

A guide to introducing grain to sheep and cattle

Grain and pellets can be cost effective supplements for sheep and cattle. These supplements need to be introduced gradually and stock monitored to avoid problems with grain poisoning (acidosis). This fact sheet provides a guide to introducing grains and pellets safely, symptoms of acidosis to look out for and treatment of affected animals.

SUPPLEMENTARY FEEDING OF GRAIN AND PELLETS

Grain and pellets are common supplementary feeds for sheep and cattle. They can have higher energy and protein levels than hay, making them attractive supplements for animals that have higher nutritional requirements, such as young growing stock, or females feeding young.

There are some risks when feeding grain to livestock if introduced too quickly, particularly cereal grains or any supplements that have high starch and low fibre content. The risks of acidosis can generally be minimised by careful management. If stock have not been fed grain or pellets before, it may take time for them to recognize and eat the supplement and so it can several weeks to get all stock eating the required ration safely.

It is important to:

- Introduce livestock to grain or pellets gradually
- Ensure roughage (fibre) levels are adequate by feeding hay or straw if pasture is limiting
- Monitor stock carefully for signs of acidosis
- Consider separating shy feeders and younger animals from more dominant animals to avoid uneven consumption.

Introducing grain to sheep and cattle

If all or most of the ration is to be supplemented, livestock should be fed with hay before grain is introduced. The hay can then be reduced over 2–3 weeks, as the amount of grain in the ration is increased.

Importantly, roughage (hay, straw or dry pasture) should always make up 30 per cent of the total ration for cattle and at least 10 per cent for sheep. When grain or grain-based pellets are the source of energy and protein in a diet, the roughage need not be of a high quality. Often straw and low-quality hay will suffice.

For cattle, introduce grain by:

- feeding 0.5 kilogram/head/day
- maintaining this amount until all cattle are eating some grain (one to three days), then
- increase the amount of grain by 0.5 kilogram/head every second day until the desired amount is reached.

For sheep, introduce grain by:

- feeding up to 50 grams/head/day for adult sheep and 25 grams/head/day for weaners
- slowly increasing to a full ration over about three to four weeks.

Table 1 provides a suggested program for safely introducing grain or pellets to sheep and cattle. This can vary, particularly if stock take longer to recognize and eat the supplement.

If supplying the total ration as hay and grain (no pasture), placing the grain on top of the hay in the initial phase can encourage stock to eat both the grain and hay.

Feeding frequency

Feed sheep and cattle daily during the build-up of grain rations. As soon as cattle are on a full ration and accustomed to eating grain, feed every second day (ensuring twice the daily quantity is supplied). Dry sheep can be fed on alternate days once on a significant ration and every third day once on a full ration. Weaners and lactating ewes should be fed daily

if the total ration is being fed and can also be supplied in a self feeder or as hay and grain on alternative days.

Experience has shown that every two days for cattle and three days for sheep is about the longest acceptable feeding interval.

Early weaned animals in poor condition or animals being fed for weight gain should be fed daily.

Table 1: A program for introducing grain/pellets into the diets of sheep and cattle.

Feeding days (e.g. Day 1, Day 2)	Frequency	Amount of grain per feed	
		Sheep: grams per head	Cattle: kilograms per head
1, 2	feed daily	50	0.5
3, 4	feed daily	100	1
5, 6	feed daily	150	1.5
7, 8	feed daily	200	2
9, 10	feed daily	250	2.5
11, 12, 13, 14	feed daily	300	3
15, 17	feed on alternate days for sheep, daily for cattle	600	3.5
19, 21	feed on alternate days for sheep, daily for cattle	850	4
23, 26, etc, gradually adjusted to suit final ration.	feed every third day for sheep, every second day for cattle	1,300*	4.5 (continue to desired amount per head)

SYMPTOMS OF ACIDOSIS

Animals with signs of acidosis may appear to stand away from the feed with a belly ache and will generally have scours.

Other symptoms to look out for include:

- little or no appetite
- weakness, staggering and lameness
- diarrhoea and bloat, and
- in severe cases, stock may appear dehydrated and be unable to stand.

GUIDE FOR INTRODUCING GRAINS AND PELLETS

The rate of introduction may vary depending on the type of grain and how accustomed the stock are to the grain or pellet.

Treating acidosis

Severely affected animals should receive veterinary treatment, while more moderately affected animals should be removed and fed a hay-only diet until they appear healthy. Mildly affected animals can be given a drench of sodium bicarbonate dissolved in water (1/4 to 1/2 cup of sodium bicarbonate) and may require several doses. Also seek veterinary advice for other treatments that may assist in recovery. Affected animals can be re-introduced to grain

using the same principles applied during the initial introduction.

OTHER CONSIDERATIONS

Take particular care when changing sources or batches of grain or pellets, particularly changing from one type of grain to another, e.g. barley to wheat.

Ideally, 'shandy' together the new batch of grain/pellets with the old batch for about a week. If it is not possible to mix the two grains together for a week, the rate of feeding of the new type of grain should be halved and gradually increased back up to target levels by increasing the rate of feeding as suggested in Table 1.

Additives

Cereal grains are low in calcium and so if these make up a high proportion of the diet, one to two per cent (1 -2 kilogram/100 kilogram of grain) of finely ground agricultural limestone should be added to the ration. Pellets may contain adequate calcium and require no additives. The limestone can be added onto the grain or provided separately as licks.

Sodium is deficient in most grains but may be adequate in the water but can also increase the palatability of the limestone when offered separately as a lick. One per cent (1 kilogram/100 kilogram of grain) of common salt (sodium chloride) should be added with the calcium.

MORE INFORMATION

For more information, the following resources are available online:

- Feeding Livestock website (feedinglivestock.vic.gov.au)
- Drought Feeding and Management of Sheep and Beef Books – practical guides to feeding and managing stock during drought and other times when pasture is limited.

Available at feedinglivestock.vic.gov.au or call 136186 for a copy.

For more information on agriculture recovery, please contact Agriculture Victoria on 136 186 or visit the Agriculture Victoria website:

<http://agriculture.vic.gov.au/agriculture/emergencies/recovery>

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