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Minnesota Feedlot Rules and Manure Management

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Introduction

During the 2000 Legislative session, a revised animal feedlot rule was introduced. In April 2000 it passed in the House and Senate and was signed by the governor. This rule, as published in Minnesota Rules Chapter 7020, took effect on October 23, 2000. The revised animal feedlot rule appears to have considered the needs of the producer, both small and large, as well as providing protection of our natural resources. All groups involved in revising the 20-year-old rules performed a commendable job in devising a workable solution to this controversial subject. This paper attempts to summarize the history and highlight the major points of the revised feedlot rules. In addition, this paper also provides a list of resources that veterinarians and producers can consult for further information.

History

The first feedlot rule in Minnesota was passed in 1971. It was amended in 1974 and again in 1978. Since last amended, many changes have taken place in agriculture and the protection of the environment. During the 1990s, numerous feedlot bills were introduced in the Legislature but a comprehensive animal feedlot bill failed to pass until the year 2000. Although the bill appeared to move quickly through the 2000 legislative session, the revised feedlot rule is not simply a response to recent public attention but a culmination of many years of consideration by producer and environmental groups, and numerous branches of state and county government.

As written above, there have been many changes in agriculture and protection of the environment in the past 20 years. One of the major changes is the shift from the family farm to the corporate farm. With the introduction of larger operations, the public's perception has been that the potential for environmental damage has also increased. The difficulty in formulating new feedlot rules was to find a compromise that would be financially workable for family farms (and corporate farms) and still provide adequate protection for the environment. The revised feedlot rule is a major step in addressing the changes that have occurred in the past two decades and the concerns associated with them.

Scope

The scope of the revised feedlot rules, as found in Chapter 7020, is as follows:

This rule governs the storage, transportation, disposal, and utilization of animal manure and process wastewaters and the application for and issuance of permits for construction and operation of animal manure management and disposal or utilization systems for the protection of the environment. This chapter does not

address wastes from fish. This chapter does not preempt the adoption for enforcement of zoning ordinances or plans by counties, townships, or cities.

The major parts within Chapter 7020 include definitions, registration and permitting, the role of state and county government, liquid manure storage areas, manure stockpiling, and land application of manure. Several other topics are found in Chapter 7020 such as poultry ranges but will not be discussed in this paper.

Definitions

The key definition in Chapter 7020 is that of an “animal feedlot.” For veterinarians and producers, a feedlot has traditionally been associated with a facility designed to feed out beef cattle to market weight. In Chapter 7020, an animal feedlot has a much broader definition. In Chapter 7020, the definition is written as follows:

“Animal feedlot” means a lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. For purposes of these parts, open lots used for the feeding and rearing of poultry (poultry ranges) shall be considered to be animal feedlots. Pastures shall not be considered animal feedlots under these parts.

Using this definition, the following types of facilities are considered feedlots: tie stall and stanchion barns, freestall dairy barns, heifer and dry cow open lots (where vegetation cannot be maintained), beef feedlots, swine confinement facilities, and horse barns and turn-out areas.

A second important definition is that of an “animal unit.” An animal unit is a unit of measure used to compare the amount of manure produced by different species. For many of the regulations, the size of a facility in animal units dictates the minimum requirements that must be followed. It is based on the amount of manure produced on a regular basis by a slaughter steer or heifer. This amount has been designated as one animal unit. From this definition, the following animal units (AU) have been assigned:

Diary cattle:

- one mature cow (whether milked or dry) over 1,000 pounds, 1.4 AU
- one mature cow (whether milked or dry) under 1,000 pounds, 1.0 AU
- one heifer, 0.7 AU
- one calf, 0.2 AU

Beef cattle:

- one slaughter steer or stock cow, 1.0 AU
- one feeder cow (stocker or backgrounding) or heifer, 0.7 AU
- one cow and calf pair, 1.2 AU
- one calf, 0.2 AU

Swine:

- one head over 300 pounds, 0.4 AU
- one head between 55 and 300 pounds, 0.3 AU
- one head under 55 pounds, 0.05 AU

Horse:

- One horse, 1.0 AU

Sheep:

- One sheep or lamb, 0.1 AU

Additionally, animal units have been defined for chickens, turkeys, and ducks depending on the type of manure system. For all other animals, the number of animal units is the average weight of the animal in pounds divided by 1,000 pounds.

Registration and Permitting

One of the goals of the revised rules is to determine the actual number and location of feedlots in Minnesota. This information will be used to determine staffing needs and allocation of other resources. Owners of the following facilities are required to register with the Minnesota Pollution Control Agency (MPCA) or County Feedlot Officer by January 1, 2002:

- An animal feedlot capable of holding 50 or more animal units, or a manure storage area capable of holding the manure produced by 50 or more animal units
- An animal feedlot capable of holding 10 or more animal units, or a manure storage area capable of holding the manure produced by 10 or more animal units, that is located within shoreland (generally within 1,000 feet of a lake or 300 feet of a river or stream)

There are several ways a facility can be registered; please check with the MPCA, County Feedlot Officer, or Chapter 7020 for specific registration requirements.

Permitting is also a major component of the revised feedlot rules. Several types of permits exist depending on the type, size, and location of the animal feedlot or manure storage area. Building a new facility or expanding an existing facility often requires obtaining a permit prior to construction. Please check with the MPCA, County Feedlot Officer, or Chapter 7020 for specific permitting requirements.

MPCA and County Involvement

Minnesota's feedlot program is managed through a cooperative program between the MPCA and county governments. In 53 Minnesota counties, the MPCA has given the County Feedlot Officer the authority to implement most of the feedlot rules and regulations. County Feedlot Officers and their staff are responsible for registration, permitting, inspections, education and assistance, and complaint follow-up. The main area that MPCA retains authority is the permitting of facilities with 1000 or more animal units. Additionally, some counties use other local government services such as the Natural Resource Conservation Service, the Soil and Water

Conservation District, and the Extension Service for their expertise in technical matters. To determine whether your county has been delegated the authority to implement feedlot rules, contact the Feedlot Service Center toll-free at (877) 333-3508.

Liquid Manure Storage Areas

One of the public's greatest concerns is the potential for discharge from a liquid manure storage area. The revised feedlot rules address this concern with specific regulations pertaining to the location, design, construction, and operation of such areas. In the new rules, there are site restrictions for the construction of new facilities and the expansion of existing facilities. These site restrictions consider such factors as distance to shoreland and private/public wells, geologic conditions such as Karst areas, and proximity to flood plains. The rules also contain detailed design and construction requirements in addition to regulations pertaining to the management of these areas.

Manure Stockpile Sites

One of the main concerns of small producers during the revision process of the feedlot rules was the use of manure stockpile sites. For many small producers, manure is placed at a location for temporary storage until it can be land applied. The revised rules address this issue by classifying stockpiles as short-term or permanent. For short-term stockpiles the manure must be removed and land-applied within one year of the date the stockpile was formed. This type of stockpile has fewer construction and management requirements than a permanent stockpile site. In addition, permanent stockpile sites often require a permit prior to construction.

Land Application

Another concern of producers during the revision process of the feedlot rules was the land application of manure. The revised rules establish minimum requirements for producers of all sizes. These requirements include: managing manure to prevent pollution of waters, following maximum nutrient rate limits during land application of manure, maintaining vegetative buffers in special protection areas, and injecting or incorporating manure into the soil within 300 feet of open tile intakes. As the number of animal units at a facility increases, the number of requirements also increases. For example, a producer with less than 100 animal units must adhere only to the minimum requirements. A producer with 100 to 299 animal units must also test manure for nitrogen and phosphorus content, and a producers with 300 to 999 animal units must test soil for phosphorus levels as well as test manure. The largest producers, those with 1000 or more animal units, must follow all of the above requirements and must also develop and implement a manure management plan.

Closing

The revised animal feedlot rules were written to address the changes in agriculture and the general public's growing concern about protecting the environment. It is in the best interest of Minnesota's agriculture industry to work closely with state and county government to manage feedlots in a manner that allows family farms to survive and commercial farms to expand while still protecting our natural resources. Veterinarians should help producers, where possible, as it is also in their best interest that Minnesota remains a leader in agriculture.

Resources

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 554155

(651) 296-6300 (metro general information)
(800) 657-3864 (toll-free general information)
((651) 296-7327 (metro Feedlot Service Center)
(877) 333-3508 (toll-free Feedlot Service Center)
www.pca.state.mn.us (web page)

MPCA Fact Sheets (available by contacting MPCA or on their web page):

Do I Need to Register My Feedlot or Manure Storage Area?	(April 2001)
Under 300 Animal Units: Operation and Management	(February 2001)
Under 300 Animal Units: Construction and Operation	(February 2001)
300 to 999 Animal Units: Operation and Management	(February 2001)
300 to 999 Animal Units: Construction and Expansion	(February 2001)
1,000 or More Animal Units: Operation and Management	(February 2001)
1,000 or More Animal Units: Construction and Expansion	(February 2001)
What About My Existing SW-A Permit, Certificate of Compliance or Interim Permit	(February 2001)
County Feedlot Program	(February 2001)
Technical Guidelines for Stockpiling Manure	(March 2001)
Liquid Manure Storage Areas	(February 2001)
2005/2010 Open-Lot Certification	(February 2001)
Land Application of Manure: Less than 300 Animal Units	(February 2001)
Land Application of Manure: 300 or More Animal Units	(February 2001)
Closure of Feedlots or Manure Storage Areas	(February 2001)
NPDES Permit: Frequently Asked Questions	(April 2001)
Pasture Operations and Minnesota Feedlot Rules	(January 2001)
Karst Workgroup Recommendations	(January 2001)