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### G75-232 Cow-Calf Herd Health Program Basics

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## Cow-Calf Herd Health Program Basics

This NebGuide suggests ideas and discusses some basic essentials of health management in beef cow operations.

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Establishing a good cow-calf herd health program is a necessary step if profit is to be realized. Managing disease risk is an important aspect of a good health program design. Vaccinations help reduce the probability of disease but cannot solely be depended upon for prevention. Well-designed herd health programs address multiple areas of management in order to reduce likelihood of disease outbreaks. The objective of any beef herd health program should be to profitably produce calves having optimum weaning weights from a high percentage of cows in the herd. Active involvement with your veterinarian will ensure sound health program development year-round.

Ideally, cattle producers would like a uniform cow-calf herd health program that could be used in any beef herd. 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 herd nutritional status is deficient.

Attention to reproductive management is critical for successful calf production. Breeding seasons limited to 45 to 60 days for cows and 30 to 45 days for replacement heifers are recommendations that many producers have adopted. Pregnancy tests done early in gestation and culling of open females should be routine. These procedures will tend to eliminate cows or heifers of low fertility whether due to genetic or other reproductive problems.

Select replacement heifers that weigh the recommended weight for the breed by 15 months of age. Data indicate this should be about 65 percent of mature weight. This size should not be the result of feeding

alone, but also a result of genetic influence. Replacement heifers selected for feminine appearance and other desirable characteristics are most likely to produce the greatest profit; however, performance records of the heifer's mother can also provide valuable information.

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. Your local veterinarian can make specific recommendations. He or she has the most complete information on disease problems in the area and knows the circumstances on your particular farm or ranch. Individualized approaches to disease risk and management are more effective.

Choice of vaccine depends on herd disease history, management factors, the veterinarian's experience and success rates in a specific area. Vaccination programs should be designed with targeted goals and objectives in mind. These include observation of known principles about vaccination and development of immunity. Label directions for vaccine use should be followed to obtain desired results. Plan your herd vaccination program with your veterinarian. The following procedures should be considered in developing your herd health program. Very few herds will require all possible vaccinations listed.

### **Vaccinations for Replacement Heifers**

Replacement heifer vaccinations may be the most important injections administered for disease prevention in the cow herd. Introducing immune animals into the herd lessens the risk of disease spread. These replacement heifers should receive vaccinations as young calves and also near weaning time similar to other calves in the herd. Vaccinations applying specifically to replacement heifers might be:

- Brucellosis — 4 to 12 months of age (recommendations for this vaccination may change due to advent of Nebraska Brucellosis-free status).
- BVD (Bovine Viral Diarrhea) virus
- Coronavirus scour vaccine
- Enterotoxemia (*Clostridium perfringens* types C and D)
- *Escherichia coli* (*E. coli*) scour vaccine
- IBR (Rednose, Infectious Bovine Rhinotracheitis)
- Leptospirosis (5 strains) bacterin
- Rotavirus scour vaccine
- Trichomoniasis
- Vibriosis (*Campylobacteriosis*)

### **Cow Vaccinations, Injections and Health Related Procedures**

#### **Vaccinations/Injections**

- BVD (Bovine Viral Diarrhea) virus
- Coronavirus scour vaccine
- Enterotoxemia (*Clostridium perfringens* types C and D)
- *Escherichia coli* (*E. coli*) scour vaccine
- IBR (Rednose, Infectious Bovine Rhinotracheitis)
- Leptospirosis
- Rotavirus scour vaccine
- Trichomoniasis
- Vibriosis (*Campylobacteriosis*)

- Vitamin AD

## Procedures

- Pregnancy examination.
- Pour-on insecticide for grub control and lice reduction.
- 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 abscesses.
- Cull cows with poor udders or cows that are poor milkers.
- Body condition score cows and make plans to handle cows in poor body condition. (Use the body condition scoring system of 1-9. Consult other information to learn this system.)
- Check records of cow performance for better decision making.
- Deworming.

## Bulls and Artificial Insemination

Since half 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. Progeny testing information is very valuable. Using EPDs (Expected Progeny Differences) help 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 subfertile or sterile. Breeding soundness examination by a veterinarian one or two months prior to breeding time is an important management procedure. This involves a complete physical and semen evaluation of the bull. Additionally, observing the bull during service is important to detect anatomical defects and to be aware of cow cycling activity, insuring cows are being served properly.

Bull capacity under different breeding systems is shown in *Table I*. Recent data suggest cow:bull ratios may be increased above these suggestions in many cases.

**Table I. Bull capacity under pastures and pen breeding systems.**

<i>Number of Cows to be Served</i>		
<i>Age of bull</i>	<i>Pasture Breeding</i>	<i>Pen Breeding</i>
15 months	15-20	20-25
24 months	20-25	25-35
Mature	25-35	35-50

Artificial insemination (AI) and heat synchronization are valuable programs in beef operations. They must be well planned, properly timed and correctly executed to be successful. The body condition of cows/heifers must be adequate, and in general in a weight gaining state. Generally, body condition scores from cows should be at least 5 and heifers should be at least 5.5 to be in good breeding condition. Further information and literature is available on body condition scoring and should be used if one so desires.

The following vaccinations might be considered:

- BVD (Bovine Viral Diarrhea) virus
- IBR (Rednose, Infectious Bovine Rhinotracheitis)
- Leptospirosis (5 strains)
- Trichomoniasis
- Vibriosis (Campylobacteriosis)

# Calf Health Management, Procedures and Vaccinations

## Birth

- Navel — apply 2-3 percent tincture of iodine.
- 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. Quality colostrum is superior to commercially available products.
- If viral scours is a potential 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.
- Clostridium C and D antitoxin, *E. coli* K99 antibody and coronavirus antibody are also available to help prevent baby calf diseases where indicated.
- Vitamins A and D and selenium/vitamin E injection (in deficient herds/areas).
- Ear tag calf to identify, corresponding to cow's identification (ear tag).
- Keep and use records of cow-calf pairs and their health history.
- Castrate very young calves — use clean hands and equipment that has been disinfected.
- Use dehorning paste or good electric dehorner to prevent horn growth on young calves.

## Before going to pasture

- Brand (not required in all areas)
- Castrate and dehorn (if not done at birth)
- Give 7-way Clostridial vaccine (Blackleg)
- Pinkeye vaccine
- Intranasal IBR-PI3 vaccine
- Viral vaccines as recommended

## Preweaning

- BRSV (Bovine Respiratory Syncytial Virus)
- BVD (Bovine Viral Diarrhea)
- Castrate and dehorn stragglers that were missed earlier
- Hemophilus somnus bacterin — first injection
- IBR intranasal
- IBR (Rednose, Infectious Bovine Rhinotracheitis)
- Implant with growth promoting implants
- Pasteurella vaccine
- Parasite control — internal and external
- PI3 (Parainfluenza 3)
- 7-way Clostridial

## Weaning

- Administer second injection for any vaccine that requires a booster relative to procedures performed a few weeks earlier.
- If not already done, implant steers and heifers with growth promoting implants as recommended.
- Pay attention to bunk and water tank training.
- Observe calves several times per day for health problems.

- Plan and feed a balanced ration that fits with production goals.
- Implement vaccination program if not done preweaning (see preweaning suggestions above).

## Summary

A cow-calf herd health program will help 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-term 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; his/her training and experience makes him/her the best qualified to advise on herd health programs. Ongoing contact with your veterinary practitioner allows development of long-range health programs as well as achievement of goals related to health and production.

Good management will help health programs work better! It is important to properly handle vaccines, paying attention also to label directions about timing and administration. Providing a clean, dry, comfortable environment and, avoiding overcrowding the animals, are also key factors.

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

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