



The Veterinary Link

by **BOB LARSON, DVM**, University of Missouri-Columbia

Health programs for beef herds

Veterinarians are vitally important for the healthy and profitable production of beef animals. Besides a veterinarian's value in diagnosing and treating sick cattle, he or she can have great value in preventing disease and ensuring optimum production and reproduction in beef cattle herds.

A complete health plan

In my job as a state Extension veterinarian, I have the opportunity to talk to producers and visit many farms and ranches that are experiencing

health or reproduction problems. The most common similarity among these ranches is that they do not have routine veterinary visits and veterinary involvement in management decisions. Complete health plans should be established between veterinarians and producers to accomplish at least the following goals:

- Establish a biosecurity plan to minimize the introduction of disease-causing germs onto your farm by developing a vaccination

protocol, an isolation plan for new or returning cattle, and a traffic flow and visitor restriction plan to reduce the likelihood of introducing infectious disease.

- Establish a sanitation plan to minimize the spread of disease-causing germs found in manure between animals by means of feed-handling equipment (front-end loaders, feed wagons, etc.), feeding areas and living areas.

(Continued on page 28)

Minimal herd health plan goals:

- ✓ Biosecurity
- ✓ Sanitation
- ✓ Parasite control
- ✓ Performance promotion
- ✓ Minimize calving difficulties
- ✓ Evaluate herd performance
- ✓ Medication



Herd health tips

1. Decrease incidence of calving difficulty (heifers are primary concern).

- Ensure that heifers are developed properly
- Reach 65% of mature weight by start of first breeding season
- Reach 85% of mature weight by calving
- Use bulls with high calving ease direct expected progeny differences (CED EPDs)

2. Calve in a clean environment.

- Do not calve in the same pasture where cows were fed all winter. Move to calving pasture a few days before the start of calving.
- Calving pasture should be large enough to maintain grass cover, have some natural or man-made shelter, and not be in a low or mud-prone area.
- Do not use bale rings in calving pastures. Spread the hay and move the feeding location daily. (Unroll bales if feeding big bales.)

3. Keep calves in a clean pasture with minimum exposure to older calves.

- Move cows that have not calved to a new pasture away from pairs every one to two weeks. This will ensure that calves will not be exposed to calves that are more than two weeks older than themselves.
- An alternative is to calve in a single calving pasture and to have several nursery pastures that pairs can be moved into soon after birth.
- If the cow claims her calf and is lactating, move the pair to a nursery pasture within 24 hours of birth.
- If the cow does not claim her calf or is slow to initiate lactation, move the pair to a nursery pasture as soon as normal maternal behavior occurs — usually within 48 hours of birth.
- Start new nursery pastures every one to two weeks.
- Any calf (and its dam) that becomes sick should be removed from the nursery pasture and taken to a sick-calf area where it can be treated easily and it won't be likely to spread disease to the other calves.
- After the youngest calves are at least 30 days old, the herd can be put back together.

4. Isolate all new cattle away from the herd for at least one month.

- This includes new bulls, replacement heifers, cows and purchased calves. During this time vaccinate all new adults using the same program as the current herd.

5. Institute a sound vaccination program (consult with a local veterinarian for details)

- Give calves, when about 2-3 months of age, a clostridial vaccine (seven-way blackleg).
- Depending on how and when calves near weaning will be marketed, consider an infectious bovine rhinotracheitis (IBR) + bovine viral diarrhea (BVD)

vaccine, a booster of clostridial vaccine, and/or a pasteurella vaccine.

- Consider a brucellosis (Bang's disease) vaccine for heifers that will be replacements.
- For replacement heifers about 12-13 months of age (at least one month prior to the start of breeding season), use modified-live virus (MLV) IBR + BVD vaccine (one or two doses at three-week intervals). Also use a leptospirosis + vibriosis vaccine.
- Vaccine protocols for adult cows depend on the herd situation. Consult with your local veterinarian. But consider using IBR + BVD and leptospirosis + vibriosis at prebreeding time and leptospirosis at preg-check time (fall).
- Vaccinations for bulls also vary from herd to herd. Consult your veterinarian, but consider IBR + BVD and leptospirosis + vibriosis at prebreeding time.
- If vaccine is labeled for subcutaneous (sub-Q) use, give it sub-Q in the neck region. If it must be given in the muscle, give it in the neck muscle. Do not vaccinate into the rear leg of a calf or cow.

6. Use dewormers.

- Dewormer usage is most important in young, growing animals, replacement heifers and stocker cattle.
- Plan deworming based on movement onto new pastures.

7. Control lice.

- The most common times to treat for lice are in the fall (when calves are weaned) and sometimes again in midwinter.
- Use a pour-on, spray or dust bag labeled for lice.

8. Manage herd reproduction to achieve high pregnancy rates.

- At breeding, cows should be in body condition score (BCS) 5 (on a 9-point scale), and heifers should be in a BCS 6.
- Bulls should pass an annual breeding soundness examination (sometimes referred to as a BSE). Bulls should have sound feet and legs and healthy reproductive tract (testicles and penis). They should have fertile sperm.
- Eighty percent of heifers and cows should be cycling prior to the start of the breeding season.
- Use early pregnancy determination (80-120 days after start of breeding season) to determine success of early breeding season.
- Use chin-ball markers on bulls or frequent observation to determine breeding activity throughout the breeding season.

9. Examine all cows about the time calves are weaned.

- Conduct pregnancy palpation if not palpated earlier.
- Check eyes for evidence of cancer eye. Treat or cull.
- Check udder, legs and teeth. If in poor condition, cull the cow.



The Veterinary Link *(from page 27)*

By developing a complete herd-health program with your veterinarian, the costs of disease and production loss can be minimized.

- Establish a parasite control program to effectively and efficiently use dewormers and pasture management for internal parasite control. Use sanitation and fly and lice control products to minimize economic loss due to external parasites.
- Establish a program to optimize the use of performance-promoting products such as growth-promoting implants in growing cattle.
- Establish a program to minimize calving difficulty in first-calf heifers by proper replacement heifer selection, nutrition and sire selection.
- Establish a method to evaluate the herd's performance (records) in the areas of: pregnancy rates, death percentage, growth rates (weaning or other weights) and nutritional needs [use of body condition scores (BCS)].
- Establish proper antibiotics and other drugs to use in the herd as well as proper injection sites, injection routes [subcutaneous (sub-Q), intramuscular (IM), intravenous (IV), etc.], dosages and any withdrawal times to be observed.

Development, management

Two areas that form the foundation of good herd health and production are proper heifer development and proper calving management. Good heifer development is critical to ensure that heifers calve within a selected calving period and with minimum calving difficulty. Calving difficulty directly causes a significant amount of calf death loss and also contributes to calves that later die from scours, navel ill or pneumonia because they did not stand up and begin nursing soon after birth. Herds with heifer development problems may exhibit low heifer pregnancy percentages, excessive calving difficulty and/or low pregnancy percentages to the second breeding season. Heifer development problems usually are due to inadequate nutrition (at any time from weaning to becoming pregnant for the second calf), breeding to bulls that have poor calving ease characteristics or not successfully getting heifers bred in a short breeding season.

Another important factor that affects calf sickness and death loss is the amount of exposure to disease-causing germs. Any procedure that concentrates large numbers of cattle in a small area increases environmental contamination and, consequently, increases the potential for outbreaks of calf disease. Systems in which calving cows are dispersed in large calving pastures are generally considered superior. The most common reason that producers confine heifers or cows into a small area for calving is the perceived need to assist cows that have calving difficulty, but proper heifer development will reduce that need. Even in large pastures, cows will tend to congregate around feed and water

(Continued on page 30)

The Veterinary Link *(from page 28)*

sources, and these areas may become heavily contaminated.

If supplemental hay and grain are fed, they should be provided at locations that are separate and distant from water sources. This practice will encourage cow dispersal and minimize contamination and mud in one area of the pasture. If

bales are used, they should be spread over the calving pasture, and the feeding location should be changed daily. In areas of the country with minimal snowfall, winter pasture can be stockpiled. Use of grazing rather than hay feeding encourages cow dispersal and minimizes contamination. If the herd

forage plan includes feeding hay, consider feeding hay in early to mid-gestation and saving stockpiled pasture for the actual calving season.

Move your cattle

The risk and severity of disease will typically increase as the calving season

progresses. This is common in beef herds because of the effect of the calf as a germ amplifier. Calves that are exposed to low numbers of disease-causing germs early in the calving season will typically have mild or no disease. Calves born later in the calving season are exposed to escalating numbers of disease-causing germs from the other calves and tend to have more severe disease risk.

To reduce this amplifying effect, it is necessary to have a plan for cattle movement throughout the calving season, which requires several pastures. To ensure that beef calves are born in a sanitary environment, the herd should not be fed throughout the winter in the same pasture or area in which calves will be born.

The pregnant cow herd should be moved to the calving pasture one to two weeks prior to the start of calving. Every one to two weeks, all the pregnant cows should be moved to new pastures, with the cow-calf pairs left in the pasture where the calf was born. By starting new calving pastures every one to two weeks, no calf is exposed to any calf more than two weeks older than itself — effectively eliminating the buildup of disease-causing germs within a calf group.

Alternately, a cow or heifer and her calf can be moved from a single calving pasture to a nursery pasture within 24 hours of calving. Cow-calf pairs should be added to a single nursery pasture for one to two weeks. Thereafter, the rancher should begin adding pairs to a second pasture.

If enough pastures do not exist or cannot be created with two-strand electric fence, fewer nursery pastures can be used, but the difference in age between the oldest and youngest calf in a nursery pasture should never exceed 30 days, and smaller differences are preferable.

Calves that develop diarrhea should be moved immediately to an area away from healthy calves, treated and not returned until all the calves in the group are at low risk for developing diarrhea (for instance, at more than 30 days of age or at time of summer turnout).

The actual program implemented on each individual ranch will be similar, but will have differences based on particular circumstances. By developing a complete herd-health program with your veterinarian, the costs of disease and production loss can be minimized.