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EFFECTS OF MARKING METHOD, AGE AT MARKING AND AGE AT MULESING ON THE GROWTH RATE OF LAMBS

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Summary

The effects of marking method, age at making and age at mulesing on subsequent growth rates of lambs were assessed in two flocks in western Victoria. In both flocks there were no significant differences in death rate as a consequence of marking or mulesing treatments.

In a Polwarth flock, marking or mulesing at 5 days or 5 weeks temporarily reduced growth rates of lambs, but their subsequent liveweights at 5 months or older were not significantly different.

In a fine-woolled Merino flock, growth rates of lambs were not affected by the method of marking (knife or rubber rings) or the age at mulesing.

I. INTRODUCTION

In the Australian sheep industry lambs are commonly marked at ages ranging from'2 to 6 weeks. Lamb-marking includes the castration of male lambs and the tail-docking of both male and female lambs to reduce soilage of breech wool and assist in control of fly strike. In addition, the modified mules operation (Graham, Riches and Johnstone 1941) can be performed at lamb-marking time to reduce fly strike.

Losses in newborn lambs are substantial in western Victoria and investigations have been made on systems of intensive lambing involving the provision of shelter during lambing. Under these conditions the opportunity arises to mark and mules at 4 to 5 days of age when the lambs and their dams are commonly released to pasture.

Observations were undertaken to compare the influence of age at marking and mulesing, and marking method on lamb growth rate.

II. MATERIALS AND METHODS.

Two flocks comprising 4 to 6 year old Polwarth ewes (Flock A) and 3 to 5 year old fine-woolled Merino ewes (Flock B) lambed in May-June, 1970 on adjoining properties in similar intensive systems of lambing (Lear, Clarke, O'Brien and Glassford unpublished) about 140 kilometres west of Melbourne, Victoria. In both flocks the effect of age at mulesing on growth rates of lambs to various ages was studied. Additional treatments were age at marking in Flock A and method of marking in Flock B.

Lambs were weighed at 4 to 5 days of age as they left the lambing systems and randomly allocated to treatments. Marking and mulesing treatments as set out in Table 1 were imposed on Flock A. In Flock B the treatments imposed were marking at 5 days with either rubber rings or knife, mulesing at 5 days, mulesing at 5 weeks, and no mulesing.

Growth rates to 5 weeks and 5 months and liveweights at 5 months, 8 months and 12 months were compared in relation to treatment and the significance of differences were established using analysis of variance.

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Death rates were compared using the X^2 test.

TABLE 1

The effect of age at making and mulesing on lamb growth rate and liveweight in Flock A

No. of lambs	Treatments		Mean growth rate (g day^{-1})		Mean liveweight (kg)		
	Marking	Mulesing	5 days to 5 weeks	5 weeks to 5 months	At 5 months	At 8 months	At 12 months
88	5 days	5 weeks	221	122	29.2	28.4	28.8
90	5 days	5 months	228	130	30.0	28.2	28.5
91	5 weeks	5 months	246	120	29.6	27.3	28.0
		L.S.D.*	15	7	n.s.	n.s.	n.s.

* Least significant difference ($P < 0.05$).

III. RESULTS

In Flock A mean liveweights at 5, 8 and 12 months of age did not differ significantly between treatment groups. However, marking or mulesing significantly reduced growth rate ($P < 0.05$) during the interval following the operation (Table 1).

In Flock B, marking method or age at mulesing did not affect growth rates. Growth rates ranged from 145 to 148 g day^{-1} between 5 days and 5 weeks of age and from 91 to 97 g day^{-1} between 5 weeks and 5 months.

Death rates after marking constituted 2.2% and 7.3% of lambs observed in Flock A and B respectively and did not differ significantly with marking or mulesing treatments. There were 4% deaths after the combined mulesing and marking operation at 5 days of age, but no deaths after mulesing operations performed at 5 weeks or 5 months of age.

IV. DISCUSSION

The results indicate that lambs may be mulesed or marked at an early age without significantly affecting overall growth rates or survival. Although marking and mulesing resulted in a temporary reduction in rate of growth of fast growing Polwarth lambs, the timing of treatments had no effect on liveweights at 5 months of either Polwarth or Merino lambs. Donnelly (1973) has shown that Merino lambs mulesed and marked at 1 to 6 weeks of age grew faster to 6 months than lambs marked but not mulesed. He also showed that reduced liveweight gain, lower wool production and lower fertility were consequences of mulesing at 10 months rather than at marking time.

The lack of difference in growth rates of lambs after marking with the ring or knife is in agreement with the results of Sinclair, Savage and Wood (1950).

Marking and mulesing of lambs at a young age may have a number of practical advantages by fitting in with other husbandry operations such as vaccination of lambs and post-lambing drenching of ewes.

The authors conclude that it is practicable and desirable for producers using intensive systems of lambing to incorporate early marking and mulesing into their management systems.

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