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Swine Diseases

Practical methods of investigation

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The present-day graduate of veterinary medicine is quite well fitted by his technical training to enter into any of the many branches open to him. However, the technical training does not prepare one completely to meet actual field problems. I believe this to be true especially of those graduates who enter into general practice, and in this instance to one phase, i.e., swine practice. Therefore, the following is written with the hope that it may be of assistance in helping the recent graduate solve some of the problems confronting him.

A knowledge of swine husbandry, breeds and breeding, feeds and feeding, housing and management, and sanitation is very necessary in swine practice. Although the theoretical study of these branches may seem uninteresting to some students during the course of study, from past experience I can assure you that many times I have wished for a broader knowledge of these subjects, from which I might draw at will the information needed while in the field. It would be impractical to take textbooks into the field from which to cull the answers to the many questions which arise. Therefore, a general knowledge of these subjects is necessary that one may not find one's self in a cul-de-sac. For instance, in breeds and breeding: white hogs are especially susceptible to photosensitization which may be confused with the skin form of erysipelas. In feeds and feeding: Does that pig with the rolling gait have rickets? Is feed adequate? In housing and management: In winter is there sufficient room to bed the number of hogs in the drove without crowding? Are there direct drafts on the hogs? Is the building sufficiently ventilated? Are the floors and bedding dry? Is there sufficient trough or self-feeder room? Is the water supply clean and abundant? Is shade available in the summer time? Sanitation: Are the premises of such nature that they may be kept in a sanitary condition? Are the lots well drained or are there many mud holes? Have the premises been in use for years and if so, what has been the progress and condition of previous droves? Have roundworms, bowel or lung troubles been a problem?

The foregoing gives a general idea of symptoms which automatically can be recognized by observation and previous knowledge of these subjects.

When an owner calls you to see his diseased drove, which may represent a potential value of from one to several thousand dollars he needs your help. Do not rush madly out to see the drove. First, write down a complete history of conditions past and present, such as: Number in drove? Age? Appetite? Immune to hog cholera? When did trouble first start? How many were sick? How did they act? Have any died? Were deaths quick or was sickness prolonged for several days? Does it seem to be a progressive condition? Have any new stock been added? Were they held in quarantine before adding to drove? Are neighbors' hogs diseased? Has the drove received any treatment and what kind? Has there been any change in feed? Exchange of labor? (Keeping case reports, at least until you are more familiar with disease conditions, will assist materially in recalling past experiences.)

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First observe the drove at rest. Observe breathing, eyes, hair, skin, position assumed and evidence of diarrhea. Take as many temperatures without restraint as possible. Notice if the sick are gaunt. If cough is present, note character of it. Have the owner stir them up and note gait as well as character of voice. Note if depression is present. Note arched backs, lameness and enlarged joints, if present.

**Autopsy**

An autopsy of one animal, alive or dead, when brought in for examination often does not reveal the true picture of the disease. If in doubt, suggest a trip to the farm. If possible select an animal which has been sick for some time and one which is acutely sick. Post-mortem changes in dead animals sometimes obscure lesions of some diseases. Establish a routine method of examination and always follow it through, and ordinarily you will not overlook any lesion. Always look for hog cholera as it is the most deadly disease of all and the most easily prevented. Thorough knowledge of gross anatomy, histology, pathology, parasitology and bacteriology are of prime importance. There are few pathognomic symptoms or lesions of disease and many times the veterinarian will wish he could remember more details. I do, and I now am very thankful for the opportunity I had to see much gross pathology on federal meat inspection as a bureau employee.

Any methodical routine procedure in post-mortem examination should be adequate. Never cut any part completely off in the field, keep everything in the cadaver. Make an examination of the glands and body organs before cutting open the bowels or stomach and covering everything with their contents. Have the owner furnish a feed stack and a shovel, and when the autopsy is concluded, put the carcass, the blood, stomach and bowel content into the sack to keep dogs and chickens from scattering it over the farm and contaminating other areas. Have owner call rendering truck for disposal of dead, or burn completely. (Refer to state regulations governing burial of diseased animals. The Iowa state regulations do not permit burial of animals dead of infectious diseases). Methodical routine procedure is necessary in any autopsy. Failure to follow through may bring about a faulty diagnosis as shown by the following: A sow died suddenly and a veterinarian was called. He made his autopsy, found free blood in the small bowels and opened the stomach but did not extend the incision through the pyloric end of the stomach where an ulcer the size of a dollar was later found. The veterinarian was suspicious of anthrax and called for consultation. The finding of the ulcer simplified matters. Another instance: A veterinarian was called to see a drove of pigs that had symptoms of pneumonia. He partly autopsied 2 dead hogs by merely opening the thoracic cavity to expose the lungs. The drove was put on treatment for pneumonia with no results and hogs continued to get sick and die. He had not taken temperatures of any of the sick. Called for consultation, I found many hogs with high temperatures, off feed, weak and wobbly and with no appetite. Complete autopsy confirmed diagnosis of a break in cholera immunity in a farmer-vaccinated drove. This wasn't smart, but just methodical routine procedure.

**Diagnosis**

Now you have the history, symptoms and post-mortem lesions to make a diagnosis. Yet there are times, with all this information, that this cannot be done and it is necessary to send specimens to a laboratory for examination. However, if the drove is not immune to cholera, the condition is symptomatic of an infectious disease and is progressive you had better think of hog cholera and be guided accordingly. Hog cholera is one disease that will not wait for you.

It would be wise to learn if there had been any recent losses from any cause in the community. Whatever your line of treatment, whether medicinal or biologic (or both), give adequate dosage and try to have arrangements made so that the treatment will have a good chance of being successful. It may be that clean ground will do the work or part of it. It will at least...
break the exposure of the well animals to the infections present. Enteritis of any kind cannot successfully be treated unless the hogs are forced to take the medicine prescribed for them. This usually requires that they be placed in an enclosure of sufficient size to accommodate them, one that can be kept clean, and where they cannot partake of food other than that prescribed, which is usually medicated. Use biologics, some of which contain live organisms and are good products. Treat biologics right. Keep them refrigerated properly when not in use and when taken to the farm, have a container of sufficient size to refrigerate all biologics to be used. Some of these products are readily perishable when exposed to heat for even a short time, especially hog cholera virus. Handle biologics so that you will know when you use them you can expect good results. If carelessly handled and exposed to heat, the value of the results would be questionable. Keep a record of the producer, serial numbers and expiration date of all products used. Always wear rubbers or overshoes when investigating swine diseases and wash them off thoroughly in a disinfecting solution before leaving the premises. Keep 2 thermometers on hand at all times, one in your pocket and one in your grip. However, if you do not insert them into the hogs you will not know whether or not they have a rise in temperature. Do not let the thermometer be exposed to the direct sun rays on the deck of your auto in summer. Have a pair of rubber gloves to put on when taking temperatures, especially where hogs have diarrhea. Always wear rubber gloves when making autopsies. One doesn't always know what he is dealing with and it is possible that erysipelas, brucellosis or other infections may be present and cause the veterinarian untold misery and loss of time from practice. In surgery it is necessary to be surgical and use the instruments required. In autopsies, use a good butcher knife, 6 inches long, sharpen it and keep it so. Learn to handle a knife on a steel. It isn't necessary to beat it on the steel to sharpen it. Simply bring the edge of your knife smoothly at a slight angle against the steel. If the knife is sharp in the beginning it will stay that way with a little steel work, and instead of being work the autopsy will be more interesting. A dull knife does not make a good impression.

Observe all the autopsies possible and get close enough in order to be able to interpret the lesions demonstrated by the instructor. If something isn't clear, ask questions. Don't look wise if the instructions are not clear because the time may come when the instructions given will be the key toward diagnosis of a malady.

Tests show that the sow's milk flow per pig is about the same in a litter of 8 as in a litter of 4. Pigs from small litters are not much, if any, larger at weaning time. The only gain is in the sow, as she usually loses less flesh in the suckling period.

Objectionable odors and flavors in milk can be prevented by removing from the animal's diet the feed which causes this trouble. The most pronounced flavors and odors are produced by garlic, onions, turnips, cabbage, rape, kale and certain weeds such as bitterweed and stinkweed. Sudden changes in rations to such feeds as green alfalfa, green sweet clover or silage may produce temporary flavors in the milk. Odors may also be absorbed from the barn by carelessly handled milk.

It is estimated the average case of tuberculosis represents a community liability of approximately $10,000. Less than 6 per cent of the families in which the disease occurs are financially able to meet this cost. Accordingly, the taxpayer is paying the bill for tuberculosis whether he realizes it or not.

It has been calculated that the normal offspring of 1 pair of common houseflies in 1 year would cover the entire surface of the earth to the depth of 43 feet if no factors inhibited their proliferation at a normal geometrical rate.