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SURVEY OF DISEASE PROBLEMS IN LARGE FEEDLOTS

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Diseases of feedlot cattle continue to plague the cattle industry. It has been estimated that disease losses may run between \$10 to \$20 for each animal placed in the feedlot (Herrick, 1967).

In order to reduce this loss, two things must be accomplished:

1. Determine the cause of the disease or condition affecting the animal, and
2. Incorporate, if possible, a program to prevent the problem.

A large scale survey of over 407,000 yearling feedlot cattle was conducted in Colorado to determine cause of illness and death (Jensen et al., 1976a). The sickness rate of yearling cattle was found to be 5.1% with 18.9% of these dying. This gave an overall death rate of 1%. Most of the cattle were 12 to 18 months of age and shipped into Colorado from other states. Both heifers and steers were involved.

Respiratory diseases caused 75% of the illnesses and 64% of the deaths. Pneumonia was the major disease, and it probably caused more economic loss than all other diseases combined.

Cause of Death Loss in Feedlots^a

Pneumonia	48%
Brisket disease	6%
Diphtheria	6%
Intestinal infections	5%
Riding injury	4%
Bloat	3%
Urinary calculi	2%
Endocarditis	2%
Ulcers	2%
BVD	2%
Pulmonary edema	1%
Miscellaneous	17%

^a Jensen et al. (1976a).

Nearly 71% of fatal cases of shipping fever pneumonia occurred during the first 45 days on feed (Jensen et al., 1976b). This emphasizes the importance of stresses such as shipping, exposure to feedlot disease organisms, inhalation of dust, and the change of rations as possible factors in the complex cause of shipping fever. Pneumonia developed during all seasons but had a higher rate during fall and winter than during spring and summer.

Most cases developed during the early part of the feeding period and fewer later in the period as shown:

Days on Feed

1- 45	72%
46- 90	14%
91-141	9%
142-up	5%

Organisms Involved

Infected tracheas and lungs contained both pathogenic and nonpathogenic organisms. The majority of bacteria isolated were of the Pasteurella group and also the Mycoplasmas. IBR (red nose) virus was the most common viral agent identified.

Organisms Isolated

Pasteurella alone or in combination	62%
Mycoplasma in combination	35%
IBR virus in combination	18%
None of these pathogens	17.9%

IBR virus and Pasteurellas have long been associated with the shipping fever complex, and it has been established that Pasteurella usually must work in concert with a stressing organism or condition that will lower the animal's resistance and allow the Pasteurella to produce the pneumonic condition. The role of the Mycoplasma organisms is not presently fully recognized.

Clinical Diagnoses of Respiratory Disease

<u>Season</u>	<u>Average Number of Cattle on Feed</u>	<u>%</u>
Fall	151,391	4.7
Winter	182,528	3.1
Spring	182,065	2.5
Summer	143,814	2.5

Bulling Among Yearling Feedlot Steers

Bulling among steers is a common health and economic problem in feedlot operations. Bullers attract riders, which repeatedly mount and physically injure the bullers. The main economic loss results from physical injury, stress to both buller and rider, and the necessity of early isolation of the victims (Jensen et al., 1976c).

Of 1,988 necropsies performed in 1 year, 83 (3.8%) were diagnosed as riding injuries. The incidence in Kansas feedlots was estimated at 2.2% and the financial loss per case estimated at \$23.68 per buller involved (Brower and Kiracofe, 1972).

In the Colorado study, the annual percentage of bulling increased from 2.09% in 1971 to 3.67% in 1974. During this period, they changed from strictly oral feeding of DES in 1971 to implantation and oral feeding in 1972-74.

The following observations were made about bulling in feedlot steers:

- (1) The problem of bullers has increased with the number and size of feedlots and represents a serious problem.
- (2) Some steers become bullers because they are weakened by disease.
- (3) Contributing factors that influence bulling include:
 - (a) Seasonal and environmental factors such as changing or stormy weather,
 - (b) Method or age at castration,
 - (c) Crowding within pens,
 - (d) Hormone implants,
 - (e) Odor, and
 - (f) Hair color, if different from pen mates.
- (4) Once mounting is initiated, it usually continues until the buller is removed.

The Colorado study concluded:

- (1) The occurrence of bulling in large feedlots averages 3%.
- (2) There appears to be a relationship of bulling to hormonal implantations.
- (3) Estrogenic compounds in fresh alfalfa may influence the seasonal occurrence of bulling.
- (4) Bulling is an economically important problem among feedlot cattle.

Relationship of Bullers to Brand of Implant^a

Implant	Dosage (mg)	No. of cattle implanted	Bullers	
			(No.)	%
DES	30	68,086	1,729	2.54
Ralgro	36	51,216	1,123	2.19
Synovex-S	20	42,020	1,691	4.02

^a Jensen et al. (1976c).

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