

Molybdenum Poisoning in Cattle on Pumice Land and Its Control by Injection of Copper

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COPPER deficiency in beef animals has been evident in some areas in New Zealand in greying of the coats of Aberdeen Angus cattle and unthriftiness. The condition can be prevented by increasing copper supplies to the animals, and effective and cheap control of the disease has been achieved by a method of subcutaneous injection of copper compounds arising from research into the disease by the Wallaceville Animal Research Station. Copper cerates for treating animals can now be bought and farmers can get advice on their use from veterinarians or Livestock Instructors.

ABERDEEN ANGUS yearlings which graze over some of the pumice hills near Wairoa do not have the deep black coats characteristic of their breed. The black is replaced to a varying degree by grey. In slightly affected animals the grey occurs only round the eyes, like a spectacle frame; in more severe cases much of the coat is mottled grey-black; and in very severe cases the whole coat is grey and has a dull, lifeless look. The severely affected animals are under-sized and unthrifty, but the less severely affected ones do not show any marked failure of growth or lack of thrift.

The disease is of most importance in weaners, for calves under 3 months

of age and most animals over 18 months seldom show any signs. Some of the breeding cows, presumably among those who have borne a calf regularly each year, show greying, but not many lose condition. The main economic loss is therefore from the effect on weaners and comes chiefly through reduction in selling price of stunted animals and from occasional deaths, especially in the winter after weaning. The incidence of the disease varies from year to year. In some years only an odd weaner is affected and in others 25 per cent. or more are so poor that they are drafted and sold as culls; the remaining animals are below desired size.

The condition is associated with a slight deficiency of copper and an excess of molybdenum in the fodder which together have the effect of pro-

ducing a copper deficiency in the animals. Table 1, on page 219, shows the pasture composition from one property where greying occurs and shows also the copper contents of livers and of blood samples taken from a random selection of animals on that property. It will be seen that the pasture is much higher than normal in molybdenum and that the livers and some of the blood samples are much lower than normal in copper content.

Method of Supplying Copper

The greying and unthriftiness can be prevented by increasing the copper supplies of the cattle, but the way to do this economically was at first something of an enigma. Topdressing the pasture with copper salts would have been satisfactory except for the cost. Both sheep and cattle are carried on affected farms, but the sheep do not need extra copper and any financial return for the outlay on topdressing would come only from improvement in the cattle. As might be expected, sheep are in the majority and cattle are carried in low concentrations. For instance, on one farm of 300 acres there are 200 breeding cows, and it is the progeny of these 200 cows

▼ Slightly affected animals show grey round the eyes.

▼ Normal animal.

