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## **Biosecurity Issues For Forage Producers & Buyers**

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Several animal diseases can be spread by environmental factors and the viruses can live for several days or months. However, certain precautions can be taken to help prevent and/or manage diseases like Salmonella, Coccidiosis, Ecoli and Johne's Disease.

Always remember some key questions when moving livestock and buying feed or hay for those animals. First, know the disease status of your herd and source herds if you are buying livestock extremely important to expand your own herd. Ask about the source(s) of any manure spread on the fields if you are buying hay. For example, Johne's Disease can affect sheep, goats, farmed deer, antelope and llamas, and is spread by manure. Therefore, knowing or asking what kind of manure was spread on your hay field or your forage producer's field is crucial. Today, Johne's Disease will serve as a model for biosecurity procedures essential to prevent the spread of this disease. However, most of these rules can also be applied to several diseases and parasites that are spread by environmental factors, such as manure removal.

Johne's Disease is a contagious bacterial infection of the lower small intestine. Consequently, the disease is spread easily by manure. The number of organisms found in an animal's manure varies from very low, non-shedding, intermittently shedding to very high shedding. The severity of the disease seems to vary with the number of organisms being shed in the manure. Of course, the greater the number of organisms in the manure the better the chance of survival of the organisms passed by the host until a new host comes along to pick up the organisms.

Where the manure is left is of significance. Like many disease-causing organisms, the survival of this disease is much better if the manure is left in a dark and damp building. Most viruses and bacteria also stand a better chance of survival to infect a new host if the weather is not too hot or too cold. Sunlight can effectively kill the Johne's organism by drying it, but any piles or clumps of manure protect the bacteria. So manure removal from buildings must be completed efficiently and effectively.

Now what can we do with it? Because manure carries such a high number of bacteria, we do not want to have waste around the dry lot, calving pens or

anywhere animals may have access. Hauling manure to a field will help kill microorganisms, but to what field? In Indiana, these bacteria can survive for one year so spreading manure may result in hauling it back to the barn in feed for the livestock. We need to avoid the hay field and the pastures if they serve as a feed supply. This would just re-infect your livestock. This process would concentrate more bacteria in the animals and make the disease condition worse. This manure needs to go on to crop fields--not hay or pasture fields.

This bacterium is so bad you should not use the same front-end loader for feed and manure.

Manure from animals housed for short periods or being picked up by someone should be removed directly to the field. Do not expose any of your herds.

Manure from trucks that hauled animals of an unknown status should be avoided. Do not let your herd be exposed to it. It should go directly to a cultivated field.

Do not make hay from fields, which have been exposed to other species that can carry Johne's Disease: sheep, goats, farmed deer, and camileds.

Because young animals are the most susceptible to the disease, do not pasture younger animals after older animals. The more separation that can be accomplished between younger animals and older animals, the better the disease is controlled.

New livestock purchases should be isolated and tested if they did not come from a program status herd or maintain a current negative individual test.

Manure from exhibitions should not be spread on hay or pasture fields.

Avoid contamination of water supply with manure. Drain standing water or fence off the area so stock cannot gain access to the area.

If another operator raises the replacements, all of the biosecurity steps must be included in the program.

These steps will not totally control Johne's Disease (or all other diseases), but they will certainly aid in controlling the severity and spread of the disease. For more information of Johne's Disease, contact the Cattle Ruminant Division of the Board of Animal Health at (317) 227-0315 or [animalhealth@boah.state.in.us](mailto:animalhealth@boah.state.in.us).