

Health Considerations and Herd Expansion  
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When a producer decides to expand their breeding herd there are several items they consider when making that determination. The current and future economic outlook for beef production, beef demand, existing ranch resources, additional resources required, capital requirements, what type of animals to purchase, health status of herd additions, when to expect a positive cash flow from the expansion, and consumer preferences, these few items are just a short list of the many areas under consideration.

The health considerations for herd additions is important because herd additions carry the risk of bringing disease agents into the herd that can negatively affect herd health. Most infectious diseases of cattle do not survive for long periods of time in the environment and don't travel great distances through the air. Efforts by producers to keep disease agents off their farm or ranch must focus on a plan to minimize the risk of introducing disease agents through herd additions. When establishing a biosecurity plan for the ranch a producer should work with bull and female suppliers to ensure that the ranches veterinarian and themselves understand the suppliers herd health programs. Buying cattle with little or no information about the health status of the originating herd adds risk to the health status for the producers herd. Based on the health program for the source herd and the health risks for the owned herd a producers veterinarian can determine which vaccines, diagnostic tests and quarantine protocols provide and appropriated level of protection.

A quarantine period for new cattle is one way of protecting a herd. All additions prior to introduction should be held at a location which does not share a fence line or a water source with any cattle from the current herd for a period of at least four weeks with no signs of illness. If cattle appear ill during quarantine the isolation period should be extended until there is a time frame of at least three weeks with no signs of illness. If purchased cattle would arrive with some diseases that could be spread to other cattle this quarantine period should allow time for the new animal's immune system to clear the disease causing organism and reduce the risk of introducing the problem into the current herd. While new cattle are being quarantined they should receive vaccines that bring them to the same vaccination status as the current herd. The current herd should also receive booster vaccines as required by the label before mixing the current herd with new additions.

For other diseases cattle can be infected for long periods of time without clearing the organism and without showing signs of disease. During this long – sometimes lifelong – time period these carriers can pass the disease causing agent to other cattle. A test and refusal strategy should be implemented for diseases that can cause significant health and economic losses for a herd when available tests are highly accurate. Bovine viral diarrhoea (BVD) is a disease that fits this strategy, it can cause significant losses in cow calf herds and persistently infected cattle can be identified with accurate tests.

Other disease can also have lifelong carrier states, however, because of the characteristics of the disease, or the test, a test and refusal strategy may not be the best management plan. Some examples are provided. Bovine leukosis virus (BLV) is a common virus that infects many beef herds in the U.S. but only occasionally causes illness or death. The test for BLV is accurate, therefore false negative and false positive results are not common. If a producer has tested their herd and it is BLV negative they should test all purchased cattle for BLV and only allow test negative cattle to enter the herd. However, if there are BLV positive cattle in a herd, refusing an animal which tested positive will

not help to reduce the incidence of infected cattle in a herd unless refusal is accompanied with other disease control measures.

Anaplasmosis is caused by a parasite that infects red blood cells. It can be transmitted from infected cattle to susceptible cattle by ticks, horse flies and human activities and some tests will not consistently identify carrier animals. The Anaplasmosis control program that is most appropriated for a herd will depend on the percentage of cattle in a herd that are currently infected and the risk of infection from cattle in neighboring herds. If a herd is in an area where few cattle are infected with the parasite a producer may elect to test all incoming cattle identify positive cattle and then attempt to clear the carrier state in the positive animals. The trouble with this strategy is that some cattle after treatment fail to clear the carrier state. Therefore all cattle found positive and treated need retested and found negative utilizing an accurate test prior to being added into the herd. If a herd is in an area where neighboring herds or the current herd has a high incidence of Anaplasmosis, adding test negative Anaplasmosis cattle will result in a high risk for the additions becoming infected with the parasite and then show signs of serious illness or death. In areas with high Anaplasmosis infection risk, importing only positive animals may be the best strategy.

Johne's disease is caused by an organism that usually infects cattle when they are young, however clinical disease does not appear until the infected cattle are older. The diagnostic tests that are currently available are not highly accurate in the early stages of infection, meaning young infected cattle can test negative. Because additions to a herd are often young animals, a test and refusal strategy does not work well to limit a herd's risk to Johne's disease because a test negative animal may actually be a carrier. If a herd is participating in a Johne's disease control program to limit the risk of Johne's disease, rather than test individual purchased animals, that herd should only add individuals from herds which also participate in a strict Johne's control program.

Protecting a herd from purchased animals that could bring disease agents onto a ranch is an important part of a herd health program. Many diseases have complicated disease patterns with individuals appearing normal while harboring the disease. Producers should work closely with their veterinarian to identify herd health goals, develop strategies that will help meet those goals and monitor the health status for a herd.