

Traffic Patterns for Pastured Poultry Producers

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Problems with disease cost pastured poultry producers large sums of money each year. Pastured poultry producers can raise flocks of many sizes, but in any case, the risk of contracting a disease in this poultry management system is greater. Pastured poultry producers have greater exposure to disease agents because their management practices are specifically designed to allow the birds outdoor access. Therefore, these flock owners may work harder to prevent losses due to disease.

Pastured poultry flocks have access to not only the traditional mechanical vectors of disease in the form of dirty equipment, transport coops, and trucks, but also to the three main biological vectors of disease: Insects, wild birds and rodents. Although these three vectors are not well controlled in most pastured operations, the flock owner has many other avenues of management that they can use to improve the biosecurity on their farm. With this in mind, examining traffic patterns as a part of a biosecurity program is critical in the prevention of diseases, no matter the size of the flock. One of the avenues of biosecurity is to control the amount of traffic onto, and the traffic patterns within, the farm.

Traffic onto the farm

Many pastured poultry owners receive visitors such as family members, customers, group educational tours, or on-farm workshop attendees. This can also include people we often forget about in our daily routine such as the postman, meter reader, or even extension agents. Often, it is in the nature of a pastured poultry operation to allow more public access to demonstrate both the viability of the operation and the welfare of the flock. Many customers who buy products from these producers want to personally see that the flock is happy and healthy. There is also the novelty factor of this alternative management program, which brings in educational tours and workshop attendees. This marketing tool used by pastured poultry producers comes with an inherent risk in the form of infective footwear, clothing, and vehicles. Visitors bring different diseases from their flocks or communities that may be left behind on the producers farm, thereby potentially causing a disease outbreak. One major component of a biosecurity program is to control both the traffic patterns onto the farm and within the farm.

Asking questions. Visitors may be welcome, but the flock owner cannot be sure the visitors have not been around poultry or pet birds (i.e. finches, parrots, cockatiels, canaries) within the last 48 hours. Rather than quizzing visitors about their location within the last 48 hours, many producers forego asking these questions that may leave some customers or visitors feeling alienated. Other farmers do not feel comfortable asking the questions or would rather go on faith that all will be fine. The first step is to inform visitors before they come of your '48 hour rule' so that they can plan ahead. It is always a good idea to re-state the question of visitors to be thorough.

If one of several visitors does have pet birds or a small flock of poultry at home, it is a good idea to provide them with a waiting area until their group returns. Provide seating and shade in a waiting area so that they will be less likely to wander around the farm. A brochure of the farm, a short write-up about the farm's management practices, and a fact sheet on poultry biosecurity will provide them with reading material and also provide further explanation as to why they are unable to participate in the tour. Give the person in the waiting area an assignment related to the written material you provided in the waiting area so that when the group returns they

can contribute one or two interesting facts to the group that you did not discuss in the tour.

Here are some suggested questions to ask of visitors:

1. **"Has anyone here taken care of their own chickens or pet birds today or yesterday?"** We work hard to keep our birds healthy, so would anyone who has cared for chickens or pet birds at home today or yesterday, please wait here?"
2. **"Our farm cares deeply for the overall health and welfare of our flock. Does anyone here have chickens or pet birds at home?"** Wait a moment for any "yes" responses, and if there are any, then ask: **"Have you been around your birds within the last 48 hours?"** If the visitor has not, then they can go on the tour. If they have, then they may proceed to the waiting area.
3. **"Our farm works hard to keep our birds disease-free so I am going to ask some questions related to biosecurity. Does anyone here today have chickens? How about pet birds such as canaries, parrots, cockatiels, or finches? Has anyone visited friends or family within the last two days who have any of these birds? Has anyone been in contact with, or rescued, any wild birds or wild birds' nests in the last two days?"** Give visitors a moment to think through their last few days before proceeding with directions to the waiting area for those who have been around birds.
4. **A more passive approach would be to state the following: "We would like to ask that anyone who has been around pet birds or poultry at home within the past two days to please wait here. This is due to the risk of diseases to our flock. We do have a fun activity for you in the waiting area and when we return, you should be able to teach the group something about our farm."** Keep in mind that this approach is not likely to be as effective as the more direct questions in preventing those who have been around birds from getting close to your flock.

Barriers to Disease Here are some partial solutions for a biosecurity program when dealing with visitors onto the farm:

1. **Separate Parking:** Ask visitors to park away from the flock. Vehicle tires have been known to transport organisms over several miles and it is impractical for most producers to ask visitors to perform a full undercarriage wash of their vehicles, tires, and wheel wells. Provide a clean and well-marked parking area for potential visitors to the farm that is distant from the flock.
2. **Footbaths:** Human footwear is a common source of disease-causing agents and that includes pathogens that are infective to poultry. Some visitors may have poultry of their own, but may be unwilling to disclose such details if it means losing out on a visit to see alternative management practices. Therefore, it is best to have all visitors step through a footbath after leaving their vehicles to ensure that footwear is clean before approaching a flock viewing area.
3. **Coveralls:** If it is planned for visitors to come into direct contact with the flock, then it is best for the flock owner to plan ahead and provide coveralls. Tyvek® disposable coveralls are a suitable alternative to providing cloth coveralls to

visitors. Place used disposable coveralls in a trashbag and then dispose of them in a timely manner. For cloth coveralls, wash immediately and dry thoroughly before their next use.

- 4. Disposable Boot Covers:** Disposable boot covers (Nasco® Big Boot) may be another disposable solution for visitors who may have direct contact with the flock. Rather than providing rubber boots of varying sizes, many producers prefer to keep on hand a box of disposable boot covers for visitors to place over their regular footwear.
- 5. Visitor Log Book:** Have all visitors sign into a log book so that if your flock should become sick, you have a record of all visitors that may have been the source of the disease. The log book should contain a name, address and telephone number for each visitor. This may be difficult to do in large groups, but you can plan ahead and ask the group organizer to provide this information on a separate sheet of paper that is provided upon arrival.

Daily Flock Maintenance

Traffic within the farm Some common sense management practices that benefit pastured poultry flock owners include housing birds of different ages separately. Always care for younger birds before caring for older birds. Care for birds in quarantine last. This practice will determine the traffic pattern within the farm and should be considered carefully. The immune system of a young chick is naïve and susceptible to different types of infection. An older bird has been exposed to, and perhaps is an active carrier of, many different disease agents. Older birds, therefore, have a more mature and stronger immune system over that of a younger bird. Keep equipment separate and if pens or pastures must be entered for daily care and feeding, then step through a footbath upon entry and exit. The best plan is to have separate boots for each pen or pasture along with the footbaths.

If it is not possible to use a footbath, then each farmer should closely evaluate the setup of their poultry operation. The flock caretaker is most likely to be the carrier of disease agents from pen to pen on a daily basis. If pens or pastures must be entered, always care for the youngest birds first. Then move to older birds and finish the daily care routine with the oldest members of the flock. The last birds that should be cared for in any traffic pattern within a farm are those kept in quarantine. These are sick and injured birds, or birds that have recently returned from a poultry show. These are the birds that are likely to be the most infective and should be cared for at the very end of the daily routine.

Feed Rooms Most pastured poultry farms have a feed room where the farmer starts their daily routine. Placing a footbath near the feed room entrance is an effective component of a good biosecurity program. Feed rooms need periodic restocking and, therefore, are usually near a driveway for feed bag delivery and unloading. Before reaching the feed room, it is a good area to have a hose and spigot for washing down vehicle tires after a trip to the feed store. Feed stores are communal areas for many poultry flock owners to visit. Parking lots and store floors are not routinely sanitized. Therefore, keep a can of Lysol® in the vehicle for spraying footwear after visiting the feedstore and be prepared to hose down tires before delivering feed to the feed room. If a pastured poultry operation is sufficiently large as to require feed deliveries, it is recommended that a wash station be provided for the feed truck driver to use for cleaning off the tires

of the feed truck. This wash station should be located in an area near the entrance of the operation.

General Management Practices

Biosecurity can be defined as a set of practices used to limit the spread of disease-causing organisms from any one location to another. The three major steps of biosecurity are isolation, cleaning, and disinfection. Keeping the farm isolated may mean that visitors are allowed only on a certain day of the week at a posted time. Some pastured poultry producers only allow visitors by appointment. Keeping the flock as isolated as possible is best to reduce the opportunities for agents of disease to gain entry. Cleaning and disinfection procedures are described more carefully in a separate fact sheet (Cleaning and Disinfection in Pasture Based Poultry Management Systems, Center for Small Flock Research and Innovation, 2012)

Very few pastured poultry producers operate in a vacuum; that means that they are members of their communities, both agricultural and municipal. Farmers may join clubs, sell at farmers markets, or participate in coop tours. All of these activities help the farmer get the word out about their product and their alternative management practices. These activities almost always mean that the pathogens will enter the farm via the tires or footwear of visitors or the farmer.

Upon return from a show, an event, a coop tour, a poultry club meeting, or any other activity in which a farmer or flock owner may have been in contact with those who have poultry, there are a few suggested measures of biosecurity to perform. Rather than immediately going to see the flock, change clothing and footwear first. Wearing a hat or overshirt ensures that any infective pathogens in the dust that settles on hair or clothing will be less likely to be shed when in contact with the flock.

Summary

Isolation is one of the three most effective measures of biosecurity and is part of the thought process for every responsible flock owner. If complete flock isolation is not possible, then consider the amendment of habits to stop disease from tracking their way onto the farm. The movement from one house or facility to another by humans should be done from the youngest to the oldest birds, if there it is not feasible to change footwear. Dedicating oneself to a traffic pattern within the farm that goes from younger birds to older flock members is generally recommended. This is because younger birds are more susceptible to disease due to their naïve immune system, while the older birds have been exposed to more agents of disease, perhaps making them silent carriers.

For pastured poultry farms to be free of disease, following these steps are overwhelmingly recommended. Given the size of most pastured poultry operations, it is often much easier for them to alter their routines so that they may deliver a much more biosecure method of management to their birds. Adjusting traffic patterns within the farm will help to prevent disease and allow pastured poultry producers to save hard-earned dollars. Remember, many agents of disease need a human to help them reach the next susceptible poultry host. Be mindful of your actions to ensure that your flock stays happy and healthy.



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