

another farm, where a fairly solid block of 5 acres of ragwort standing about 3 ft. high was treated, approximately 22 lb. of sodium chlorate per acre was used. Although most of the plants on this area were in bloom, the effect of the spray was such that all were killed and no seed ripened, as would have been the case had the plants been cut and allowed to lie. This is important, preventing, as it does, reinfestation by seeds.

The work carried out clearly indicates that spraying with chlorates is much faster than either cutting or pulling, and the expenditure in material is amply recovered in the lesser labour involved. In addition, the chlorates definitely kill, and therefore give promise of providing the farmer with a method whereby the elimination of ragwort may become possible.

The foregoing matter may be regarded as preliminary. More definite information and instructions will be given in a further article to be published shortly in the *Journal*.

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## ANTE-NATAL DEFORMITY OF LAMBS.

### A PRELIMINARY INVESTIGATION IN OTAGO.

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FOR several seasons farmers in parts of Otago have been reporting a serious loss at lambing-time from deformed dead fœtuses. An opportunity was recently afforded, during an investigation into mortality of lambs from so-called pulpy kidney, to obtain definite information on the subject, together with specimens and histories, from a number of the farmers concerned.

Regarding the type of monstrosity, there is only a rudimentary mandible, shown as two rounded protuberances at the base of the skull. The inferior maxilla is overshot and gives the general appearance of a seagull's head. The legs are shortened and often of different sizes, but have the correct number of bones. The spinal column is arched, and some of the cervical vertebræ are fused. The wool has grown normally, but the whole fœtus is expelled with the membrane. Many ewes have difficulty in lambing in such cases. Frequently there are twin lambs, the one deformed, the other apparently normal but very often with little stamina. Many lambs born alive in affected flocks are unable to use fore or hind limbs, and die from starvation before the third day. Where the farmer has to give help to a lambing ewe it must be done with the utmost aseptic precaution, or the ewe may die from septicæmia. Many ewes are unable to lamb at all and have to be destroyed. A post-mortem examination of such a case shows intense œdema of the uterus and uterine horns, and especially of the uterine cotyledons. There is often a large quantity of peritoneal fluid, the result of the œdema.

Microscopical sections of the organs of a ewe gave results as follows: Pituitary body: The posterior portion contained hæmorrhages which may or may not have been due to rough excision of the gland. The anterior portion appeared intensely congested. Uterine wall: Very much