

Newcastle Disease of Turkeys

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Newcastle disease has become well established in North Dakota and constitutes a serious threat to the poultry industry of the state.

In an earlier report the ways in which this disease is spread was discussed (1). The diagnosis of Newcastle disease is not easy, and tentative diagnoses should be confirmed by laboratory tests.

The symptoms shown by turkeys infected with Newcastle disease virus are frequently different from those shown by chickens.

Reports discussing Newcastle disease in turkeys have been made by several investigators (2) (3) (4) (5) (6). The disease has often been confused with botulism, fowl cholera, erysipelas and coccidiosis. The different types of treatment for the different diseases shows the importance of getting a correct diagnosis.

On many farms Newcastle disease has become established, and protective vaccination must be used to prevent heavy losses in chickens. The same situation now prevails with turkeys. Preliminary experiments conducted several years ago showed that the killed virus vaccine protected turkeys under field conditions of exposure.

A laboratory trial was made in 1949 in which 24 turkeys of about two months of age were used. Twelve were vaccinated and 12 left as controls. Two weeks after vaccination all were challenged by injecting a highly virulent virus intravenously. In the following two weeks all of the controls died, while none of the vaccinated birds showed symptoms.

These findings are in agreement with a report by Rached (7) who found that formalin-inactivated Newcastle disease virus protected poultts against subsequent challenge by live virus.

It is recommended that, on those farms where Newcastle disease has been diagnosed, chicks and poultts be vaccinated with a killed virus vaccine at the time of delivery, and that extreme precautions be used to prevent the introduction of infection for at least two weeks. It requires approximately two weeks for the vaccine to produce an effective immunity.

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NEW EYES FOR RESEARCH

Our cover picture shows Dr. D. F. Eveleth and Miss Alice Goldsby of the station's veterinary science staff, poring over a new phase microscope.

This is a delicate, highly sensitive and fairly expensive piece of equipment, purchased because its use will greatly help our work of research. It gives a somewhat "third dimensional" view which aids greatly in identifying bacteria, animal parasites, intestinal worms.

It will be a great aid in studying coccidiosis, both the species in mammals and in poultry. It will be a help in studying sperm for artificial insemination of cattle.

This phase microscope, say the veterinary scientists, is expected to give a big boost to their research into blackhead of turkeys. For many years it has been known that blackhead was caused by a protozoa. Now, being able to study it more closely, the scientists may be able to identify another phase of the life cycle of this protozoa—an important step toward its ultimate control.—JB.

POTATOES MAKE LIVESTOCK FEED

Many farmers have the opportunity of securing cull potatoes at an economical price. Research at the Michigan Agricultural Experiment Station has shown them to be valuable as feed for some kinds of livestock.

C. F. Huffman, research scientist at Michigan College, advises that up to four pounds of fresh chopped potatoes may be fed to dairy cows each day. The cows should be started on smaller amounts to accustom them to eating potatoes. Sunburned, decomposed, sprouted, and frozen potatoes should not be fed, since they may cause digestive disturbances.

Best results are obtained when the potatoes are fed with good alfalfa hay or other legume roughage. If a "potato flavor" is noted in the milk, it can usually be done away with by feeding following milking.

Cooked potatoes make good feed for swine, according to animal husbandry specialists. Cooking makes the potatoes more digestible and increases palatability. Potatoes should be fed in a well-balanced ration with ample protein supplement and minerals. The cooked potatoes should replace not more than half of the grain ordinarily fed in the ration. They may be fed at the rate of two to four pounds of potatoes per pound of grain.

For sheep, fresh potatoes may be used both for fattening lambs and for wintering ewes. For the lambs, one to two pounds may be fed with good quality legume hay and grain. Ewes may receive the same, and following lambing, be increased to four pounds a day. Only potatoes in good condition should be fed.