.



You should train all workers to look for signs and evidence of animals and you **MUST** train employees to recognize what produce **MUST** not be harvested.

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Monitoring frequency will vary depending on the farm operation and domestic presence and wildlife migratory patterns or presence. For example, if you are harvesting multiple times throughout the year, conducting a pre-harvest assessment will occur many times throughout the season. If harvest only takes place once a year, you may only need to conduct a pre-harvest assessment once immediately prior to harvest.

Monitoring also will depend on your initial evaluation findings of wildlife presence. For example, if your outdoor growing area is next to a large water source such as a pond or canal and you have determined through your initial evaluation this water source is used as a drinking source for many deer and geese throughout the summer and you have observed fecal contamination in and around your produce next to the water source, you may need to monitor this area more frequently for potential contamination and consider some means to deter wildlife such as fencing, buffer zones, air horns or other available tools.

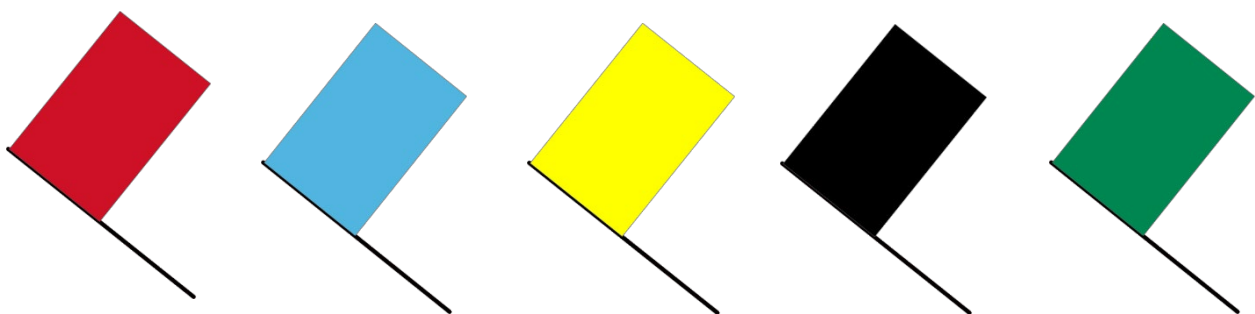


While Conducting Your Pre-Harvest Assessment Look for:

1. Areas within the field that have been trampled or areas where produce has been crushed or damaged
2. Fecal deposits on or around produce and it is important to take note of what kind of fecal deposits, so appropriate corrective action can be put in place.
3. Animal tracks
4. Rooting; or
5. Feeding

For example, you have been curing onions for the last seven days and during your pre-harvest assessment the day before harvest, you notice a large flock of birds in the corner of your onion field. You **MUST** assess that area to ensure there is no signs of fecal contamination prior to harvesting that portion of the field. If there are signs of contamination you **MUST** take measures not to harvest the contaminated onions.

If there are signs of contamination to the onions, you **MUST** notify employees so they do not harvest those onions and it is recommended you establish a buffer zone such as placing flags around the area so all harvest employees know not to harvest the contaminated onions.



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Other sources of contamination include domesticated animals and humans. Perhaps a sub-division backs up to your berry farm and you notice dog tracks, human tracks, and dog fecal matter in your produce fields.

How would you handle this situation?

What actions would you take?

Are your workers trained on what to look for?

Workers not only need to be trained on what to look for, but they also need to be trained on when and how to report signs of contamination and how to correct them.

Employee Training:

Workers ***MUST*** be trained on what to look for, such as fecal deposits, contaminated or damaged produce, animal tracks and ***MUST*** report findings to the appropriate farm personnel so a decision can be made whether the area should be designated a no-harvest buffer zone. The amount of fecal deposits found and where they are found are very important when determining how much produce cannot be harvested.

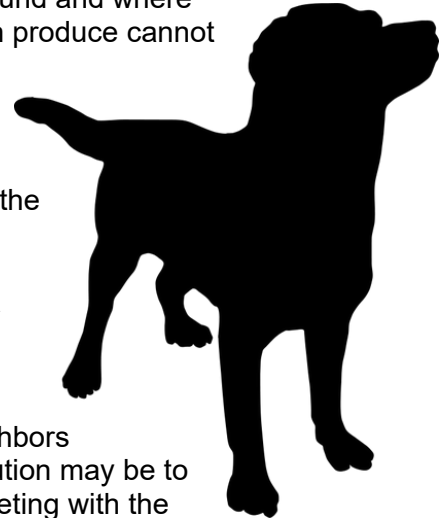
Corrective actions minimize the risk. Corrective actions help control and prevent the immediate risk and can help you come up with a long-term solution and a plan to minimize or prevent the problem in the future.

In the example where deer and geese are using the pond for a water source, corrective action may be to use fencing and decoys.



Or in the example where the subdivision neighbors are walking through the field with dogs, a solution may be to put up no trespassing signs, a fence, or a meeting with the homeowner's association.

Anytime a corrective action is implemented it is important to follow-up to ensure the corrective action was effective and the desired outcomes were achieved. Any actions taken should be documented. Documentation tracks trends and ensures workers are taking appropriate actions to keep produce safe.

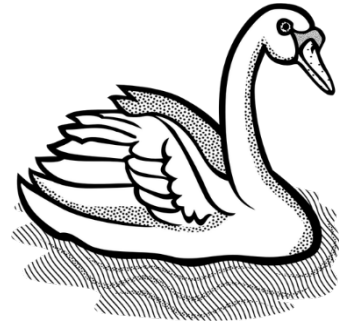


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Animal Deterrents and Co-Management:

If through your assessment you determine you do have a significant animal intrusion problem, there are multiple deterrents that can be utilized to minimize animal presence. Animal deterrents are great for recurring wildlife issues. They may include:

- Decoys
- Fencing
- Netting
- Relocation
- Tactile Repellants
- Noise Makers and/or
- Visual deterrents



The Produce Safety Rule does not require deterrents; however, they can be very effective in minimizing the presence of wildlife, if used appropriately.

Decoys are effective in scaring away many different species of wildlife. Scarecrows are effective in scaring away birds. Swans are aggressive toward Canadian geese; therefore, swan decoys can be very effective.



Fencing can be very effective in keeping many different species of wildlife out. It may be difficult to fence an entire field and very expensive, so this option may not be appropriate or feasible for everyone. In the subdivision example, a fence may work well to keep humans out.

Netting is another great option. Netting may be a more effective long-term alternative to noise deterrents, but may

be more expensive upfront. Netting can also trap animals in; therefore, it may not be appropriate for every situation.

Visual deterrents such as reflective tape, balloons, beach balls, and air noodles are inexpensive and often very effective.

Relocating animals in some situations may be a less expensive alternative. For example, your chicken coop is located next to your produce field and you are constantly rounding up the chickens out of the field. Relocating the chickens away from the produce area would most likely solve this issue. Or relocating wildlife, such as owls.

Notes

Whenever you are considering the relocation of wildlife, always contact the appropriate state wildlife management agency first. Some animals may be threatened or endangered species and may be regulated under the Endangered Species Act.

Taking of Animals:

Nothing in this regulation authorizes the “taking” of threatened or endangered species as that term is defined by the Endangered Species Act. This regulation does not require covered farms to take measures to exclude animals from outdoor growing areas, or to destroy animal habitat or otherwise clear farm borders around outdoor growing areas or drainages.



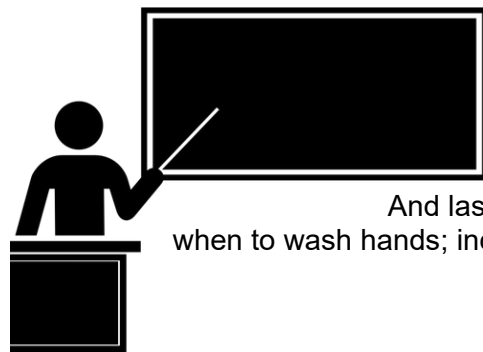
Co-Management is very important when choosing deterrents and other strategies to minimize animal presence on your farm. Co-management is a way of addressing animal intrusion issues and finding the right balance between minimizing fecal contamination and microbiological hazards to your produce while at the same time conserving wildlife and other natural resources.

Employee Training:

Training employees on what to look for and how to respond to produce contamination is key to ensuring that covered produce is safely harvested.

Persons who conduct harvest activities for produce ***MUST*** receive training that includes:

- Recognizing covered produce that ***MUST*** not be harvested, including covered produce that may be contaminated with known or reasonably foreseeable hazards;
- Inspecting harvest containers and equipment to ensure they are functioning properly, clean, and maintained so as not to become a source of contamination of covered produce with known or reasonably foreseeable hazards; and
- Correcting problems with harvest containers or equipment, or reporting such problems to the supervisor (or other responsible party), as appropriate to the person’s job responsibilities.



This training ***MUST*** be completed upon hire, and periodically thereafter, at least once annually. Documentation of training is the only required documentation for Subpart I.

And last, but not least, employees ***MUST*** be trained on how and when to wash hands; including when an employee has handled animal feces.

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Recordkeeping:

The Produce Safety Rule does not require you to keep a record of monitoring for animal intrusion. It is a recommended good practice to document assessment findings, animal activity including intrusion contamination events, and actions taken.

This is important in evaluating what measures worked and what measures did not work. Records also show you are taking steps to prevent contamination of your produce. **Recordkeeping templates can be found on the ISDA website at www.agri.idaho.gov.**



Domesticated and wild animals can contaminate produce because they can harbor human pathogens. Evaluating and assessing your operation to determine risks that may be present due to animal intrusion and knowing how to address the risks, will help you to minimize the impact to your produce. In addition, training employees to recognize, report, and not harvest contaminated produce in your operation will help you better identify animal intrusion activity and protect your produce.

Do not hesitate to contact the Idaho State Department of Agriculture or University of Idaho Extension for more information on domesticated and wild animal requirements related to the Produce Safety Rule.

The screenshot shows the ISDA website with a navigation menu including Home, About, Animals, Plants & Insects, Inspections, Pesticides, Labs, Marketing, Licensing and Registration, and ISDA Divisions. The main content area is titled "Food Safety Modernization Act [FSMA]" and includes a sub-section for "Produce Safety Rule". Below this, there are several colored boxes representing different regulatory areas: Produce Safety Rule, Accredited Third Party Certification, Foreign Supplier Verification Programs, Mitigation Strategies for..., Preventative Controls for..., and Preventative Controls for... The page also lists various FSMA-related topics like Accredited Third Party Certification, Certification, Final Rule on Foreign Supplier Verification Programs, Final Rule for Mitigation, Strategies to Protect Food Against Intentional Adulteration, Final Rule for Preventive Controls for Human Food, and Final Rule for Preventive Controls for...

The screenshot shows the University of Idaho website with a navigation menu including Prospective Students, Current Students, Parents, Alumni, and Faculty & Staff. The main content area is titled "Food Safety for Produce Growers" and includes a sub-section for "Produce Safety Rule". Below this, there are several colored boxes representing different regulatory areas: Produce Safety Rule, Accredited Third Party Certification, Foreign Supplier Verification Programs, Mitigation Strategies for..., Preventative Controls for..., and Preventative Controls for... The page also lists various FSMA-related topics like Accredited Third Party Certification, Certification, Final Rule on Foreign Supplier Verification Programs, Final Rule for Mitigation, Strategies to Protect Food Against Intentional Adulteration, Final Rule for Preventive Controls for Human Food, and Final Rule for Preventive Controls for... The page also includes a "CONTACT" section with the address: Food Safety for Produce Growers, University of Idaho, Boise 223 E. Frank Street, Suite 100, Boise, Idaho 83725, Phone: 208-262-2122, Email: emh@uidaho.edu.

Thank you for watching!

Notes

References:

1. "Produce Safety Alliance." *Welcome to the Produce Safety Alliance Website!* Produce Safety Alliance, www.producesafetyalliance.cornell.edu/
2. NASDA, www.nasda.org/
3. *US Food and Drug Administration Home Page*, Center for Biologics Evaluation and Research, www.fda.gov/
4. ECFR.io. "e-CFR: Code of Federal Regulations." *ECFR.io*, www.ecfr.gov/
5. "Produce Safety Rule." *University of Idaho*, www.uidaho.edu/extension/food-safety-for-produce-growers/food-safety-modernization-act/produce-safety-rule
6. "Idaho State Department of Agriculture." *Idaho State Department of Agriculture*, www.agri.idaho.gov/main/

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Presented by Idaho State Department of Agriculture and University of Idaho Extension

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Contact Information:

Email Address: FSMA@isda.idaho.gov

Physical Address: [2270 Old Penitentiary Road, Boise, ID 83712](#)

Mailing Address: PO Box 7249, Boise, ID 83707

Phone Number: [\(208\) 332-8502](tel:(208)332-8502)

Fax Number: (208) 334-2170

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