



Episode Thirteen - Domestic animals

Welcome to episode 13 of Food Safety Bites Brought to you the University of Wisconsin Madison, and funded by the USDA Food Safety Outreach Program, this is your host Harriet Behar. This episode is **domestic animals and produce safety**. In these podcast episodes, I will identify issues, and provide suggestions for how to reduce various fresh produce contamination risks and keep your customers safe. I will not talk in detail about what is required for a GAP audit or a FSMA inspection. If you want more information on those, please see the links on the website where you found these podcasts.

Domestic animals include those that may sleep in your house like dogs and cats and those that sleep in the barn, such as cattle, sheep, goats, pigs, horses and poultry. Some of you may have emus, ostriches, yaks, alpacas or llamas too. I won't try to imagine which animals might sleep in the house with you. There are also episodes in this series focused on working and wild animals.

All of these animals have the potential for spreading pathogens, and because they are living with you on your homestead, their presence and your daily contact with them, mean you should consider how to lessen risk of contamination from this source. Animals do not have self-control when defecating or urinating, and we should be aware that they could do this anywhere. In addition, when manure is present it can be troublesome. The suspected source of the listeria outbreak in 2011 on cantaloupes in Colorado that killed 34 people was a truck that had recently been to a cattle operation. Due to the fact it had NOT been cleaned and sanitized after being in contact with cattle manure, and was then parked next to the pack shed, there was a way for listeria from residual cattle manure to contaminate newly packed cantaloupe that was being shipped to market. Following good equipment cleaning practices and worker hygiene goes a long way to preventing sickness in others.

Since some farmsteads may be on small acreages, with produce fields and livestock housing in close proximity and with dogs, cats and perhaps poultry having free range, it is difficult to exclude the animals and their pathogens, but it is not impossible. Developing site specific strategies for management of the produce safety risks can be done by understanding those risks. Most of these domestic animals are on the farm for a purpose, to produce food, fiber and manure for use as a valuable soil fertility input. If you are fencing in and have both produce and pasture in your fields, consider growing crops nearby to that pasture that are less risky to be contaminated from this livestock. Sweet corn is one choice because it is in a husk and is grown off the ground or grow crops that are not typically consumed raw. Also think about the topography of the field - does the manure from the animal area have a way to run down to the fields?

Poop- Domestic animal poop should be treated like wild animal poop and like wild animals, dogs and cats can shed pathogenic bacteria in their feces. Produce that is in direct contact of that poop, or produce within a specific radius from that poop, should not be harvested. There is not a buffer zone specific distance mandated in GAP or FSMA that you must allow between any



poop in the field and product you are harvesting. Some growers having a no harvest buffer zone of 2 feet and others using a 6-foot radius; this radius will depend on many things like the size of the poop, the slope of the field, the product that is growing, if it has rained etc. Harvesting produce 6 inches from the poop is quite risky, as that poop can easily splash or get onto the produce, so develop your own protocols and consider the situation when deciding what not to harvest. The poop should be removed from the field in a way that follows good worker and tool hygiene. Burying it away from the produce field is an option if done carefully, so in a heavy rain, there would not be runoff and you have removed the chance of future contamination. Your workers should be alert to any poop in the field, be trained to not get it on their footwear, gloves or tools and follow good hygiene if they do. In the recordkeeping episode, I will discuss documenting known animal intrusions into your fields.

Dogs can be effective at scaring wildlife out of your fields, like raccoons in the sweet corn, or deer eating melons or winter squash. But they are also likely to poop or urinate in your fields or have rolled in manure or some unsavory dead thing, and then decide they want to run down the kale rows, spreading pathogens as they go. Luckily, growers can train their dogs to go around produce fields, and I have been able to do this. Dogs can be taught that mulched or open dirt is not an area where they should go, and if they want to go from one point to another, they can be trained to run around the field and not through it. You can also restrain dogs from being able to enter fields with fencing or confine them, especially when the produce contamination is most risky, such as near to or at the harvest stage.

Cats are used for rodent control on many farms but have the same negative issues as dogs in fields. They pose the added risk of infecting humans with toxoplasmosis parasite, which is a common parasite present in the feces of cats. This can cause a serious illness especially in pregnant women, children and those with weak immune systems. While it is more difficult to train cats, if you don't encourage them to follow you to the fields, they will typically stay at home. Don't let them in the washing and packing area or the growing fields if possible don't put their food and water and litter box in these areas, and don't encourage them to be there. You cannot exclude them 100% of the time, but you can try to make it less welcoming for them in these areas.

Free range poultry- these birds can damage your produce as well as leaving behind feces. Fencing or other deterrents should be constructed to keep them out of your produce. I will discuss poultry and other animals used as "working animals", in another episode.

Pack shed: Allowing dogs, cats or other domestic animals in your packing area is not a good idea, since they could leave behind feces and urine as well as other pathogens they pick up from the environment. Provide food and water for these domestic animals away from the produce handling areas and provide beds or shelter near the house or away from where you handle produce.

If you don't have a pack shed with doors that completely close to keep out the animals, or you want to have service or even garage doors open to have a nice breeze so the pack shed is more pleasant while working, there are heavy duty screens with Velcro or magnet type closings. If you are handy, you could also make your own screen doors or curtains. Make sure they are



tight enough on all edges to both keep out the curious cat and flies, which can also be a vector for pathogens if they had recently been on manure or decaying matter. If a domestic animal can get into your pack area, so could wild animals such as rodents and birds. I will talk more about pack area design and monitoring for pests, in a different episode.

Neighbors; Consideration of domestic animals includes livestock or dogs owned by neighbors. If this is your first year working this land, is there stockpiled manure near your field that could pose a risk? If there is livestock nearby, are there land features or the direction of wind that could allow for runoff or pathogen laden dust to end up on your produce? Do your neighbors spread raw manure, and could there be a risk of runoff after that application? These issues could affect what types of produce you grow in areas of higher risk adjoining these lands. Consider growing your jack o lantern pumpkins adjoining these areas rather than your salad greens, windbreaks and diversion ditches can also be installed to provide some protection for wind and water.

Fences: Are the fences between you and your neighbor's livestock in good condition? It is a good idea to walk that fence and make sure, and to understand whose responsibility it is to maintain those fences. In some states, maintenance of fences is shared by both landowners. If it is your part of the fence that needs fixing, and the neighbor's animals get into your fields, your neighbor might not be liable for the damage. Young animals such as calves and lambs are very good at going under weak barbed wire fences, and if there are numerous animals munching in your green beans, the damage done to your produce could be extensive.

So that's it for this episode of Food Safety Bites, the next episode is working animals. This is your host Harriet Behar brought to you by the University of Wisconsin Madison, talk to you next time!