

## ORGANIC STOCK MANAGEMENT

### Key points

- Stock, and pasture, have an essential role in an organic cropping farm's rotation by restoring soil fertility and structure that is depleted by cultivation and cropping.
- On organic farms, stock need to be managed to minimise the risk to their health from internal and external parasites.
- Both internal and external parasites affect stock in good condition less than those in poor condition (see Organic Updates 5 and 6).
- Internal parasites can be managed by: using sheep and cattle breeds which are resilient to parasites, selecting individuals that have higher resistance, optimal mineral nutrition, clean grazing, high feed intakes, and late weaning.
- Good grazing management to reduce the worm burden includes having a high ratio of cattle to sheep. Many farmers recommend a holistic grazing regime whereby stock are grazed intensively on small areas and shifted frequently (see Organic Update 14).
- The dip called Extinosad (based on a bacteria which eats lice) is being used to control lice with very good results (however permission must be sought for its use on Biogro certified stock).
- Other lice management techniques include frequent shearing, high quality feed, use of permitted dips, oils and powders such as sulphur, pyrethrum and olive oil.
- Flystrike needs to be prevented as far as possible. Shearing, and crutching once or twice during the summer is often necessary. Lush feed and ryegrass with endophytes should be avoided if possible.

Stock and a restorative pasture phase are an integral part of an organic cropping regime. Although stock on a cropping farm provide lower returns than crops, organic crops need legumes, organic matter and animal manure to replenish the soil's supply of nitrogen and minerals which are depleted during the cropping phase. The microbes in dung also speed up the cycling of organic matter and nutrients. This restorative phase is therefore essential to cropping and provides income in the process.

### Breed important

Without being able to regularly drench sheep for internal parasites, breed becomes important. Once a resistant breed has been chosen, individuals can be selected for resilience to parasites, high fertility and easy care.

### Late weaning and quality feed

Despite access to good feed, lamb growth rates can slow down at weaning. To prevent this, many farmers aim to not wean lamb until most of the lambs in any given mob are sold. The advantages of this are bigger sale weights, healthier lambs, and earlier finishing. The disadvantages are a lower stocking rate.

Parasite-free grazing is probably the most important factor for an organic sheep operation to work well. Cropping farmers can maximise the area in parasite-free new pasture by undersowing some of the larger scale crops with basic pasture mixes which can be

grazed for a couple of months or even a year or more. Many farmers graze holistically, that is, grazing small areas intensively and shifting often. The ratio of sheep to cattle is also important in reducing worm egg numbers.

In summary, the internal parasite problem is managed by selecting for resilience to parasites, clean grazing, high feed intakes, and late weaning.

### Lice management

There appears to be a strong correlation between resistance to internal and external parasites, so individuals can be selected which show this resistance. Shearing twice a year has been relied on to manage lice (autumn is a good time). Low lice levels seem to be tolerated by sheep unless they come under stress, however lice on ewes can infect lambs (which have lower tolerance). A high protein/high sulphur diet is thought to be useful (e.g., brassicas with extra minerals).

### Strategies to combat lice

Many methods have been used to organically control lice in sheep, with only limited success. These include dusting with fine elemental sulphur every 2, 3 or 4 months; spraying wettable sulphur around the crutch; spraying sheep with pyrethrum after shearing. (Note pyrethrum is a restricted input and washes off after the first rain.) Some farmers use oil (e.g., olive or tea tree oil) poured along the spine. Salt water dips have also been used.

Farmers report greater success with a recently developed dip called Extinosad. This treatment is based on a bacteria which eats the lice. For best results it is used several weeks after late autumn shearing. Extinosad is not an approved product – licensees need to apply directly to the BioGro office for permission to use.

**Flystrike management** is based on prevention. Sheep can be shorn once and crutched once or twice during the fly season. Bales of pea vinnings or straw can be given to provide extra dry matter to keep faeces firm if stock are grazing soft lush pasture. Dry,

clean wool minimises the risk of flystrike. Ryegrass varieties with endophytes should not be used in the pasture mixes.

*Also see Organic Updates 5 (Animal health – mineral nutrition) and 6 (Animal health – internal parasites).*

*This update is based on information from a Technology Transfer meeting in 2000 and from Raymond Garb's presentation to a field day at Kowhai Farm, November 2006.*