

WINTER CLEANING OF PASTURES AND SHEARING REDUCES SEED CONTAMINATION IN LAMBSKINS

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Vegetable matter contamination of either burr or grass seed is the major cause of downgrading of sheep and lamb skins in Australia. Some seeds can work through the wool and penetrate the pelt and carcase, causing severe damage. Shearing can reduce the pelt damage caused by barley grass (*Hordeum* spp) seed penetration of the skin (Holst *et al.* 1994) but shearing crossbred lambs is rarely profitable. This study investigated pasture and grazing management as an alternative to shearing to reduce or eliminate the seed contamination of lambskins and increase returns to producers.

Five month old Poll Dorset/Border Leicester x Merino cryptorchid and ewe lambs (n=160) were randomly allocated to two shearing treatment groups (shorn and unshorn) and two pasture treatments (sprayed and unsprayed), with 40 lambs per treatment group. Lambs in each treatment were divided between four plots of one hectare in size to give a stocking rate of 10 lambs/ha. The unshorn lambs were key hole crutched to remove any dags, and wigged to remove facial wool whilst the remaining lambs were shorn in early October 1995. The pasture was treated with 300 mL/ha of Fusilade 212 ® (Fluazifop-p-butyl 212 g/L) in late August 1995. The content of barley grass in the sprayed pasture was reduced from 13% to 2% of the overall pasture composition prior to the commencement of grazing. Lambs grazed the sprayed and unsprayed pasture treatments for two months starting in early October 1995. All lambs were slaughtered in early December 1995, and the skins identified with tags and tattoos. Seed counts in the wool and the flesh side of the pelt were conducted as described by Hopkins *et al.* (1995). The skins from shorn lambs were salted and commercially graded as woolskins, whilst the unshorn lambskins were fellmongered and the pickled pelts were graded commercially.

At the commencement of the experiment there was no vegetable matter contamination in the wool, as detailed by the Australian Wool Testing Authority (Vegetable Matter Base 0.1% for all lambs). After slaughter, lambs that were shorn had a significantly lower ($P<0.006$) number of seeds in the wool side of the skin compared with those that were unshorn (15.9 vs 63.5 seeds/dm², respectively).

Lambs that were unshorn and grazed the unsprayed pasture had a significantly greater ($P<0.05$) number of grass seeds in the flesh side of the skin compared with the unshorn lambs on sprayed pasture, shorn lambs on unsprayed pasture and the shorn lambs on sprayed pasture (42.8, 7.2, 3.0 and 1.6 seeds/dm², respectively). Skins from shorn lambs had a significantly lower ($P<0.025$) number of seeds in the flesh side of the skin compared with those that were unshorn (2.3 vs 25.0 seeds/dm², respectively). Skins from lambs that grazed the sprayed pastures had significantly less ($P<0.04$) seed in the flesh side of the skin compared with those that grazed the unsprayed pastures (4.4 vs 22.9 seeds/dm², respectively).

There was no significant difference in the commercial woolskin grades for the shorn lambs that had been grazing either the sprayed or unsprayed pasture. A significantly greater ($P<0.002$) proportion of pelts from lambs that grazed the unsprayed pasture were graded thirds due to seed damage than those from lambs on sprayed pasture (40.0 vs 3.5%, respectively).

Winter cleaning of pasture, by herbicide application, is an alternative to shearing for reducing seed contamination and can increase the marketing options for lambskins. Shearing prior to grazing of pasture entering the seed set phase is the most effective means of reducing seed contamination of lambskins. Winter cleaning also reduces seed contamination of lambskins but not to the same extent as shearing.

HOLST, P.J., HALL, D.G and HEGARTY, R.S. (1994). *Proc. Aust. Soc. Anim. Prod.* **20**, 148-151.

HOPKINS, A.F., CAMPBELL, I.P., MARKS, N., MANIFOLD, F. and PHILLIPS, M.L. (1995). Final Report, Meat Research Corporation Project DAV 093.