

DPI Naturally Victorian Initiative

Health, well-being in organic lamb management

Combining highly productive pastures and best management practice is a key component contributing to the health and well-being of young sheep. Livestock health and well-being are critical in organic production systems.



By MICHELLE SMITH

THE DEPARTMENT of Primary Industries, through the Naturally Victorian Initiative, has continued to support the organic red meat industry by developing the Organic Prime Lamb project.

This project sought to compare the effects of two different pasture systems for finishing organic lambs. The first pasture system was based on an annual pasture consisting of annual ryegrass and subterranean clover.

The annual pasture system was used to demonstrate the typical production system practised in south-eastern Australia, where lambs born in autumn (April) are weaned onto clean pasture at 10-12 weeks of age.

The second pasture system was based on a perennial pasture mix (lucerne, phalaris, plantain and chicory). Lambs born in August were weaned onto the perennial pasture mix in late spring at 10-12 weeks of age.

The perennial pasture mix (based on summer- and winter-active species) was selected to help improve farmers' production through more consistent feed supply that offered the potential to extend the lamb-finishing period.

Evidence from organic lamb producers and processors in Australia suggests the export market for organic lamb is substantial. One barrier to meeting this market is a lack of consistent supply and quality.

Another concern farmers have identified is management of internal parasites in sheep. Controlling internal parasites is particularly challenging in the high-winter-rainfall areas of south-eastern Australia, where traditional man-

Two inquisitive lambs surviving on what feed was left in the perennial pasture last December.

agement has been based on drenching.

Young lambs are very susceptible to infection due to slow development of their immune system. Some evidence suggests the immune response can be improved through increased supply of protein.

The project also investigated the impact of supplementing protein to weaned lambs based on the two different pasture-based production systems.

The project ran over two years (2005 and 2006) and produced two groups of lambs from each system. Half of the lambs in each group received a protein supplement of organic soybean meal at 142 grams a day.

Lambs were monitored for growth and their potential worm burden to determine the impact of protein supplementation in a grazing system. Internal worm burdens were measured through Faecal Worm Egg Counts (FWEC).

WHAT WE FOUND

Annual pasture system: The lambs grazing the annual pasture were sold around November in 2005 and 2006, with similar weaning weights and carcase weights in both years.

However, the 2006 lambs took an additional three weeks to reach target weight. This additional time was due to reduced growth rates, as mid- to late-spring rainfall failed to eventuate and, accordingly, pasture growth declined.

A 2.9 tonne dry matter per hectare decline in pasture was observed over October and November last year compared with the same period for 2005. The dry spring last year also led to a lower crude protein and metabolisable energy content than in 2005.

In both years, lambs supplemented with protein had a significantly higher growth rate for the period of the grazing study.

Perennial pasture system: Lamb performances on perennial pasture in 2005 and 2006 were similar to that of the lambs grazing the annual pasture. The reduced rainfall last year also resulted in a decline in the perennial pasture growth and nutritive value over the grazing period of the experiment, compared with 2005.

Last year, the lambs' overall growth rates (weaning to slaughter) were reduced (257g/day in 2005 versus 203g/day last year), with lambs taking an additional six weeks to finish.

Under favourable conditions in 2005, protein supplementa-



Organic lamb chops ready for sale.

tion significantly increased lamb production by increasing liveweight and carcase composition (weight and fat depth). This was not observed last year.

This result is interesting, as one would expect the group of lambs supplemented with protein to show greater improvement when environmental conditions were tougher.

One answer could be that the environmental conditions were so severe, they may have compromised expression of the protein supplement on lamb performance, with average growth rates (final three weeks before slaughter) of 82g/day and 70g/day with lambs supplemented with and without protein, respectively.

Faecal worm egg counts (FWEC): Results obtained from the FWECs were inconclusive due to variability of individual counts. FWECs were moderate to low throughout the experiment in both pasture systems regardless of protein supplementation.

This experiment provides some evidence that when good grazing management practices are employed in short-term lamb finishing systems, protein supplementation is unlikely to further reduce internal parasite burdens.

WHAT IT ALL MEANS

Alternative approaches are required to manage the health and well-being of our livestock. In this study, additional protein for internal parasite management did not affect faecal egg counts.

Farming systems compromised by low nutritional pastures may benefit from protein supplementation within an integrated parasite management program. Protein supplementation for parasite management cannot, and should not, replace best grazing management practices.

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