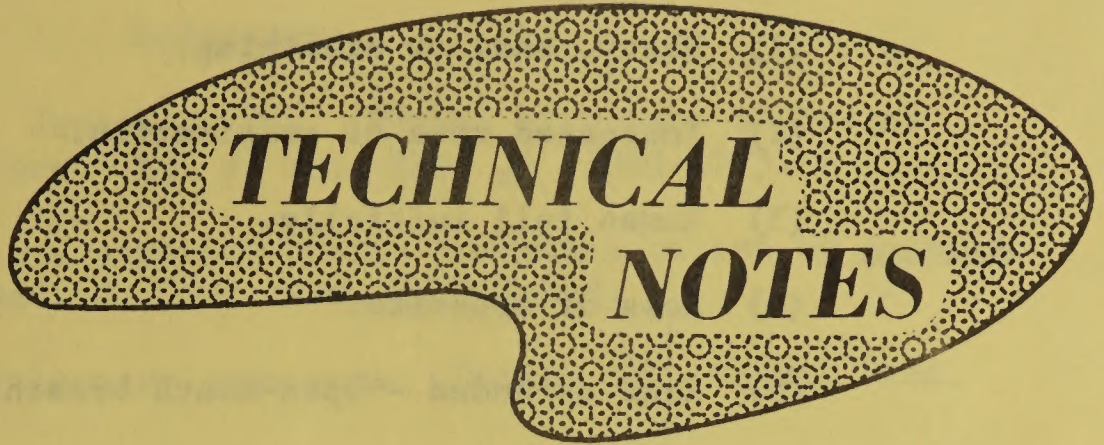


PORTLAND SERVICE CENTER  
Resource Standards & Technology  
Portland, Oregon

D-712a  
4435

QL  
84.2  
.L35  
na.150



February 17, 1967

DID YOU KNOW ???

Acute Bovine Pulmonary Emphysema (ABPE) is an acute, sometimes chronic, non-contagious lung disease (destruction of lung tissue) common to cattle throughout the western range area. The disease usually occurs during the summer and fall grazing season but it can develop anytime during the year. The most common situation has been when cattle were moved from dry native ranges onto irrigated pastures, usually during August, September, and October. During years when there is above-normal fall green-up of native ranges, and the movement of cattle from a heavily-used pasture to an ungrazed pasture is involved, some occurrence of ABPE may be expected.

Losses are a result of a change in diet and not as a result of any particular grazing system. Occurrence of this disease on BLM-administered lands has been rare. Livestock disorders are generally the concern of the rancher; however, BLM range managers should be aware of the disease since it is caused by a change in forage conditions. Under intensive range management, ABPE may occur when the animals are moved from dry forage to green succulent forage.

Characteristics of the disease

- (1) Occurs generally in late summer or early fall.
- (2) Common only to cattle.
- (3) Results from change in pasture and forage conditions.
- (4) Characteristically it occurs between the second and seventh day after a change in forage.
- (5) It is apparently non-infectious.



Some of the more readily recognizable symptoms

- (1) Heavy, shallow breathing.
- (2) Increased rate of respiration.
- (3) Rumen full initially.
- (4) Loss of appetite.
- (5) Head extended - open-mouth breathing.
- (6) Increase salivation.
- (7) Occasional bleeding of the nose.
- (8) Persistent coughing.
- (9) Characteristic loud grunt.
- (10) At later stages there is a bluish color of skin due to lack of oxygen in the blood.
- (11) Gaunt appearance at later stages.
- (12) Quick death from exertion. (Cattle which have shown symptoms of the disease should not be moved because any exercise exaggerates the disease and usually results in death to the animal.)

There are generally two ways by which ABPE occurrence can be reduced:

- (1) Leave stock on the same grazed pasture until such time as the feed has started to cure or until after the first frost in the fall, and
- (2) Allow cattle to gradually move onto new feed over a period of several days by using the new feed one hour the first day, two hours the next, etc. This requires additional movement of stock by the operator.

Additional information can be obtained in the attached list of references and from Dr. Leroy R. Maki or Dr. James O. Tucker at the Division of Veterinary Science, University of Wyoming, University Station, P. O. Box 3354, Laramie, Wyoming, 82070.

---

Technical information for this note was abstracted from the Proceedings of the 1963 and 1965 Symposia on Acute Bovine Pulmonary Emphysema, Laramie, Wyoming. Sponsored by: Division of Veterinary Science, University of Wyoming.



## ACUTE BOVINE PULMONARY EMPHYSEMA

### References

- Alexander, A. F. and R. Jensen. 1963. Normal structure of bovine pulmonary vasculature. *Am. J. Vet. Res.* 24 :1083-1093.
- Allen, G. W. 1962. Acute atypical bovine pneumonia caused by Ascaris lumbricoides. *Canad. J. Comp. Med.* 26:241-243.
- Bailey, J. W. 1962. Pulmonary emphysema. *Canad. Soc. Animal Prod. Proc.* 117-118.
- Begg, H. W. and W. A. Whiteford. 1948. Acute interstitial pulmonary emphysema of bovines. *Vet. Rec.* 60:135.
- Blood, D. C. 1962. Atypical interstitial pneumonia of cattle, *Canadian Vet. J.* 3:40-47.
- Butler, W. J. 1940. Pulmonary emphysema or asthma in cattle. *Lederle Vet. Bulletin* 9:11.
- Cote, F. T. 1944. Rape poisoning in cattle. *Canadian J. Comp. Med.* 8:38-41. (Cited by O'Donoghue, 1960).
- Farquharson, J., and W. J. Butler. 1944. Proceedings of the 47th United States Livestock and Sanitary Association. p. 224. (Cited by Gibbons, 1962).
- Fox, F. H., and S. J. Roberts. 1949. Recent experiences in the ambulatory clinic. *Cornell Vet.* 39:249-260.
- Fuechsel, R. E. 1952. An approach to the problem of acute pulmonary emphysema of cattle. *Norden News* 26:7,15.
- Gibbons, W. J. 1956. Pulmonary Emphysema. *North Am. Vet.* 37:98,100.
- Gibbons, W. J. 1962. Bovine pulmonary emphysema. *Modern Vet. Practice* 43 (8):34-37.
- Goodman, A. A. 1956. Bovine asthma. *North Am. Vet.* 37:850-852.
- Gould, G. N. A. 1945. A preliminary note on digestive disorders of cattle associated with leys and reseeded pastures. *Vet. Record* 57:365.
- Gould, G. N. 1956. Problems of grassland and forage farming. *Vet. Record* 68:378-379.



Acute Bovine Pulmonary Emphysema

- Haynes, N. B. 1963. "Silo filler's disease" in dairy cattle. J. Am. Vet. Med. Assoc. 143:593-594.
- Jenkins, P. A. and J. Pepys. 1965. Fog-fever. Precipitin (FLH) reactions to mouldy hay. Vet. Rec. 77:464-466.
- Johnston, R. W. 1961. Treatment of pulmonary aedema in the cow with hydrochlorothiazide. Vet. Record 73:344.
- King, J. M. 1961. Respiratory distress in cattle. Western Vet. 8:42-50.
- Klussendorf, R. C. 1954. Pulmonary emphysema. North Am. Vet. 35:745-746.
- Kuhn, R. M. 1951. A case report. Southeast Vet. 2:10-11.
- Mackey, D. R. 1952. Acute pulmonary emphysema in cattle. Southwest Vet. 5:342-344. Also in Jen-Sal Journal, October 1952, pp. 22-23.
- Maclean, M. W. 1948. Acute interstitial pulmonary emphysema of bovines. Vet Record 60:202.
- Maki, L. R., and J. O. Tucker. 1962. Acute pulmonary emphysema of cattle. II. Etiology. Am. J. Vet. Res. 23:824-826.
- Monlux, W., J. Fitte, G. Kendrick, and H. Dubuisson. 1953. Progressive pulmonary adenomatosis in Cattle. Southwest Vet. 6:267-269.
- Monlux, W. S., P. C. Bennett, and B. W. Kingrey. 1955. Pulmonary adenomatosis in Iowa cattle. Iowa Vet. 26:11-13. (Bibl. Agr. 20:5081:1956).
- Moore, G. R. 1952. Bovine Asthma. North Am. Vet. 33:418.
- Moulton, J. E., J. B. Harrold, and M. A. Horning. 1961. Pulmonary emphysema in cattle. J. Am. Vet. Med. Assoc. 139:669-677.
- Moulton, J. W., C. E. Cornelius, and B. I. Osburn. 1963. Acute pulmonary emphysema in cattle. J. Am. Vet. Med. Assoc. 142:133-137.
- Moulton, J. E. 1962. Bovine emphysema studied in cattle. Calif. Agric. 16:7 (Index Vet. 31:(2) 157 (1963)).
- O'Donoghue, J. G. 1960. Bovine Pulmonary Emphysema. Canadian Vet. J. 1:482-484.
- Pierson, R. E., L. N. Davidson, R. A. Baldwin, R. E. Fueschel, O. A. Beath, and J. F. Ryff. 1954. Pulmonary emphysema of cattle. Pub. by Wyoming Vet. Med. Assoc.



## Acute Bovine Pulmonary Emphysema

- Pierson, R. E. 1956. Cow asthma or pulmonary emphysema increasing in Rocky Mountain area. *Cattle Guard* 1:42.
- Powell, W. D. 1962. Novel method for treatment of pulmonary emphysema. *Mod. Vet. Prac.* 43:72,75.
- Quin, A. H. 1961. The syndrome of bovine pulmonary emphysema. *Canadian Vet. J.* 2:80.
- Railsback, G. A. 1945. Idiopathic pulmonary emphysema of cattle. *Vet. Med.* 40:369-370
- Railsback, G. A. 1948. Bovine pulmonary emphysema (panthers) in Arkansas cattle. *Jen-Sal J.* 31:September.
- Rainey, J. W. 1958. A bovine respiratory disorder believed due to seed of wild white clover (*Trifolium repens*). *Vet. Record* 70:167-168, 169.
- Schofield, F. 1941. Nonspecific hemoglobinuria and acute pulmonary emphysema of cattle as essential enterotoxemias. *J. Am. Vet. Med. Assoc.* 99:28-32.
- Schofield, F. W. 1924. Acute alveolar emphysema in calves. *Ann. Report Ontario Vet. College*, p. 40.
- Schofield, F. W. 1944. Acute bovine pulmonary emphysema. *Ann. Report Ontario Vet. College*. No. 29:p. 17.
- Schofield, F. W. 1948. Acute pulmonary emphysema of cattle. *J. Am. Vet. Med. Assoc.* 112:254-259.
- Schofield, F. W. 1953. Pulmonary emphysema. *Wisconsin Vet. Med. Assoc. Bull.* Oct. 15 (Cited by Klussendorf, 1954).
- Seaton, V. A. 1957. Pulmonary adenomatosis in cattle produced by nitrogen dioxide poisoning. *North Am. Vet.* 38:109-111.
- Seaton, V. A. 1958. Pulmonary adenomatosis in Iowa cattle. *Am. J. Vet. Res.* 19: 600-609.
- Tucker, J. O. (Chairman). 1959. Pulmonary emphysema meeting minutes, Sheridan, Wyoming. Septebmer 3-4, 1959. Mimeographed-Division of Veterinary Science, University of Wyoming



Acute Bovine Pulmonary Emphysema

Tucker, J. O., and L. R. Maki, 1962. Acute pulmonary emphysema of cattle. I. Experimental production. Am. J. Vet. Res. 23:821-823.

Tucker, J. O. 1963. Acute pulmonary emphysema of cattle research--current status. Paper presented at the Intermountain Veterinary Medical Association meeting, Las Vegas, Nevada, January 25, 1963.

Vickers, C. L., W. T. Carll, B. W. Bierer, J. B. Thomas, and H. D. Valentine. 1960. Pulmonary adenomatosis in South Carolina cattle. J. Am. Vet. Med. Assoc. 137:507-508.

Wictor, C. E. 1952. Report of the Los Angeles County Livestock Department, 1951-1952. p. 56. (Vet. Bull. 23:2729; 1952).