

Veterinary Science at Work for North Dakota Livestock Producers

By
H. L. WALSTER, Director

THE Department of Veterinary Science in the North Dakota Agricultural Experiment Station is headed by Dr. Donald F. Eveleth as Chairman of the Department, Station Veterinarian, and Professor of Veterinary Science. Dr. James O. Foss is Assistant Station Veterinarian and Assistant Professor of Veterinary Science. Dr. F. M. Bolin, Associate Station Veterinarian and Associate Professor of Veterinary Science is on military leave of absence in the Asiatic theater of war. Miss Alice I. Goldsby serves as laboratory technician and Hugo Schneider is in charge of the care of experimental animals and birds, and assists in post-mortems.

The Department of Veterinary Science is housed in a two story brick building, 51 by 73 feet, erected in 1910. Attached to the main structure is a 31 by 49 foot barn, a 16 by 16 foot killing room, and a 21 by 36 foot dissecting room. A new incinerator for the disposal of dead animals was erected in 1944. A special post-mortem room has been provided in the barn, and a pigeon loft and flyway has been constructed.

Functions of the Department of Veterinary Science

THE TEACHING FUNCTION

The Department of Veterinary Science is not organized to provide instruction for a degree in Veterinary Science and Medicine. Instead, it offers elementary instruction in veterinary science including courses on the Anatomy and Physiology of domestic animals, on Animal Hygiene, on Immunity and Infectious Diseases, and on Poultry Hygiene and Sanitation. These courses are primarily designed to train students majoring in animal husbandry, dairy husbandry, and poultry husbandry.

THE CONTROL FUNCTION.

The Professor of Veterinary Medicine serves as bacteriologist and consulting veterinarian to the State Livestock Sanitary Board.

Section 36-0107 of Chapter 36-01, North Dakota Revised Code of 1943 provides that "The Professor of Veterinary Science of the Agricultural College shall act as bacteriologist and consulting veterinarian to the State Livestock Sanitary Board. He shall make bacteriological or pathological examinations of all diseased animals or portions thereof, or of such material as may be forwarded to him by the Board or its duly authorized agents. He shall furnish material for the diagnosis of contagious diseases and instruction as to its use. For his services, the bacteriologist shall receive such compensation as the Board may deem proper, which shall be paid out of the fund appropriated for the use of the Board."

The Station maintains a Veterinary Diagnostic Laboratory. During the year July 1, 1943 to June 30, 1944, the Laboratory made examin-

ations of 2504 specimens. (See Report of the Veterinary Diagnostic Laboratory — Bimonthly Bulletin, North Dakota Agricultural Experiment Station, Volume VII, No. 1, pp. 14-17. September-October, 1944.

The Professor of Veterinary Science serves as one of the members of the Stallion Registration Board.

Section 36-0302 of Chapter 36-03, North Dakota Revised Code of 1943 provides that: "There shall be maintained in this State a stallion registration board to carry out the provisions of this chapter. The board shall be composed of:

1. The Professor of Animal Husbandry of the Agricultural College, who shall be ex officio secretary and executive officer of the board.
2. The Professor of Veterinary Science of the Agricultural College.
3. The Commissioner of Agriculture and Labor.
4. The President of the State Livestock Sanitary Board.
5. The President of the North Dakota Livestock Association.

The Professor of Veterinary Science to be Director of the Serum Institute.

Section 36-1801 of Chapter 36-18, North Dakota Revised Code of 1943 provides that "A serum institute shall be maintained at the State Agricultural College. The institute shall be under the control and regulation of the State Board of Higher Education, and the Professor of Veterinary Science of the Agricultural College shall be its director."

The last appropriation made by the legislative assembly of North Dakota for the support of the serum institute was an item of \$12,000 contained in Chapter 5, laws passed at the nineteenth session, legislative assembly of the State of North Dakota, January 6th to March 6th, 1925. This last appropriation for the serum institute was to the Agricultural College Experiment Sta-

tion for the biennium July 1, 1925 to June 30, 1927. Since there have been no subsequent appropriations for this purpose, the work of the serum institute was discontinued on June 30, 1927.

THE RESEARCH FUNCTION.

As constituted at present the principal function of the Department of Veterinary Science is the conduct of research on livestock diseases. During the period January 1, 1944 to January 1, 1945, Dr. Eveleth and his associates continued their studies on the parasites of sheep, carried on their studies on urinary calculi in sheep, and initiated projects on fowl cholera and on the diagnosis of pullorum disease in turkeys.

Gastro-Intestinal Parasites of Sheep (Bankhead-Jones Offset Project 58)

This project was approved by the Director of the Station on January 10, 1944 and by the Office of Experiment Stations on January 19, 1944. Its financial support has been from the State Appropriations for Veterinary Science. Dr. Eveleth reports that autopsies made on 94 lambs and sheep revealed some 12 different species of internal parasites, and that there appears to be a seasonal variation in the parasitism. For further information on the occurrence and control of these parasites the reader is referred to the article by Eveleth and Goldsby which appears in this issue of the Bimonthly Bulletin under the title "Using Chemicals in Combating Internal Parasites of Sheep," and to two other papers. "A Preliminary Note on the Geographical Distribution of Gastro-Intestinal Parasites of Sheep in North Dakota and Adjacent Areas" by Alice I. Goldsby and D. F. Eveleth—Bimonthly Bulletin, North Dakota Agricultural Experiment Station Volume VII, No. 2, pp. 35-36, 1944.

"The Gastro-Intestinal Parasites of Sheep in North Dakota" by D. F. Eveleth and Alice I. Goldsby. Veterinary Medicine. Vol. 40 No. 3, pp. 90-96, 1945.

Lungworm Infestation in Sheep in North Dakota

(Bankhead-Jones Offset Project
No. 59)

In his annual report to the Director, Dr. Eveleth reports that the lungworm disease has been rather uncommon in North Dakota during the past year. Studies are being made with artificially infected lambs and observations are being made as to the value of different treatments under field conditions. The following paper contains pertinent information on the lungworm disease. "Further studies on the Control of Lungworms in Sheep" by D. F. Eveleth and M. W. Eveleth. Michigan State College Veterinarian, pp. 22-25 & 46, Fall, 1943.

Use of Shikles Syringe With Whitlock Nozzle for Administering Anthelmintics to Sheep

Drs. D. F. Eveleth and J. O. Foss published a note under the above title in *Veterinary Medicine*, Volume 39, No. 10, October, 1944. The article describes how the long nozzle can introduce the dose of anti-worm remedy far down the esophagus so as to avoid danger of the remedy entering the trachea. Reprints describing details and precautions are available upon request.

Vitamin A Deficiency in the Production of Pregnancy Disease in Sheep

Drs. J. O. Foss and D. F. Eveleth published an article under the above title in *Veterinary Medicine*, Volume 39, No. 8, pp. 313-315, 1944. They have found symptoms chemically and pathologically similar to pregnancy disease in ewes feeding upon rations deficient in Vitamin A. They suggest that this Vitamin A deficiency may be a predisposing factor in the production of Ketosis (acetone or ketone bodies in the urine) in pregnant ewes. They found that administration of Vitamin A caused disappearance of the Ketosis within a few days. Reprints

of the article are available upon request.

Other Scientific Contributions

"Identification of *Corynebacterium renale* from the Kidney and Bladder of a Horse." By Dr. J. O. Foss, *Journal of American Veterinary Medicine Association*, 104-No. 802, p. 27, 1944.

Research on Poultry Diseases

Dr. J. O. Foss has a project on Fowl Cholera under way. Dr. D. F. Eveleth, Veterinarian, and Dr. C. I. Nelson, Bacteriologist, are cooperating on a research on "The Diagnosis of Pullorum Disease in Turkeys." An experimental antigen is being prepared under Dr. Nelson's direction. The Pullorum Disease Testing Program is in cooperation with the North Dakota Poultry Improvement Board.

Scientific Conferences

All Station departments can only be kept alert to the progress of their particular fields of work by keeping in contact with their fellow workers in the Nation. For this reason it is considered good Experiment Station policy to send representatives to such conferences. During the past two years the Department of Veterinary Science was represented at scientific conferences as follows:

D. F. Eveleth, at U. S. Livestock Sanitary Association, Chicago, Illinois, December 6-9, 1944.

D. F. Eveleth, at Am. Vet. Medical Association—81st Annual Meeting at Chicago, Illinois, August 22-24, 1944.

J. O. Foss and D. F. Eveleth, at N. Dak. Vet. Medical Association 39th Annual Meeting at Fargo, N. Dak. January 13-14, 1944.

J. O. Foss, at Veterinary Conference, Wadena, Minnesota, May 18, 1944.

D. F. Eveleth, at Sioux City, S. Dak., Lamb Feeding and Parasite Control Conference, May 18, 1944.