STUDIES OF CASTRATION AND TAILING IN YOUNG LAMBS; INFLUENCES OF DIFFERENT METHODS ON ACUTE DISTRESS RESPONSES.

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ABSTRACT

An investigation of the acute effects of several methods (rubber rings, knife and docking iron) of castrating and tailing 4 to 5 week old lambs was performed. The investigation consisted of a study of certain anatomical aspects of the sites of castration and tailing, experimental validation of the behavioural responses as indices of distress, ranking of the various methods of castration and tailing according to the acute responses and testing of the effects of handling on lambs castrated plus tailed with the knife.

The innervation of the external genitalia and the tail was described and the pattern of innervation was discussed with respect to castration and tailing.

The behaviour elicited by castration and tailing was dependent upon the method used. Following rubber ring application the behaviours exhibited were increased activity, increased recumbency of which a high proportion was lateral, and these behaviours were associated with elevated plasma cortisol concentrations and are therefore suggested to be indicative of distress.

After use of the knife or the docking iron abnormal standing/walking behaviour was associated with elevated plasma cortisol concentrations and therefore appeared to indicate distress. The behavioural and plasma cortisol responses continued beyond the 4 hour observational period of the first experiment so a second experiment was performed. It demonstrated that the response to castration plus tailing with the knife approached completion at 8 hours. Handling of lambs to effect blood sampling did not appear to significantly affect the response.

Ranking of the methods of castration plus tailing, castration only and tailing only showed that the use of the knife was apparently more distressing than any other procedure. Apparently less distressing than the use of the knife but similar to each other were castration plus tailing with the rings, castration only with the ring, short-scrotum plus tailing with the rings and castration with the ring plus tailing with the docking iron. Tailing only with the ring and tailing only with the docking iron were apparently as distressing as handling with jugular venipuncture, although it is

suggested that the quality of the distress apparently experienced would have been different.

Thus in order to minimise the acute effects on lambs, there is evidence that the best methods are as follows.

1. For castration plus tailing: castration plus tailing with the rubber rings, short-scrotum plus tailing with the rubber rings or castration with the rubber ring plus tailing with the docking iron.

2. For castration only: castration only with the rubber ring.

3. For tailing only: tailing only with the rubber ring or the docking iron.

However there are other factors to be considered in conjunction with the above recommendations, and these are discussed.

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