

How to Use the Veterinary Laboratory

By

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The Department of Veterinary Science at the North Dakota Agricultural College and Experiment Station is charged with the duty of diagnostic service for the citizens of the state. Every year veterinarians and livestock growers make use of this service. From time to time specimens are submitted on which no report or a very unsatisfactory one must be made.

Furnish the Facts

In order for the laboratory worker to make a diagnosis with the utmost speed and accuracy he must have all of the facts available. Many samples are received by the laboratory with the following errors made in submitting them: No name on the package and no accompanying letter, no history, wrong type of material, decomposed material and leaking packages. The following directions are given for the submitting of specimens to any laboratory for the diagnosis of animal disease.

(1) First give as complete a history of the disease outbreak as possible. Include in this the number of animals involved, the number sick and the number dead. State whether there have been any additions to the herd or flock. State whether the disease is confined to one farm or whether it is on other farms. Give information on treatment and vaccination program. State whether similar outbreaks have been encountered on the farm on previous years. Any observations on management practices or possible feeding errors should be included. This history should be attached to the container in which the specimen is submitted.

(2) If a live animal or fowl is to be submitted, it should be one showing typical symptoms or lesions and properly boxed or crated.

itics should be checked so that no undue delay should occur. Do not send specimens to arrive Saturday afternoon or Sunday without telephoning or telegraphing the laboratory. If these specimens are sent by express or parcel post they may not be delivered until Monday. A Special Delivery Stamp will insure a quicker delivery.

If tissue specimen is sent, select diseased tissue. Specimens of suspected blackleg or malignant edema should be taken from areas showing abnormal tissue. A small piece of tissue should be removed with a sharp knife and placed in a leak-proof container. A glass jar with a tight lid is satisfactory. The piece of tissue should then be sprinkled with borax. If anthrax is suspected use utmost care in procuring samples. If blood has come from the carcass

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saturate some cotton swabs with the blood and place them in a tight leak-proof container. Some instrument should be used to hold the cotton swabs. A pair of pliers is handy and can be held in a flame or placed in concentrated formalin after use.

If an animal is suspected of being poisoned send some stomach contents, some intestinal contents and a portion of the liver. If the animal has vomited some of this material is very satisfactory as it usually contains the poison.

The container in which the tissues have been placed should then be packed in a box so that there is no danger of breaking

it. Label—"Glass" and "Perishable" and attach the "history" to it. If the material is sent by parcel post a three cent stamp should be placed on the envelope containing the history.

If one desires to send droppings for the diagnosis of parasites or mastitis or other special types of diagnosis he should write to the Veterinary Department, NDAC, Fargo, for specific instructions.

These directions are offered for the use of those seeking diagnostic service in order that it will be possible in more cases to make a diagnosis on the material submitted.

FISH AND MILK PROTEINS ARE A GOOD SUPPLEMENT TO PEA MEAL PROTEIN IN A RATION FOR YOUNG GROWING CHICKS

A Review

D. W. Bolin, Associate Nutritionist, Department of Animal and Human Nutrition, is the senior author of a paper entitled "Chick Growth Response Resulting from Methionine Additions to Various Protein Supplements with Pea Protein." The paper, published in Poultry Science, Volume XXV, No. 2, March 1946 as a contribution from the Departments of Agricultural Chemistry and Poultry Husbandry, University of Idaho, Moscow, is under the authorship of D. W. Bolin, Charlie F. Petersen, C. E. Lampman, and Olaf E. Stamberg. Mr. Bolin joined the staff of the North Dakota Agricultural Experiment Station on July 1, 1945.

The above authors in a previous publication have shown, that pea proteins are methionine deficient for chick growth. Methionine is an essential amino acid, the addition of this amino acid to pea protein increased markedly the growth rate of the young chick. In view of these findings, different protein supplements, such as fish meal, dried milk, meat meal, soybean oilmeal and cereal proteins were, each added separately to a ration containing 54.5 per cent ground peas or 12 per cent pea protein. Chicks one week old were placed on these rations for two weeks. In addition, chicks were also placed on the same rations to which 0.25 per cent methionine was added.