

## Bloat

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### What is bloat?

Bloat is a risk when animals are grazing young, lush pasture, particularly if the pasture has high legume content (clover, medics or lucerne). Ruminant animals produce large volumes of gas during the normal process of digestion. This gas either is belched up or passes through the gastrointestinal tract. If something interferes with gas escape from the rumen, bloat occurs.

Natural foaming agents in legumes and some rapidly growing grasses cause a stable foam to form in the rumen. Gas is trapped in small bubbles in this foam in the rumen and the animal cannot belch up the gas. Pressure builds up in the rumen causing an obvious swelling on the left side of the body.



Photo: Belinda Walker, NSW DPI

### Bloat in cattle

#### Signs of bloat

Cattle with bloat may display the following signs:

- distended left abdomen;
- no longer grazing;
- a reluctance to move;

- appear distressed – vocalise, eyes bulging;
- strain to urinate and defecate;
- rapid breathing – mouth may be open with tongue protruding;
- staggering.

In advanced cases the animal will go down. Death is rapid at this stage, and is due to the swollen rumen compressing the lungs, interfering with breathing and tissue oxygenation, and obstructing blood flow.



Photo: Belinda Walker, NSW DPI

### Treating cattle

#### Early/mild cases

Animals that are mildly affected can be treated orally with an anti-bloat preparation. After dosing, keep the animal moving to encourage the preparation to mix with the frothy rumen contents.

#### Moderately affected stock

Bloated animals starting to show signs of distress need veterinary attention. A stomach tube can be used to relieve the gas build-up. Anti-foaming agents can be delivered directly into the rumen through the tube. Moving the animal around after treatment is important.



## Severe cases

Animals that are severely bloated and distressed need rapid relief. This may be achieved by inserting a wide-bore trochar and cannula into the rumen high on the left flank (where the swelling is greatest). After gas and froth is released, an anti-bloat preparation is poured through the cannula into the rumen to help break down remaining froth/foam (dose according to label instructions – see 'Always read the label'). In emergency situations, vegetable oil (250–500 mL) or paraffin oil (100–200 mL) has traditionally been used.

In most cases of frothy bloat, a trochar and cannula will not be adequate to relieve pressure, and a 10–20 cm incision will have to be made using a clean, sharp knife. It may be necessary to scoop the frothy material out of the rumen by hand. In these emergency cases there is usually no time to wait for a vet to arrive, so stock owners will have to do this themselves. Veterinary attention is necessary to irrigate the abdominal cavity, clean and stitch the wound and give antibiotic treatment to prevent serious infection.

## Bloat in sheep

Bloat does occur in sheep but is less severe than in cattle. Bloat in sheep often occurs with enterotoxaemia (pulpy kidney), so it is wise to vaccinate against clostridial disease (5-in-1) before sheep go out onto lush pasture or when bloat occurs in the flock.

## Treating sheep

Treatment for sheep is the same as for cattle. At present only Tympanyl™ is registered for use in sheep. Traditional treatments include drenching with 50–60 mL of vegetable oil or paraffin oil. An oil or surfactant anti-bloat preparation registered for cattle may be used under written veterinary recommendation, usually at one-fifth of the cattle dose. Because sheep are small, it is possible to sit them on their hindquarters and massage the rumen to mix the oil and encourage belching. Emergency incisions into the rumen are rarely necessary.

## Prevention

When pasture is considered risky, bloat prevention options include the following:

- Restrict pasture intake by limiting grazing time or implementing strip-grazing.
- Fill animals on hay before turning onto pasture.
- Spray the pasture daily with pasture oil (see Tables 1 and 2).
- Drench each animal twice daily with an anti-bloat preparation or oil.

- Apply anti-bloat preparations twice daily onto the flank.
- Add bloat oil into the water supply.
- Use anti-bloat blocks or licks.
- Use anti-bloat capsules .
- If hand feeding each day, add liquid bloat preventatives or products containing monensin to the feed.

## Products available for bloat control and treatment

### Always read the label

Users of agricultural (or veterinary) chemical products must always read the label and any Permit before using the product, and strictly comply with the directions on the label and the conditions of any Permit. Users are not absolved from compliance with the directions on the label or the conditions of the Permit by reason of any statement made or omitted to be made in this publication.

## Products containing monensin

Monensin changes the ratio of volatile fatty acids produced in the rumen. Its main use is to improve feed efficiency. It also decreases rumen methane gas production and reduces the amount of stable foam produced during fermentation, therefore it can be used to prevent bloat.

### Important notes:

- **Monensin is extremely poisonous to dogs, horses and other equines.** Ingestion may be fatal. Care must be exercised to avoid accidental ingestion of monensin by these species.
- An overdose of monensin is toxic to cattle. Depending on the amount consumed, the signs of toxicity are:
  - decreased feed intake
  - poor growth
  - depression
  - death.

It is essential to follow label directions and accurately measure out the amount of monensin to add to feed on a weight basis. Thorough mixing and even distribution throughout the feed is essential.

- Never use monensin premix in combination with Elanco Rumensin® capsules.
- If dosing cattle with Elanco Rumensin® capsules in hot weather it is important to keep the capsules cool.

**Table 1. Animal treatments (cattle)**

Product	Description	Dosing instructions
BP bloat-ease	Liquid paraffin oil.	May be used as a drench (130 mL/head), or added to feed (100 mL/head), or applied to the flank twice daily.
Coopers <sup>®</sup> Teric bloat liquid	Alcohol ethoxylate teric	20–40 mL/head/day for prevention. May be added to feed with molasses or added to water (40 mL/15 L).
Bloataway preventative bloat drench	Alcohol ethoxylate	20–40 mL/head/day for prevention.
Tympanyl <sup>™</sup>	Contains emulsifiers, surfactants and oil-plant extract.	350 mL (cattle), 170 mL (sheep) as treatment for clinical bloat.
Bloat-rid	Contains animal, mineral and vegetable oils.	60–113 mL/head as a drench, flank dressing or pasture spray.
Nutrिमol <sup>®</sup> Bloat Master <sup>™</sup> water-soluble bloat treatment and preventative	Blue water-soluble liquid. May be used in water troughs, over feed, or in a drench gun.	For relieving clinical bloat, 25 mL is mixed with 200–300 mL warm water and given as a drench. For prevention, 5–12 mL on feed twice daily.
No-Bloat	Topical solution/suspension containing mineral and animal oil. May be applied to the flank or used as a pasture spray.	Flank application 60 g twice daily. Pasture spray 85 g/head/day.
Bloatenz Oral	Alcohol ethoxylate drench. May be added to water.	7–25 mL/head for prevention.
Bloat-Drench oral bloat control	Alcohol ethoxylate drench. May be added to water or molasses.	21 mL/head (to 42 mL/head in extreme risk situations) twice daily for prevention.
Bloatex	Mineral and vegetable oil. May be used as a drench, flank application or pasture spray.	Drench 113 mL/cow. Flank application 60 mL/head twice daily. Pasture spray 85 mL/head/day.

**Table 2. Animal treatments (cattle) – products containing monensin**

Product	Description	Dosing instructions
Elanco Rumensin <sup>®</sup> Capsule	Rumen capsule. Decreases rumen methane gas production.	1 capsule per animal at least 7 days before grazing risky pasture. Lasts approximately 100 days.
Moneco <sup>®</sup> 100; Moneco <sup>®</sup> 200	Used as an additive to feed. Must be thoroughly and evenly mixed throughout the ration.	For prevention of bloat, use at a rate of 25–33 mg/kg of feed for beef cattle, and 11–18 mg/kg of feed for dairy cattle.
Elanco Rumensin <sup>®</sup> 100; Elanco Rumensin <sup>®</sup> 200 Elanco Rumensin <sup>®</sup> Granular Elanco Rumensin <sup>®</sup> Technical	Used as an additive to feed. Must be thoroughly and evenly mixed throughout the ration.	For prevention of bloat, use at a rate of 25–33 mg/kg of feed for beef cattle, and 11–18 mg/kg of feed for dairy cattle.
PhibroMonensin 100; PhibroMonensin 400	Used as an additive to feed. Must be thoroughly and evenly mixed throughout the ration.	For prevention of bloat, use at a rate of 25–33 mg/kg of feed for beef cattle, and 11–18 mg/kg of feed for dairy cattle.
Monendox 100 BMP Monendox 200 BMP	Used as an additive to feed. Must be thoroughly and evenly mixed throughout the ration.	For prevention of bloat, use at a rate of 25–33 mg/kg of feed for beef cattle, and 11–18 mg/kg of feed for dairy cattle.

Table 3. Licks and blocks

Product	Description	Instructions
Blotliq	Contains alcohol ethoxylate.	One block / 15 head.
Rumevite <sup>®</sup> bloat block	Contains alcohol ethoxylate and vegetable oil.	One 20 kg block / 15 head. Replace as necessary.
Teric <sup>®</sup> bloat block	Contains alcohol ethoxylate.	One 15 kg block / 10 head. Lasts approximately 15 days.
Optimol bloat ADE block	Contains alcohol ethoxylate.	One 20 kg block / 10 head. Lasts approximately 20 days.

Table 4. Pasture treatments

Product	Description	Instructions
BP pasture spray anti-bloat	Mineral oil	100 mL/cow/day
No-Bloat	Mineral and animal oil	85 g/head/day
Bloat-Rid	Mineral and animal oil	60–113 mL/head/day
Bloatex	Mineral, animal and vegetable oil	85 mL/head/day
Bloat pasture spray	Paraffin oil	85 mL/head/day

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The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product name does not imply endorsement by NSW Department of Primary Industries over any equivalent product from another manufacturer.

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