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NebGuide

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Cow-Calf Herd Health Program

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This NebGuide discusses essentials of health management in beef cow operations.

Establishing a good cow-calf herd health program is a necessary step in the right direction if a profit is to be realized.

The objective of any beef herd health program should be for 100 percent of the cows to produce a calf weighing enough to provide a reasonable return. This goal can be partially accomplished by using a 45- to 60-day breeding season for cows and 30 to 45 days for replacement heifers. Then pregnancy test early (90 days later) and cull all open females. This procedure, in the long run, will tend to eliminate cows or heifers of low fertility whether it is due to genetic or other reproductive problems.

Ideally, cattle producers would like a uniform cow-calf herd health program that could be used in any beef herd. However, management practices and local disease problems vary so widely that it is impossible to make blanket recommendations. Proper nutrition for any type of livestock is an absolute necessity; a health program will fail if the nutritional status on a herd basis is deficient.

The following disease control and management procedures should be considered in a Nebraska cow-calf herd health program. Most herds will not need all of these procedures, but they are mentioned so that beef producers will be aware of them. Specific recommendations should come from your local veterinarian as he has the most complete information on disease problems in the area, and knows the circumstances on your particular farm or ranch.

The following procedures should be considered for replacement heifers and the cow herd.

Replacement Heifer Selection

Select replacement heifers that weigh the recommended weight for the breed by 15 months of age. This size should not be the result of feeding alone, but also a result of genetic influence.

Replacement heifers selected for feminine appearance and desirable characteristics of the type are most likely to produce the greatest profit, however records of performance by the heifer's mother can also provide valuable information.

Vaccinations for Replacement Heifers

- *Baby calves - Clostridium vaccines (Blackleg et al.)*
- *Age 4 to 12 months - Brucellosis*
- *Thirty to 60 days before breeding.*
  - a) Vibriosis and trichomoniasis - if applicable.
  - b) Leptospirosis (use serotypes found in your area).
  - c) IBR (Red Nose).
  - d) BVD as advised by a competent veterinarian regarding killed or MLV type of vaccine.
  - e) Pregnancy check and pelvic measurement if applicable.
- *Six weeks and 3 weeks before calving*-calf diarrhea (scour) vaccines.
  - a) Enterotoxemia toxoid (types C & D).
  - b) *Escherichia coli* (*E. coli*) scour vaccine.
  - c) Rota-Corona viral scour vaccine.

Cow Vaccinations and Injections

- *Initial immunizations* - consult with your veterinarian.
  - a) Generally *30 days before breeding* (for convenience, however, some vaccines can be given to pregnant cows at weaning or pregnancy testing time).
    - 1) Vibriosis and trichomoniasis - if applicable.
    - 2) Leptospirosis.
    - 3) *Escherichia coli* (*E. coli*) scour vaccine (one injection 6 weeks before and another 3 weeks before calving; one annual booster thereafter).
    - 4) Rota-corona viral vaccine (6 and 3 weeks before calving; one annual booster thereafter).
    - 5) Enterotoxemia toxoid types C & D (6 and 3 weeks before calving; one annual booster thereafter).

- *Annual booster*
  a) 3 to 6 weeks before calving is ideal, but many give boosters when spring calving cows are gathered in the fall for pregnancy check.
     1) Clostridium/Enterotoxemia toxoid (types C & D).
     2) *Escherichia coli* (*E. coli*) vaccine.
     3) Rota-corona viral vaccine.
- *Injectable Vitamin A, D & E, if deficiency is likely.*

Spring Calving Cow Program at Weaning Time (October)

- Pregnancy examination (an option is to administer Vibrio and Leptospira vaccine boosters now).
- Pour-on insecticide for grub control and lice reduction (may have to be repeated in January or February for lice control).
- Check for eye cancer.
- Check age and condition of teeth for culling decisions.
- Check for and correct other health problems, i.e. bad horns, foot condition, lumps or abcesses.
- Cull cows with poor udders that are poor milkers.
- Observe body condition, cull or correct cause of problem.
- Check records of cow performance for better decision making.

Parasite Control

Internal Parasites

The economic benefits of deworming most adult beef cows in Nebraska are questionable. Have the practicing veterinarian examine randomly collected fecal samples for worm eggs before making a decision to treat for worms. The minimal number of worm eggs for which treatment is recommended will vary with the species of worm present. Many dewormers are available, including an injectable.

External Parasites

Horn flies — Use oral larvicides, dust bags, oilers or ear tags that contain an insecticide.

Face flies — Nothing is very successful. Forced use of dust bags will help; ear tags containing insecticide may be helpful, although duration of effectiveness is limited.

Lice — Use dipping vats, sprays, pour-ons or injectable control.

Grub — Use pour-ons, sprays or injectable control.

Bulls and Artificial Insemination

Since half of the genetic makeup of the offspring is provided by the bull, it is recommended that bulls or semen for artificial insemination be selected with genetic characteristics that will permit siring calves that are of higher quality than the cow herd. Progeny testing information is very valuable. Use of EPDs (Expected Progeny Differences) helps when making bull selections.

Breeding soundness is very important in herds of all sizes, whether one or many bulls are being used. Approximately 15 percent of all bulls are sub-fertile or sterile. Breeding soundness examination by a veterinarian a month or two prior to breeding time is an important management procedure. This requires a complete physical and semen evaluation. Additionally, observation of the bull during service to detect anatomical defects is a good practice.

a) In warm weather, the testicles should hang freely with a narrow neck in the part of the scrotum next to the body. The testicles should not be held tightly against the body.
b) The testicles should be of equal size and feel firm to the touch, not soft and mushy.
c) The circumference of both testicles at the greatest diameter will vary as to breed and maturity. Approximate diameter should be:
   - *Yearling bulls* (12-14 months) - about 12 to 13.5 inches (30-34 cm).
   - *Mature bulls* - about 14 to 15 inches (34-39 cm).
d) Bull capacity under different breeding systems is shown in the following table.

Number of Cows to be Served		
Age of bull	*Pasture Breeding*	*Pen Breeding*
15 months	15-20	20-25
24 months	20-25	25-35
mature	25-35	35-50

If very high numbers of females are cycling during the first 21 days, less cows per bull may be advisable.

Artificial insemination (AI) and heat synchronization are also valuable programs in beef operations. They must be orderly, sanitary, properly timed and correctly executed to be successful. The body condition of cows/heifers must be good and in a general gaining state. Based on 1-9 scoring, 9 being too fat, the body condition score should be 5-7. AI is a valuable management tool if correct procedures are followed.

Calf Program

- *Birth*
  a) Navel - apply 2-3 percent tincture of iodine.
  b) Feed colostrum - the sooner the better! The first hour after birth is optimum. Make sure the calf nurses, or administer 1 1/2 to 2 quarts of colostrum in a nipple bottle or with an esophageal feeder, if necessary. Some commercially prepared colostrum products are also available and may be helpful.
  c) If viral scours is a problem in calves born to cows that were not previously vaccinated with rota-corona vaccine, the oral form of this vaccine can be given to the calf immediately after birth. (Accurate diagnosis is important for determining prevention and treatment procedures. Veterinary consultation is necessary.)
  d) Clostridium C & D antitoxin and Oral *E-coli K99* antibody is also available to help prevent baby calf diseases.

e) Vitamin ADE and Selenium injection (in deficient herds/areas).
f) Ear tag calf to identify, corresponding to cow's identification (ear tag).
g) Keep and use records of cow-calf pairs and their disease problems.
h) Castrate very young calves - use clean hands and equipment that has been disinfected.
i) Use dehorning paste or good electric dehorners to prevent horn growth on young calves.

- *Before going on pasture or about 6-8 weeks old.*

a) Brand (not required in all areas).
b) Castrate (if not done at birth).
c) Give 7-way blackleg, pinkeye and possibly nasal IBR-PI3 vaccine as recommended by your local veterinarian.
d) Growth promoting implants: Use only on steers and non-replacement heifers; do not implant replacement heifers.
e) Fly repellent ear tags should be considered.

- *Calfhood vaccination for brucellosis.*

a) Have your veterinarian vaccinate heifers, preferably at 4 to 6 months but before 12 months, using reduced dosage Brucella vaccine. Vaccinating before weaning is acceptable.

- *Steer and heifer vaccination, parasite control and surgery, as weaning time approaches.*

a) If worked a few weeks before weaning—options:

1) BVD - killed vaccine, first injection.
2) 7-way Clostridial-Hemophilus somnus bacterin, first injection.
3) IBR (nasal type), or IBR, PI3, Lepto combination.
4) Pasteurella vaccine should be considered for respiratory disease prevention.
5) Consult veterinarian about BRSV vaccination.
6) Consider use of injectable parasite and grub control. Consult your veterinarian for proper timing.
7) Castrate and dehorn stragglers that were missed earlier.

b) Procedures at weaning, if vaccinated a few weeks previously:

1) Administer second injection for any vaccine that requires a booster relative to procedures performed a few weeks earlier.
2) If not already done, implant steers and heifers with growth promoting implants. Do not use growth promoting implants for heifers that have the potential of being retained in the breeding herd.
3) Consider use of injectable parasite and grub control (consult your veterinarian).

c) Officially vaccinate all replacement heifers (as provided below for brucellosis) if not already done.

1) An officially calfhood vaccinated heifer should have commercially prepared reduced dosage vaccine administered by a licensed veterinarian between 4 and 12 months of age. The calf must be identified officially in compliance with state and federal regulations.

Facilities

Adequate restraining facilities, watering devices, sorting pens, hospital pen, shelter belts, etc., are essential to the success of a herd health program in any livestock production operation.

Summary

A cow-calf herd health program will help to improve the profitability of any beef breeding enterprise. The primary objectives of this program are to increase the weight and average number of calves weaned per cow on a long range basis.

A herd health program should be established that has a reasonable chance of being followed. Arrange the timing of vaccinations so they can be given while the cattle are being handled for other reasons, such as at pregnancy testing time, and at a time when disease protection is most needed.

Many of the health procedures are listed for consideration only. Recommendations for specific practices for each herd should come from your local veterinarian.

Develop a good working relationship with a local veterinarian as their training and experience make them the best qualified to advise on herd health programs.

Good management will help health programs work better! It is important to properly handle and administer vaccines, provide a clean dry comfortable environment and avoid overcrowding the animals.

The producer is the key; without his/her leadership and willingness to adapt and overcome deficiencies, no program can be effective.

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