



Episode Fourteen - Working animals

Welcome to episode 14 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 **working 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.

What would be considered a working animal in a produce operation? Draft horses come to mind. Performing tasks like tilling, cultivating, pulling sprayers, pulling harvest equipment like potato diggers and bringing harvest wagons to and from the fields. In addition, farmers sometimes use poultry like weeder geese, to lessen weeds in strawberry, cane berries, potato or other vegetable patches or chickens rotated with moveable fencing under their fruit trees to control various insects.

Other farmers might use larger animals such as sheep or pigs in fruit orchards to keep down the vegetation while spreading their nitrogen rich manure. Dogs and cats can be considered working animals as well, by deterring wildlife and killing rodents. I cover dogs and cats in the episode on domestic animals. Grazing animals could be considered working animals as well, but since they are not specifically working in the produce field, I cover the risks with these animals in the domestic animals episode.

Contact between people and animals- If working with draft animals for an extended period of time- you will be touching them and probably getting hair, sweat and manure on your hands, clothing and shoes. Those working with the animals, should not directly handle produce until they have had a chance to wash their hands and change their clothing, gloves and boots. When providing food and water, or opening up an overnight enclosure in the morning, wear dedicated shoes that are not also worn in the produce field. Shoes and boots have many crevices where manure can get caught. Another solution would be to wash and sanitize rubber boots between livestock contact and produce contact. If you are doing more than just providing some water and feed, and are with and among them for an extended period of time, then it is a good idea to change your clothes too before working with produce.

Contact between produce, produce fields and animals- There are many growers who use draft horses in their fields, and there are good practices that can be used to lessen the risk of these animals being present in the produce fields. Believe it or not, horse diapers or poop bags are available from a variety of vendors, from on-farm Amish made to ordering on-line from Amazon. These are used in urban areas for horse drawn carriage rides as well as other locations, making them easy to obtain. Some collect only fecal matter; others can collect both poop and urine. Farmers can also setup their fields and equipment so if the horses are working with growing produce, the equipment they are pulling is offset. The horse could walk on wide aisle to one side where there is no produce or better yet on a grassy pathway next to the



produce. If they defecate without the poop bag, it is easier to see and collect than if the horse is cultivating right in the middle of a field of almost mature cabbage. Have a standard area around any poop, where there is a no harvest buffer zone for the produce. This is usually somewhere between a 2- and 6-foot circle, depending on the size of the poop, the type of crop and the weather conditions. Be aware that feces can splash around in times of heavy rain and increase the areas that could be contaminated.

Good worker hygiene- Working animals on a farm might be more like domestic animals than farm animals when considering the proximity, they are kept to the home and homestead area. Buggy and draft horses that pull wagons could be hitched up close to the house during the day, and then put away in the barn at night, leaving their manure in the front yard. Farmers and farm workers will be checking weeder geese or sheep in the orchard periodically during the day, and if there is an issue, may enter the enclosure and have contact with manure or livestock. The path or road out to the produce fields, may go right through a barnyard, where there is accumulated manure that can end up on boots or wheels and get transported out to your produce field.

Each farmer should consider these contamination risks and consider changes or activities that include good worker and equipment hygiene. Moving the hitching post, developing a different road to the produce field, and having one person be in charge of the livestock can all be possible solutions. As well as everyone understanding that they need to be aware to avoid manure and wash or change their footwear before field harvesting or washing and packaging produce for sale. If children are barefoot and have walked through the barnyard, they should wash their feet thoroughly before going into a produce field or a packing shed.

Manure from livestock in produce fields or orchards- Since the risk of having manure splash up onto apples hanging on the tree is quite small, livestock could be in the orchard up until 90 days before the harvest of the fruit under the organic regulations, since the edible portion of the human consumed crop is not in touch with soil particles. The animals can also do cleanup after the fruit is harvested. Be aware to not overgraze and have dusty bare grown, where dust could then easily blow up onto the fruit. Weeder geese could be used the first year the strawberries have been planted, when you are not harvesting fruit commercially, or in summer after the spring harvested berries are gone. Pay attention to the manure on the ground around the trees if there are animals grazing the orchards - if there is manure it can travel on boots on ladder rungs, where hands are then placed, and contaminate the fruit.

Remember, all types of fecal matter could contain some type of pathogen and setting up systems that lessen contact with poop on the ground, on the fur, hair or feathers of working animals and the hands, clothing and shoes of people goes a long way to lessening contamination of the produce you sell.

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