

Attention to herd health vital for

Creating and implementing an effective herd health program is essential to an operation's profitability whether a large ranch or a small acreage. Vaccinations are an important part of such programs. Effective herd health programs begin with vaccinating replacement heifers and cows to protect unborn calves and continues with proper management and vaccination over an animal's life.

Production calendars often look different for each operation. Veterinarians can help producers create a plan which is tailored to their operation and addresses each of these elements.

Your veterinarian can help recommend products and develop vaccination schedules, as well as offer advice that can help improve herd health and ensure proper response to vaccination. As you can see a positive veterinarian-client relationship is important to herd success.

There are several common vaccination strategies. Clostridial and respiratory vaccines are the framework for nearly all vaccination programs. Additional

ensure protection against other disease challenges. Let's take a look at some common vaccines and how they are often implemented in an operation. We'll start with vaccinations given to cows and then discuss those given to calves.

Cows

Cows represent an important component of a complete herd health program. The vaccination program for cows should be structured around:

- Preventing disease in the cow,
- Protecting against diseases that may cause abortion of the unborn calf, and
- Protection of the calf after birth through the colostrum.

Cows typically only need to receive booster vaccinations once a year, often before breeding. Booster vaccinations protect the mother and the calf.

Administer booster vaccinations before the beginning of the breeding season (45 to 60 days prior) or once pregnancy is well-established. For cows, it is common to administer a booster vaccine



small acreage cow-calf operations

that protects against pathogens responsible for bovine respiratory disease complex such as: bovine viral diarrhea type I and II (BVD), infectious bovine rhinotracheitis (IBR), bovine respiratory syncytial virus (BRSV), and parainfluenza 3 (PI3).

The pathogens responsible for IBR and BVD can also cause infections within the reproductive tract of a female, possibly resulting in abortions. Vaccination against reproductive diseases including vibriosis (*Campylobacter fetus*) and leptospirosis are also recommended to prevent loss of pregnancy and abortion. Administering a booster clostridial vaccine may also be recommended. As mentioned previously your veterinarian can help develop a vaccination program and timeline of when to vaccinate the cow herd to provide the best protection.

Calves (2 to 4 months old):

Vaccinations given to calves during the first two to four months of life prime the calf's immune system against future disease challenges associated with weaning and shipping. Maternal antibodies are beginning to wane between two to four months of age. Vaccinating calves between 2 to 4 months of age ensures continued protection against disease. Vaccinations during this time often coincide with branding, reducing the number of times calves are handled.

Calf vaccination programs include administering a 7- or 8-way clostridial vaccine and vaccine against the viruses associated with bovine respiratory disease complex. The respiratory vaccine can be administered by traditional injection or as an intranasal vaccine given directly into the nasal passage. Note that intranasal vaccines do not provide protection against

Recommended Cow Vaccinations

- Respiratory vaccine protecting against IBR, BVD, BRSV, and PI3
- Vibriosis (*Campylobacter fetus*) and leptospirosis vaccine (often included in the respiratory vaccine)
- 7-way clostridial vaccine
- Other vaccines, if necessary, in your area

Recommended Calf Vaccinations (2 to 4 months of age)

- Clostridial 7-way vaccine (or 8-way if needed)
- Injectable respiratory vaccine (provides coverage for BRSV, IBR, PI3, and BVD type I and II) or
- Intranasal respiratory vaccine (provides coverage for BRSV, IBR, and PI3)
- Mannheimia/Pasteurella vaccination (if intranasal vaccine respiratory vaccine was used)

Recommended Calf Vaccinations (pre-weaning/weaning)

- Booster respiratory vaccine (provides coverage for BRSV, IBR, PI3, and BVD type I and II)
- Mannheimia/Pasteurella
- Booster clostridial 7-way vaccine

Recommended Calf Vaccinations (post-weaning 3-4 weeks)

- Booster respiratory vaccine (provides coverage for BRSV, IBR, PI3, and BVD type I and II)
- Booster clostridial vaccine (If not administered at pre-weaning/weaning)
- Potential booster Mannheimia/Pasteurella (may depend on marketing venue/program)

BVD, and an additional BVD injectable vaccination must be used simultaneously or at a different date.

Producers may also consider vaccinating against *Mannheimia haemolytica*, and *Pasteurella multocida*, two common bacteria associated with shipping fever and pneumonia. Although it is important to help prevent pneumonia caused by Mannheimia/Pasteurella, the heavy pathogen load caused by the additional vaccinations can be overwhelming. Consult your veterinarian to determine if additional vaccinations should be given at branding or to wait until weaning.

Calves (weaning)

Weaning is one of the most stressful times for a calf, and proper protection is crucial to maintain good health. Giving a booster vaccination at weaning can help create a stronger immune response, providing added protection for calves. Keep in mind the stress of weaning will increase cortisol levels (stress hormone), vaccinating calves three to four weeks before weaning or delaying vaccinating calves until the day after weaning can allow for decreased cortisol levels and a better immune response to the vaccine. A second booster shot post-weaning for respiratory diseases and Mannheimia/Pasteurella may be required for value-added marketing programs and can provide additional protection.

Replacement Heifers

Heifer calves being retained within a herd as replacements should receive vaccines prior to the first breeding season. Vaccinating replacement heifers can occur simultaneously with cow vaccinations as long as it allows suitable time before breeding and follows label instructions. Replacement heifers receive the same (respiratory, vibrio/lepto, and 7-way clostridial) vaccines the cows receive and should also be administered a brucellosis (bangs) vaccine.

Other considerations

Include bulls in a herd vaccination program as they can transmit diseases to the cow herd during the



breeding season. Breeding soundness exams and trichomoniasis testing bulls each year are valuable components of a herd health program.

Herd health encompasses more than just vaccination; a good nutrition and mineral program, as well as proper herd management, are essential for maintaining a health herd no matter what size.

Proper use and administration of vaccinations is paramount to get the full benefit of protection against disease. This includes using the correct type of vaccine, proper timing, dosage, route of administration, and following label instructions. The Beef Quality Assurance (BQA) program provides guidelines for best practices for animal husbandry and management of cattle, with focus on proper handling and administration of vaccines and antibiotics (learn more at www.bqa.org/beef-quality-assurance-certification).

Veterinarians, extension educators, state extension specialists, and fellow producers are an asset when it comes to developing, modifying, and evaluating your herd health program. Staying in contact with them can help ensure your herd is properly protected against disease and ultimately improve animal performance.

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