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G86-799 Health Management and Recommended Vaccinations for Dairy Replacements

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Rice, Duane and White, R. Gene, "G86-799 Health Management and Recommended Vaccinations for Dairy Replacements" (1986). *Historical Materials from University of Nebraska-Lincoln Extension*. 194.

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Health Management and Recommended Vaccinations for Dairy Replacements

This NebGuide discusses the importance of having a good vaccination schedule, and provides recommendations on which vaccinations to give, depending on variables.

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Correct management decisions are necessary to realize maximum returns on investments in any dairy operation. Dairymen sometimes assume there is a quick remedy for health problems, but the prevention of disease is by far less expensive. Preventing health problems in the dairy herd goes much further than using a veterinarian to treat individual animals with emergency problems.

A veterinarian with experience and a genuine interest in dairy cattle is essential to assist the dairyman with herd health problems. He should be involved with total management and help to establish realistic herd goals.

The value of herd health is generally recognized, but unfortunately many dairymen have not implemented a total health program. Economic pressures mandate adopting a program that incorporates minimum standards of management practices. These standards should involve the entire scope of livestock handling from birth to culling time. A healthy animal is necessary for maximum productive efficiency.

Investments in disease control procedures are many, and include buildings and equipment that are frequently equal to or better for preventing disease and maintaining health than some of the vaccines or medications that are used. For example, calf disease control efforts are better when the environment is controlled for calf cleanliness and comfort. Mismanaged environmental factors and/or feeding techniques can cancel the advantages of otherwise apparently healthy animals.

To reap benefits from improved animal health, the factors that hinder the development of quality replacement heifers must be identified and eliminated. Among the factors to be evaluated are genetic base, environment, how the heifer is reared, feeding, and vaccination programs. Information on the genetics and environmental influence is addressed in other Extension publications. This NebGuide is intended to assist in improving herd health decisions related to vaccinations that help prevent disease.

Vaccination

Vaccination is one part of an effective health program as it helps to prevent disease and, in most cases, is more cost-effective than treating sick animals. There are certain diseases that occur so often, such as IBR (rednose) or blackleg, that routine vaccination is absolutely necessary. There are others that may not warrant the expense of vaccination because the disease incidence in that herd and area may be very low. Maintaining a closed herd is highly recommended as additions can frequently introduce diseases.

It should be recognized that no vaccine is perfect and all animals may not be capable of building immunity from vaccination, thus vaccine failures can occur. For more information, see NebGuide G86-797, *"Causes of Vaccination-Immunization Failures in Livestock."*

The mere act of administering a vaccine is called *vaccination*, while *immunization* occurs only if the animal responds favorably to the vaccine and thus becomes immunized with a protective antibody level against the specific disease. A veterinarian who is familiar with the herd and the diseases in the area is the best counsel in making decisions concerning the use of vaccines.

The vaccines that are readily available and frequently needed in a dairy herd are listed below.

Vaccinations To Reduce Diseases in Dairy Replacement Heifers

- A. Vaccine and/or recommendation options for dairy calves.
 - I. At birth—options.
 - a. Oral virus scour vaccine the first hour of life to aid in preventing rota-corona virus scours (CalfGuard®, Norden). Discuss with your veterinarian.
 - b. Type C antitoxin or toxoid, as an aid in preventing clostridial enterotoxemia. Discuss with your veterinarian.
 - c. Monoclonal antibody (not a vaccine) given orally to the calf within the first twelve hours following birth to aid in preventing *E. coli* scours (Genecol 99®).
 - II. At 2 to 3 weeks.
 - a. Intranasal IBR-PI3 vaccine to aid in preventing infectious bovine rhinotracheitis; can possibly be given earlier if your veterinarian concurs.
 - b. Four-way or seven-way blackleg to aid in preventing blackleg and other clostridial diseases.
 - c. *Haemophilus somnus* vaccine to aid in preventing diseases caused by *H. somnus*—first shot; discuss with your veterinarian.
 - d. Leptospirosis vaccine, optional—check with your veterinarian.
 - e. Pasteurella vaccines, optional check with your veterinarian.
- B. Vaccine options for heifers two months old until the time they calve.
 - I. At 2 to 6 months.
 - a. Brucellosis for heifers—this is important.
 - b. *Haemophilus somnus*—second shot, if your veterinarian has already recommended the first shot.
 - c. Leptospirosis—at this time if not given previously; repeat yearly.

- II. At 8 to 14 months.
 - a. Boosters for IBR (rednose) and four-way blackleg are recommended.
 - b. Vibriosis vaccine if natural breeding is to be used.
 - c. BVD—this vaccine is optional and is recommended *only* after discussing it thoroughly with your local veterinarian. If BVD vaccine must be used, consider using the "killed" vaccine and vaccinate every year.
- C. Vaccines that can be administered to the heifer or cow before calving to protect the calf through protective antibody levels in colostrum.
 - I. Combination rota-corona virus *E. coli* scour vaccine (ScourGuard3®, Norden), two shots, six and three weeks before calving.
 - II. *E. Coli* vaccine—two shots, six and three weeks before calving (Vicogen® , Coligen® , Colibac®).
 - III. Enterotoxemia Type C Toxoid—two shots, six and three weeks before calving.
 - IV. Possibly killed BVD at this time. Never administer MLV-BVD (modified live virus-bovine virus diarrhea vaccine) to a pregnant cow. Check with your veterinarian about this vaccine.

SUMMARY

The use of vaccines is variable, using them without some specific knowledge of disease patterns and immunology makes their selection difficult. Thus, your veterinarian's knowledge in nearly all instances plays an important part of vaccination, treatment, and other animal health decisions.

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File G799 under ANIMAL DISEASES

A-21, Cattle

Issued May 1986; 12,000 printed.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Elbert C. Dickey, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.

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