Creating a Contagious Disease Biosecurity Plan

Keeping livestock and poultry healthy is the keystone to any livestock or poultry agricultural endeavor. Healthy animals grow better, reproduce more efficiently and produce more economically valuable products. Unhealthy animals cause a producer to spend more time managing the stock, more money on health inputs and vet bills, and often produce less or poor quality products. Without healthy animals, conservation, production, and profitability are impossible.

One of the reasons rare breeds of livestock and poultry are so loved by their keepers is because they are so naturally hardy. This hardiness comes from practical selection within the environment of the small farm, where expense decisions have historically been carefully weighed. Judicious practices such as culling unthrifty individuals, when practiced over many generations, leave most *Conservation Priority List* breeds with very hardy immune systems. This hardiness, however, does not make these breeds immune to all potential health threats.

In planning to maintain the health and hardiness of rare breeds, there are a number of "tools" available: careful and well-thought out breeding strategies, selective culling, appropriate nutrition plans, modern medicine, passive transfer of antibodies, and reducing potential exposure to disease. All of these and more represent the scope of biosecurity. The last point, reducing potential exposure to disease, is particularly important during times of disease threat and is an element easily controlled by you, the steward, for very little expense.

The threat of contagious disease can be reduced or prevented through removing the possibility of contact between the disease and the animal. This is done by addressing the many ways disease could be introduced. Controlling disease transmission vectors is particularly important when a highly infectious disease is circulating. Given that today distance is much less a limiting factor, all livestock keepers should implement such individual biosecurity protocols that will work well for their own situation.

A Contagious Disease Biosecurity Plan is useful in preventing disease, and in validating and documenting your commitment to disease prevention. During times of disease outbreak, having a Contagious Disease Biosecurity Plan and evidence of its implementation may be the difference between retention or pre-emptive destruction of your stock due to disease eradication efforts.

The American Livestock Breeds Conservancy has compiled a list of biosecurity protocols that can be used to tailor a Contagious Disease Biosecurity Plan for your individual farm. We have provided a sample plan that can be adopted as is, or that can be reviewed as a basis in understanding how to formulate a custom plan. The ALBC Contagious Disease Biosecurity Plan is complete with protocols to implement during routine or crisis situations – you simple check off those protocols that will work on your farm. Choosing protocols can be easy, but it is important that you follow all of those protocols you select. So, use the following Contagious Disease Biosecurity Plan as an outline to help you understand the principles of biosecurity and to help you formulate a plan that will fit the particular needs of your farm. What you do today will protect you and your livestock well into the future.

AI Considerations

Avian influenza is a disease of current concern. Some pertinent facts about this disease help to explain management practices that aid in the prevention of such diseases.

- High path avian influenza causes high mortality and can be characterized by rapid losses of a large percentage of poultry very quickly.
- Incubation period from exposure to high path avian influenza is from 3-7 days. Death from infection takes as little as 2-5 days from exposure to particularly virulent strains.
- Wild waterfowl are considered reservoirs of this disease. Avoid mixing species as mixed-species flocks can act as catalysts for virus mutation and increase the risks of outbreaks.
- During the 1983-84 outbreak in Pennsylvania, only waterfowl and shore birds, such as ducks, geese and gulls, showed serological evidence of infection with avian influenza. Sparrows, starlings, pigeons and crows showed no evidence of infection.
- A healthy pigeon or other domestic or wild bird can land amongst an infected flock and mechanically carry virus on their feathers to a healthy flock.
- Italian researchers have found that infected turkeys shed 10,000 times more avian influenza virus in their feces than infected chickens.
- The disease is primarily excreted through feces and is not significantly transmitted by aerosol, except in the case of transfer of virus between birds in single house.
- Avian influenza virus survives longest at cooler temperatures. For example, the virus survives for 35 days at 39.2 degrees F and 7 days at 68 degrees F.
- Avian influenza virus is easily destroyed by detergent, disinfectants, sunlight, drying and heat. The FAO Animal Health Special Report states: “The avian influenza virus is more simple to destroy than many other viruses since it is very sensitive to detergents which destroy the fat containing outer layer of the virus. This layer is needed to enter cells of animals and therefore destroys the infectivity. The virus survives well in water and simple washing may assist the virus to enter into areas where it is picked up by other birds. Therefore any washing to remove contamination should always be with detergents (soapy water) or specific disinfectants.”