

EFFECT OF PIZZLE DROPPING AND TESTOSTERONE PROPIONATE TREATMENT ON PRODUCTION OF MERINO WETHERS

R.S. MARCHANT* and S.G. BURBIDGE**

Grazing of wethers on improved pastures is limited by incidence of sheath rot (ovine posthitis) and urine stain of the belly wool resulting in flystrike.

An evaluation of production from Merino wethers following pizzle dropping (Donnelly 1980) and testosterone propionate implants (Rope1 (R)) (Southcott and Royal 1971) was made during 1983/84.

Four treatment groups of 100 finewool Merino wethers were set stocked on exceptionally good phalaris/subclover pasture for 12 months. A 2x2 factorial design incorporating pizzle dropping (PD) and Rope1 (R) implanted at 12 months (Spring 83) and 18 months of age (Autumn 84) was commenced after shearing in September 83. Live weights (LW), urine stain at crutching, flystrikes on belly, greasy fleece weight (GFW) and pre-sale testing plus additional measurements on bulk fleece lines of each group were recorded.

(Total liveweight gain kg)	PD- R-	PD+ R-	PD- R+	PD+ R+
LW Aug/84 (in brackets)	52.7(21.7)	52.8(22.1)	55.5(24.5)	57.4(26.4)
%Flystrike (Stain) on Belly	25(90)	3(45)	8(74)	1(42)
GFW(Clean AAAM)/head-kg	5.55(3.11)	5.74(3.30)	5.92(3.30)	6.01(3.38)

Live weight gains were significantly increased by Rope1 treatment. Greasy and clean wool weights were increased by pizzle dropping and Rope1 treatments individually and additively. Reduced bellystrike, resulting from decreased urine stain, probably accounted for increased live weight and wool weight from pizzle dropping alone. Fibre diameter, yield, staple length and strength were similar for all treatments.

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*Dept. Agriculture, Goulburn, N.S.W. **Agropraisals Pty. Ltd., Bigga, N.S.W.

CHANGES IN INTAKE AND SITE OF DIGESTION AFTER WILTING
IN CLOVER-BASED PASTURES IN WESTERN AUSTRALIA

G. MATA, J.B. MACKINTOSH and R.J. MOIR

In Mediterranean climates, pasture wilting following the cessation of effective rainfall is associated with abrupt changes in the chemical composition of the pasture, which can lead to a decrease in the digestibility of nutrients. To determine whether the decrease in digestibility of nutrients is associated with a change in the site of their digestion, four Merino wethers were fed a clover-based pasture harvested at four times: spring flush (14/09/83); wilting (3/10/83); post wilting (25/10/83); maturity (7/11/83). Nutrient flows at the duodenum were estimated using a double marker technique with ^{51}Cr -EDTA and ^{103}Ru -phenanthroline as fluid and particulate markers.

The organic matter (OM) digestibility for each harvest in order was: 75.0, 71.7, 68.2, 62.3 per cent. The digestible OM intake (g/d) declined after wilting (629, 603, 563, 526; $P > 0.05$), while the OM digested in the stomach declined with wilting (487, 375, 292, 327; $P > 0.05$). This resulted in a decline at wilting in the percentage digestible OM digested in the stomach of 77.0, 62.1, 51.7, 62.2 ($P > 0.05$). The decline in OM digested in the stomach prior to a decline in digestible OMI indicates that compositional changes in clover-based pastures after wilting are associated with marked changes in both intake and the site of digestion of sheep. The relationship between stage of maturity and wilting time as it affects subsequent composition and utilization by sheep requires further investigation.

School of Agriculture, University of Western Australia, Nedlands WA 6009.