Pulpy kidney is still a sheep killer

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"PULPY KIDNEY"

IS STILL A

SHEEP KILLER

By F. C. WILKINSON, B.V.Sc., Veterinary Surgeon

ALTHOUGH considerable publicity has been given to methods of control by vaccination, numbers of sheep are lost every year in outbreaks of infectious enterotoxaemia—the disease commonly known as "pulpy kidney."

Under extreme conditions, this disease has been known to kill off up to 30 per cent. of a flock, but more commonly the losses range from 5 to 10 per cent. The cause of the disease is the rapid multiplication in the intestines of certain microbes which produce a powerful toxin or poison. This toxin is absorbed into the bloodstream and carried throughout the body, causing death within a few hours.

In most cases, affected sheep are found dead, without any preliminary symptoms being observed. The carcasses decompose rapidly and on being opened up, the kidneys will usually be found to have deteriorated to a dark red, pulpy mass—hence the popular term "pulpy kidney."

These three photographs show how the disease develops. The victim—a twelve-months-old ewe hogget—was found standing away from the flock in the morning and appeared "dopey."

The farmer had been losing a few sheep so he placed the animal in his utility truck and took it to a field day which was being held in the district.

On arrival, the sheep was semi-comatose (see Fig. 1.). It made no attempt to move when approached and, if forced to move, would fall over and could not get to its feet without assistance. It remained propped against a fence for about half an hour.

About an hour after Fig. 1 photograph was taken, the animal collapsed, was unable to stand when lifted to its feet and lay with the head turned towards the flank (see Fig. 2).

Two and a half hours later, the animal was in a deep coma, unable to sit up and death followed soon afterwards (Fig. 3).

A post-mortem was carried out half an hour after the sheep had died. Internally, the sheep appeared normal except for a small amount of blood in the sac around the heart and small haemorrhages on the surface of the kidneys. The kidneys were not typically pulpy because the sheep had been opened soon after death. If the sheep

Fig. 1—The hogget appears dazed and "dopy"

Fig. 2—An hour later the animal was unable to stand
In this case, to prove the cause of death, some of the semi-fluid intestinal contents were taken back to the Department of Agriculture laboratory in Perth. Here the solid material was removed and the fluid portion injected into a rabbit. **The rabbit died 15 minutes after being injected.** This proved that a toxin was present, as similar material from a healthy sheep or from a sheep that has died of another cause produces no ill effects when injected into a rabbit.

This is a typical story of a sheep dying of enterotoxaemia, the term **entero**—referring to the origin of the toxin in the intestines and the **toxaemia**—referring to the coma and rapid death brought about when this toxin is absorbed into the bloodstream.

Full details of the disease and its course are given in Bulletin No. 2438 which may be obtained free of charge from the Department of Agriculture.

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