Summary

- The small brown stomach worm (Ostertagia) is the most harmful cattle parasite in this region.
- Ostertagia reduces weight gain in yearlings during spring.
- To control Ostertagia, drench spring calving herds at weaning and again in July. Rotate to ‘worm-safe’ pasture after the July drench.
- Routine drenching of mature beef cattle is not indicated.
- Drench cattle grazing ‘flukey’ pastures in May/June and September, with a third drench in December on high-risk properties.

Grazing management

- Graze yearlings on worm-safe pasture during spring to improve weight gain.
- Worm-safe pastures can be prepared by grazing paddocks with sheep or cattle older than 18 months from the previous summer.
- Drench yearlings in December if they do not graze worm-safe pasture during spring.

Economics

- Annual cost of strategic Ostertagia control in a 100-cow, spring calving herd is $1,240.
- Yearlings or sale stock must gain an extra 8.2kg in weight to break even on drench costs.
- The combination of a late July drench for weaners with a move to worm-safe pasture can increase weight gain by 30–60kg per head.

Significant parasites

- Small brown stomach worm (Ostertagia ostertagi)
- Liver fluke (Fasciola hepatica)

Other parasites

- Small intestinal worm (Cooperia oncophora) in early weaned calves
- Nodule worm (Oesophagostomum radiatum)
- Biting lice (Bovicola bovis) and sucking lice (Linognathus vituli, Haematopinus eurysternus, Solenopotes capillatus)

Geography

- Moist, temperate climate
- Uniform rainfall with long, warm summers and cool to cold winters
- Annual rainfall between 550 and 1,400mm
- Most areas have rainfall between 500 and 700mm

Production system

- Breeding and finishing area with calves born in autumn and spring
- Most cattle sold at 16–24 months of age to the domestic supermarket trade or feedlots
- Most properties graze both sheep and cattle. Cropping increases in the flatter, western areas
- Cattle are mainly British breeds and their crosses

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Calendar for worm and fluke control

<table>
<thead>
<tr>
<th>Age group</th>
<th>Dec–Feb</th>
<th>Mar–May</th>
<th>Jul</th>
<th>Sep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaners</td>
<td>✓ Weaning</td>
<td>✓</td>
<td>✓</td>
<td>(✓) May be required if previous drench was not an ML</td>
</tr>
<tr>
<td>Yearlings/1st calvers</td>
<td>✓</td>
<td>✓ Pre-calving</td>
<td>(✓)</td>
<td></td>
</tr>
<tr>
<td>2nd calvers</td>
<td>✓ (✓) Pre-calving</td>
<td>✓ (✓) Pre-calving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult cows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulls</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Liver fluke control

- All weaned cattle (Fi)
- Fi
- (Fi)
- Adult and immature fluke present. This drench may not be needed on properties with a low fluke risk.
- Only adult fluke present. Use a drench other than triclabendazole to help slow the development of resistance.
- ML Macrocyclic lactone
**Calendar for worm and fluke control**

**Spring calving herds**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Mar–May</th>
<th>Jul</th>
<th>Sep</th>
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</tr>
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<td>2nd calvers</td>
<td>✓</td>
<td>✓ Pre-calving</td>
<td>✓</td>
<td>✓</td>
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<tr>
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<td>✓</td>
<td>✓ Pre-calving</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bulls</td>
<td>✓</td>
<td>✓ Pre-joining</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Liver fluke control</td>
<td>✓</td>
<td>✓ Pre-joining</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**All weaned cattle**

- Fi: (✓)
- F: (Fi)

**Note:** ✓ indicates treatment is recommended. ✓✓ indicates previous treatment is required.

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**SMALL BROWN STOMACH WORM (Ostertagia ostertagi)**

The most important parasite in this region is the small brown stomach worm. It is present in all herds and dramatically reduces growth rates. Actual losses from heavy *Ostertagia* burdens (scouring, weight loss and death) are rare, but production losses (reduced weight gains) in weaners and yearlings occur on many properties each year, particularly in the wetter, eastern areas.

Excessive worm burdens may be picked up from pastures contaminated by weaners in autumn and winter and usually occur in late winter and early spring after weaning. During spring an increasing proportion of *Ostertagia* larvae picked up from pasture become inhibited in their growth in the lining of the stomach. Inhibited larvae resume their development from inhibited larvae, produce the autumn rise in pasture larval numbers.

After the initial autumn rise, cold winter temperatures limit larval numbers. The warmer temperatures of late winter and early spring give rise to a rapid increase in larval numbers, until their eventual decline with the hot, dry conditions of late spring.

**Seasonal trends**

The worm levels on pasture follow a reliable seasonal pattern (see ‘Small brown stomach worm’ factsheet).

Larval numbers on pasture are very low over summer due to the hot, dry conditions. Small numbers of worm eggs and larvae survive in dung pats between November and March to be released by the ‘melting’ effect of autumn rains. These larvae, in combination with eggs derived from adult worms resuming their development from inhibited larvae, produce the autumn rise in pasture larval numbers.

**Control**

Maximising weight gains involves reducing exposure of weaners and yearlings to high levels of infective larvae on pasture during late winter and early spring. Yearlings born in the previous autumn and weaners should be drenched in March to May depending on weaning time. In late July, a second drench should be combined with a move to a worm-safe pasture. Worm-safe pasture is best prepared by grazing from the previous summer with sheep or cattle older than 18 months.

**LIVER FLUKE (Fasciola hepatica)**

Liver fluke is present across most of the region but its lifecycle’s requirement for wet marshy areas means its impact varies between properties and even between paddocks.

Clinical disease is most commonly seen in weaned cattle less than three years of age in the late autumn and winter. During dry summers stock pick up fluke as they graze ‘flukey’ areas such as swamps, springs and creeks in search of green feed. The risk increases until autumn rains generate fresh green feed and stock cease grazing in ‘flukey’ areas.

Symptoms include reduced weight gain, weight loss and rarely pale mucous membranes, bottlejaw and death.

**Control**

Before fluke treatment is undertaken the presence of liver fluke on the property should be determined in consultation with a veterinarian.

Denying stock access to fluke habitats by fencing can prevent liver fluke infection. Fluke habitat can also be reduced with drainage, re-vegetation and fencing of creeks and soaks.

Where cattle graze fluke habitats, two drench treatments are usually required. The first is given in May to eliminate fluke that have been picked up during summer. The second treatment in September is designed to remove adult fluke that can contaminate pasture in spring. On high-risk properties an additional treatment in December may be required to remove high fluke burdens acquired during the spring.

**LICE**

Although lice are common in the region, trials indicate that light infestations of lice do not reduce weight gains but heavy infestations can. Losses may also result from poor appearance at sale and damage to fencing and hides from rubbing.

**Seasonal trends**

Lice numbers increase from late autumn through to early spring and then decline with increasing temperatures in spring and summer. Heavy infestations are usually seen in cattle in poor body condition. In most cases the lice are a consequence, and not the cause, of poor nutritional conditions.

**Control**

Lice problems are usually resolved by increasing feed availability and the rise in temperature during spring. Where cattle are suffering, or the rubbing is resulting in hair loss or skin damage, treatment may be required.

Upon the diagnosis of a lice outbreak producers should look for, and attempt to remedy, the underlying cause of the stress.

Lice are seldom a problem in herds using ML drenches as part of their *Ostertagia* control program.

Where lice are an on-going problem a single treatment in late autumn will usually provide effective control. Many producers are tempted to use an ML drench to control lice. This is costly and can increase the risk of the development of resistant parasites. Specific lice control products can be more effective than MLs and integrated pest management (IPM) principles indicate it is preferable to use a narrow spectrum or specific product for each pest.