

# Incidence and Chemo-prophylaxis of

# SHIPPING FEVER

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A previous report indicated that over a four-year investigation period, 9.4 per cent of feeder calves in 10 per cent of the feedlots investigated showed respiratory symptoms of sufficient severity to warrant medication<sup>1</sup>. A later report indicated that preventive medication using sulfonamides in various combinations in the feed or water provided no demonstrable protection against the respiratory entity of feeder cattle that is usually described as shipping fever<sup>2</sup>.

The present investigation was initiated to further determine the incidence of respiratory disease in feeder calves and the possible benefits of medication in feed or water to prevent respiratory disease symptoms. Applying various types of respiratory vaccines was also considered. Observations in reference to the procedures and application of "preconditioning" also were made.

## Investigational Procedure

Data were obtained from questionnaires answered by feedlot operators who purchased all or part of their calves from a local cooperative cattle breeding organization. The animals from this area were raised under range conditions. The majority were Herefords and weighed between 300 and 400 pounds when removed from their native range pasture and placed in a cooperatively operated sale barn serving the immediate area only. All calves had been castrated, dehorned, and vaccinated for blackleg and malignant edema. No other vaccination program was routinely practiced. The calves are rounded up on the morning of the sale and delivered to the sale barn.

The period of investigation extended from mid-October to early January.

## Results

This investigation involved 2,414 calves and 29 feedlots. The average feedlot experience for each lot operator was 16-plus years. Symptoms of suffi-

cient severity to warrant medication were reported for 19 per cent of the calves in 5.6 per cent of the feedlots. Two animals from one feedlot died.

Preventive medication was given to 85.4 per cent of the calves in 58.6 per cent of the feedlots at an average cost of \$1.51 per head. The most frequently used preventive medication included wide spectrum antibiotics, sulfonamides and Vitamin A alone or in combination in the feed or water. Other preventives administered alone or in combination with the antibiotics and sulfonamides included IBR, and various "shipping fever" vaccines.

Figure 1. Evaluation of Preventive Medication for Preventing Respiratory Symptoms in Feeder Cattle.

	Number of Calves	Cost per head for treatment	Number of calves exhibiting respiratory symptoms	Cost per head for calves requiring treatment
Preventive Medication	2061	\$1.57	393	\$1.28
Non-preventive Medication	353	0	8	\$0.30
TOTALS	2414	\$3,235.77	401	\$512.04

Nineteen per cent of the calves receiving medication had respiratory symptoms severe enough to warrant treatment at an average cost of \$1.28 per head. Of the calves not receiving preventive medication, 2.2 per cent required treatment at an average cost of \$0.30 per calf.

Data on yearling feeder animals were obtained from 12 feedlots involving 922 animals. Of this group, 1.08 per cent showed symptoms and 0.43 per cent of these were of sufficient severity to require medication. No deaths were reported.

One of the questions asked was, "Have you ever fed preconditioned calves?" Twenty-six feeders replied that they had not. Of this group, 12

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stated that they would pay an average of \$4.00 per head more for preconditioned calves. Two feeders had fed preconditioned calves. One would not pay more and the other suggested \$0.50 per head as maximum premium for preconditioning.

A second question asked was, "What management, feeding, or disease prevention practices do you feel should be included in a good calf preconditioning program?" From the replies received, it would appear that a great deal of confusion exists as to what should be included in a preconditioning program. Most feeders felt that the greatest benefit from preconditioning would be obtained by preweaning at least two, and preferably three weeks before the calves were sold, with an introduction to bunk feeding, water fountains and a feedlot type of environment. Major emphasis was given to rapid transportation from the ranch to the feedlot. The next considerations were "fresh" calves that had been castrated, dehorned, and vaccinated for blackleg and malignant edema. Vaccination for other diseases associated with feeder calves received sporadic attention by those replying.

#### Discussion

As in previous investigations, it would appear that use of various chemotherapeutics and vitamins singly or in combination in feed or water to prevent respiratory disease in feeder calves was of no value. The cost of therapeutic treatment of calves that had

received preventive medication was four times greater than of those that did not. Thus, it would appear that calves receiving preventive medication had a greater susceptibility to respiratory disease and/or were more difficult to treat successfully when respiratory symptoms appeared.

The incidence of "shipping fever" in calves was less, but the incidence per feedlot basis was greater than observed on previous surveys.

It seems that the feedlot operator is most concerned with obtaining calves that have been "acclimated" to the feedlot environment, including weaning three weeks in advance of placement into the feedlot, with bunk feeding and acquaintance with water fountains. It is also considered desirable to obtain "fresh" calves, indicating that calves should be transported from the ranch to the feedlot by as direct a route as possible.

Our evidence indicates that good feeder calf management is of prime importance to "shipping fever" prevention and cannot be replaced by chemotherapeutic preventives or vaccination.

#### References

1. Schipper, I. A., C. B. Bjornson, G. E. Strum. Summary of Four-Year Study in Shipping Fever Prevention. *Vet. Med.*, 57: 225-228, 1962.
2. Schipper, I. A. A Survey of the Incidence of Shipping Fever. *Vet. Med.*, 58: 731-733, 1963.

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