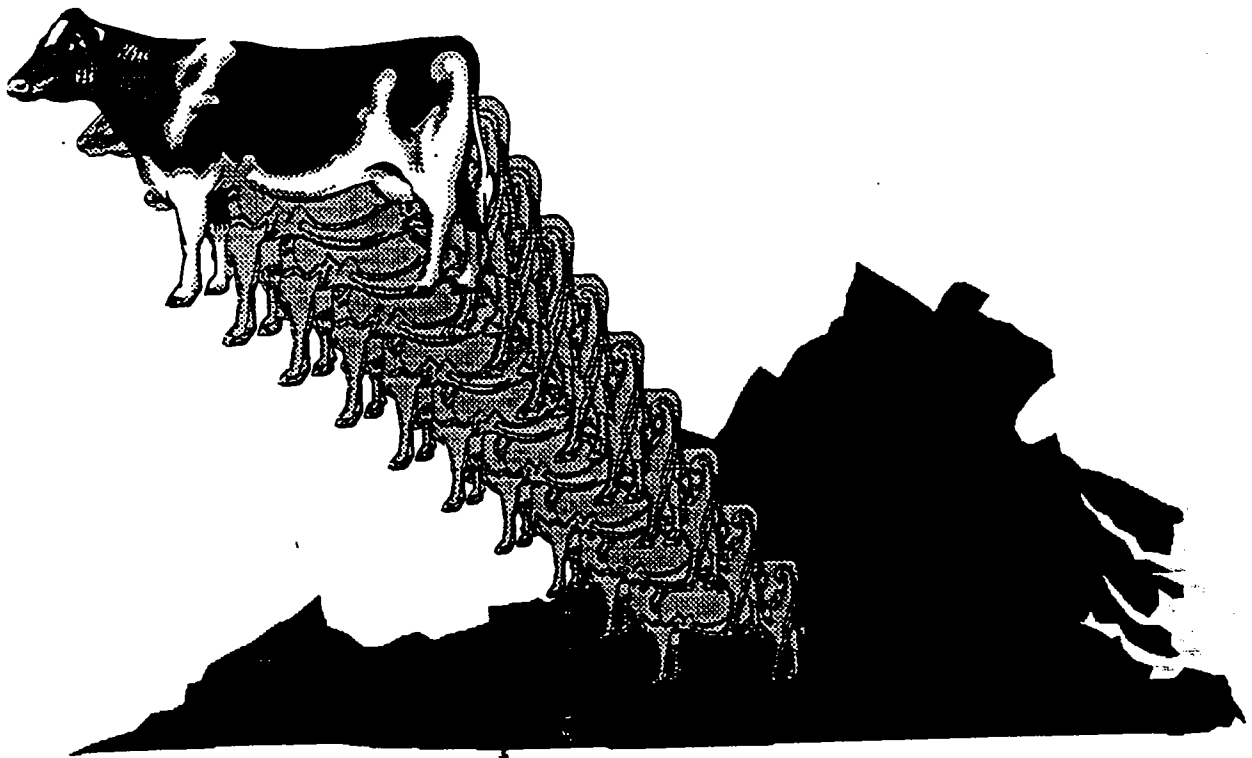


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# Recommendations for the Care and Well-Being of Dairy Cattle

## **STATEMENT OF PRINCIPAL AND INTENT FOR THE DAIRY INDUSTRY OF VIRGINIA**

As producers in Virginia, we believe in and are committed to animal well-being. Humans and animals have had thousands of years of mutual interdependence. Man's stewardship has resulted in a mutually beneficial interaction which has led to a meaningful relationship to sustain life. The Virginia Dairy Industry is committed to maintaining the human-cattle interaction and is cognizant that in doing so, well treated animals will provide for economic return to individual producers and enhance the aesthetic values of the relationship.

Proper animal care has evolved from research and years of practical experience. Researchers continue to investigate and enhance animal care methods. The welfare of dairy cattle can be satisfactorily maintained under a variety of management systems. Regardless of herd-size, adequate human resources need to be provided to ensure an adequate level of care. Everyone involved with the management of dairy cattle should be familiar with their normal behaviors. Animals in distress should receive appropriate care to ensure their well-being.

These recommendations have been prepared to identify areas where the welfare of dairy cattle could be at risk. These recommendations are voluntary and are intended to be used by the industry, scientists and other individuals as a tool to promote sound husbandry and welfare practices.

The basic requirements for safeguarding the welfare of dairy cattle include the provisions of shelter, feed and water, freedom of movement, company of other animals, prevention of injury, parasitic infestation and disease, and rapid diagnosis and treatment when indicated.

### **Animal Environment**

Sound animal care depends on a well planned and properly maintained facility. Agricultural animal operations generally require space for:

- animals (fenced, penned, or enclosed areas with waterers and feeders);
- water supply (animal, sanitation, fire, and emergency);
- feed storage between deliveries;
- electrical service (including emergency generator);
- bedding storage;
- waste storage (excreta and contaminated drainage water);
- animal shelter (from excessive solar radiation, wind, rain, and snow);
- storage of equipment to handle feed and waste;

- storage of small tools and repair of equipment;
- storage of toxic materials and hazardous substances;
- veterinary examination, treatment, and supplies storage;
- semen storage and artificial insemination;
- handling, sorting, loading, and unloading animals;
- maternity care; and
- young animals.

The selection of and specifications for functional and economic building materials should consider those conditions of use common to various parts of the facility, including:

- animal impacts and behavior that may lead to structural damage;
- animal traction and safety;
- contact time with wet and corrosive animal wastes, acidic silage, or cleaning solutions;
- moisture and fire resistance;
- personnel protection and safety;
- light reflectance;
- surface cleanability and sanitation;
- absence of "stray voltage;"
- vermin, rodent, and pest control;
- waste handling; and
- sanitary requirements for food products.

## **Housing**

At all stages of life, cattle should be housed under conditions conducive to health, growth, and good performance. Advice on aspects of animal welfare should be sought when new buildings are to be constructed or existing ones modified.

Buildings that permanently house cattle should be designed and equipped to maintain an adequate internal environment under normal weather fluctuations in a given locality. Passages, pens, and stalls should be constructed so that animals can enter them and can move about freely without physical obstruction.

Stalls, tethers, and pens should be in good repair, allow for sufficient freedom of movement, minimize the probability of injury, and allow animals to be kept reasonable clean. A dry lying area should be available.

Illumination of barn interiors should permit easy visual inspection of all animals at any time.

Provisions should be made for sick or injured animals. They should be segregated from the main group when feasible, observed thoroughly at least once daily, and provided with veterinary care as appropriate. Dead animal disposal should be promptly accomplished by a commercial rendering service or by other appropriate means.

The space allowance for cattle housed individually or in groups should be designed to the whole environment, to the size of the individual/group, and to the age, sex, weight, and behavioral needs of the stock.

Cattle in open lots or on pasture should have access to wind breaks or natural or artificial shelters if needed to protect them from harsh weather conditions.

When cattle are housed, ventilation systems should be capable of maintaining an adequate microclimate under normal local weather conditions, keeping the barn dry, removing stale air and strong odors, bringing in fresh air without drafts, and removing excess heat and moisture.

### **Emergencies and Safety**

All staff should be familiar with all appropriate emergency procedures. A plan to evacuate cattle in an emergency (for example in the event of fire, flood, or chemical spill) should be developed and reviewed regularly. The plan should include consideration of emergency housing, transportation, and personnel.

### **Waste Management and Manure Handling**

A waste management system is necessary for any animal facility. The goals of the system should be to:

- maintain acceptable levels of animal health and production through clean facilities;
- prevent pollution of water, soil and air;
- minimize generation of odors and dust; and
- minimize vermin and parasites.

Lying areas and alleyways should be designed and maintained to avoid heavy soiling of the animals, particularly the udders of dairy cows.

## **Feed and Water**

All cattle should receive feed and water on a daily basis. Except when required for medical purposes, feed interruptions for longer than 24 h should be avoided.

Cattle should have access to fresh clean water.

Producers should be familiar with the basic nutritional requirements of their livestock, outlined in the U.S. National Research Council standard, *Nutrient Requirements of Dairy Cattle*, published by the National Academy Press, Washington, D.C.

All cattle should receive a daily diet that is adequate for maintaining full health and vigor. The composition of diets should reflect production level, reproductive stage, body size, housing, and weather conditions. All feed components used in the ration should be of good quality and reasonably free of spoilage.

When cattle are fed in groups, enough manger or trough space, or feeding points, should be available to avoid undue competition for feed, particularly if feed is not available ad libitum.

Cattle permanently on pasture should have access to enough good-quality feed and water to meet recommended nutritional needs. If, for whatever reason, the pasture is inadequate, additional feed supply must be provided in a timely basis.

## **Feeding of calves**

Every calf should receive at least 5% of its body weight of colostrum as soon as possible after birth. Each calf should consume 8-10% of its body weight in colostrum over at least two meals during the first 24 hours after birth.

A calf should not be removed from the farm of birth for a least 3 days, unless it is to be suckled by another newly calved cow. A calf that has a wet navel and cannot walk well should not be subjected to the marketing system. A calf showing any signs of ill health should not be moved except for treatment.

The feeding diet for calves should include all known nutritional components necessary for normal growth and health according to physiological requirement and age.

To prevent digestive problems, calves should be old enough to adjust to pasture feeding before being placed in pasture.

## **Pastures**

Application of fertilizer and chemical control of weeds and parasites in pastures must be timed to prevent any health risk to grazing animals.

## **Health Care of the Herd**

The manager of a dairy operation should develop, in consultation with a veterinarian, sound preventive health and treatment programs, appropriate for the type of facilities and management system used.

The manager of a dairy facility should maintain a health record, including treatment and medication used for every animal. Medication must be administered by competent personnel. Medication should not be used to replace good husbandry practices.

Sick or injured animals should be treated as soon as possible or disposed of humanely. Cattle with untreatable conditions and ones that do not respond to treatment should be marketed or humanely disposed of as soon as possible. Requirements for withdrawal of medication before milking or before animals are marketed for human consumption must be strictly adhered to.

## **Surgical procedures**

Surgery, such as castration, removal of extra teats, cauterization, or dehorning, should be conducted only by competent personnel using proper equipment. Such surgery should be performed as early as possible in the development of the animal to ensure a short recovery time. Persons conducting surgery should take precautions to avoid causing unnecessary pain.

## **Herd Management**

All cattle should be visually inspected routinely. Barns and lots should be cleaned regularly. Permanent cattle identification should be done with care to avoid distress.

All personnel working with cattle should understand and accept their responsibilities to prevent avoidable suffering to animals. They should be able to recognize behavioral symptoms that indicate discomfort or disease and should know when to consult a veterinarian.

## **Handling of cattle**

Cattle should be handled quietly but firmly at all times and with care to avoid unnecessary injury, pain, and distress.

Equipment for handling and restraint should be effective without causing unnecessary stress or pain to the animals and should be designed for maximum safety of the handler.

To reduce the likelihood of calving difficulties among heifers, the general development of heifers should be considered in deciding the timing of first insemination and sires should be carefully selected, taking into account breed, size, age, and previous record. Cows and heifers should be managed so that they are in suitable body condition at the time of calving.

## **Veal Calf Husbandry**

Special-fed veal calves usually are Holstein bull calves that are fed a milk formula diet and grown to approximately 16 wk of age with finished weight of 160 to 180 kg (350 to 400 lb). Veal calves should be handled with care, gentleness, and patience. Stress on calves usually results in suboptimal physiological functions or adverse behavioral reactions and should be minimized to assure the animals' well-being and performance.

## **Holding Systems**

Veal calves may be raised in either group pens or individual stalls. Holding calves individually makes individual care easier and improves calf health. All holding units should be constructed to allow for proper drainage of waste to keep calves clean and healthy.

## **Feeding**

Veal calves should be fed to meet or exceed the established nutrient requirements for calves except for iron. Iron available to veal calves in the milk replacer, water, and supplementary sources should be sufficient to maintain the health, performance, and overall well-being of the calves in the production systems in which they reside.

## **Sanitation**

The "all-in, all-out" method of occupancy is recommended. Facilities should be steam-cleaned and disinfected between successive groups of calves. With appropriate disinfection, a 2-wk empty period is considered sufficient.

## **Milking Facilities and Procedures**

Milking facilities and procedures must comply with all provisions of the Virginia Regulation Governing Grade A Milk adopted by the Virginia Board of Agriculture and Consumer Services.

By complying with the provisions of this regulation, the consuming public and processors will be assured that milk produced in Virginia will be of the highest quality.

## **Transportation**

Safety and comfort of the animal should be the primary concerns in the transportation of any animal. Weak and unhealthy animals should not be loaded or transported with healthy animals, and appropriate steps should be taken immediately to segregate such animals and care for their special needs. Transport and handling stresses can be aggravated greatly by adverse weather conditions, especially when the weather is changing rapidly. Animals should be protected from heat and cold stress while in transit. Truck beds for cattle transport should be clean, dry, and equipped with a well-bedded, nonslippery floor. The condition of the animal should be checked periodically during transit.

Additional details on conveyance of cattle should follow the 1993 American Veterinary Medical Association Membership Directory and Resource Manual, pp 58-59, Transportation, Sale Yard Practices, and Humane Slaughter of Livestock and Poultry.

## **Livestock Markets**

Humane handling of dairy cattle at livestock markets must adhere to VR 115-02-04, Rules and Regulations Governing the Operation of Livestock Markets. Title 3.1, Chapter 27.4, Article 6, Section 3.1-796.122 of the Code of Virginia-Humane Handling of Animals at Livestock Markets.

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Publications from which this report was generated from include:

Recommended Code of Practice for the Care and Handling of Dairy Cattle, Pub. 1853/E, Agriculture Canada, 1990.

Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching. U.S. Department of Agriculture, 1988.

Animal Care Series: Dairy Care Practices, University of California, 1993.

Guidelines for the Care and Use of Animals in Production Agriculture, Nebraska Food Animal Care Coalition, 1990-1991.

Virginia Department of Agriculture and Consumer Services--Humane Handling of Animals at Livestock Markets, 1992.

1993 AVMA Membership Directory and Resource Manual--Guidelines for Cattle Marketing, pp 58-59.

Grade A Pasteurized Milk Ordinance (PMO)--1989 Recommendations. U.S. Food and Drug Administration, Milk Safety Branch, HFF-346, 200 "C" Street, S.W., Washington, D.C. 20204.

Virginia: Regulations concerning Grade A Milk (VR115-05-01) Virginia Department of Agriculture and Consumer Services, May, 1993.

Animal Care Issues--Guiding Principle and Major Summary Positions, Virginia Department of Agriculture and Consumer Services, July, 1991.

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These recommendations are not intended to be all inclusive but should act as the basis for a sound, humane dairy management practice.