

Biosecurity Considerations During Herd Expansion

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Although dairy cow numbers continue to decline across the United States, average herd size is increasing in many areas. Whether cows are purchased to fill a new facility or increase numbers in an existing one, biosecurity measures often do not receive enough consideration. According to a study done at Iowa State University and published in the Journal of Dairy Science (April, 2001), herd health is very often compromised in expansion herds (see table). All 18 herds involved in the study reported that biosecurity suffered as a result of expansion. Half of the herds reported bovine viral diarrhea and papillomatous digital dermatitis (foot warts) as diseases that occurred during expansion.

All too often, cows are purchased without any knowledge of vaccination or disease history in the herd of origin, testing of incoming animals for disease, or quarantine periods. As a result, producers who don't give biosecurity enough consideration often bring more than just new cows into their herd. They frequently introduce diseases that are unwanted and economically detrimental.

To minimize the chances of bringing unwanted diseases into your herd during expansion, consider the following recommendations:

- Make sure incoming animals are well vaccinated for IBR, BVD, PI₃, BRSV, leptospirosis, and clostridial diseases 2-3 weeks prior to arrival on your farm.
- Make sure the home herd's vaccination program is up-to-date for the diseases listed above 2-3 weeks PRIOR to the arrival of new animals.
- Use a bulk tank milk test to screen for lactating cows persistently infected (PI) with BVD in the herd(s) containing cattle that might be purchased. Test individual animals if the bulk tank test comes back positive or if only a few animals are being considered for purchase. I do not recommend purchasing any cattle persistently infected with BVD.
- Run all purchased cattle through a properly formulated foot bath 2-3 times a week for at least 2 weeks prior to purchase in order to decrease the chances of introducing foot warts. Also, run purchased cattle through a foot bath as they arrive at the home farm and repeat for 2-3 days after arrival. Cows with active heel wart lesions should either not be purchased or at least properly treated prior to arrival at the farm of destination.
- If a whole herd or a large percentage of animals from a given herd are to be purchased, use bulk tank milk cultures to identify existing mastitis pathogens. If only a few animals are purchased, consider testing them individually using a composite milk sample (collected from all 4 quarters). In either case, 2-3 sequential cultures, taken 5-8 days apart, will increase the chances of identifying the bugs present within a herd (or cow). If bulk tank tests come back positive for *Mycoplasma* (and possibly *Staph. aureus* also), culture individual cows to determine which are infected. I **strongly** discourage purchasing animals infected with *Mycoplasma* and wouldn't purchase cows infected with *Staph. aureus* unless the home herd has a pre-existing *Staph.* problem.
- Have an ELISA test for Johne's disease performed on blood samples from all cattle that are being considered for purchase. Cattle that test positive should be further evaluated prior to purchase.
- Have a non-biased, knowledgeable, and reliable party (e.g. veterinarian) examine the cattle immediately before departure from the farm of origin.
- Transport purchased animals to the farm of destination as quickly and comfortably as possible. During hot weather, transport cattle at night to reduce heat stress.
- Quarantine purchased animals upon arrival at the farm of destination for at least 10 days, and up to 4 weeks if possible. Quarantine means NO contact between purchased and home-farm animals. If this is not possible, at least segregate purchased animals (in groups containing **only** purchased animals) for the same amount of time in order to minimize contact and the spread of disease between purchased and home-farm cattle.

Do these recommendations increase the time and cost associated with purchasing new cattle? Absolutely!! But, with the current cost of replacement heifers and lactating cows, the added expense could easily be covered if it prevents the introduction of unwanted diseases or decreases the number of cattle that get sick and/or die after a herd expansion. Even if all of the above recommendations can't be followed, the more that are, the greater the chances of a healthy herd expansion.

Prevalence of Disease in Expanding Herds

<u>Disease</u>	<u>% of Herds Affected</u>
Bovine viral diarrhea (BVD)	50
Foot warts	50
Johne's disease	31
Clostridial disease	19
Infectious bovine rhinotracheitis (IBR)	19
Mastitis	19
Salmonella	13
Pneumonia (Shipping Fever)	13