



# RUMINANT SUPPLEMENTATION

Some, but not all fertilisers, may be used in the preparation of licks, blocks and dry rations for ruminants. Incitec Pivot products that may be used in this way are Urea (Incitec Pivot Granular Urea, Prilled Urea and Stockfeed Urea), Gran-am and Muriate of Potash.

Incitec Pivot granular phosphorus fertilisers, i.e. DAP, MAP and SuPerfect, must not be used as animal supplements. They are too high in fluorine (F). Their use as such may cause fluorosis

## Urea

Urea is widely used as a non-protein nitrogen supplement for ruminants. Any grade of urea can be used for this purpose. Incitec Pivot Granular Urea does not dissolve as quickly as other grades due to its larger particle size. Extra agitation and mixing time are likely to be required if it is used in the preparation of solutions and wet licks.

Incitec Pivot Prilled Urea is imported into north Queensland, and is available ex Incitec Pivot's Distribution Centres in Cairns, Townsville and Mackay.

Incitec Pivot Stockfeed Urea is obtained by screening undersized granules out of Granular Urea at Incitec Pivot's manufacturing facility at Gibson Island in Brisbane.

## Pasture

Supplementation with urea is likely to be beneficial once the crude protein content of the diet falls below 8%.

At the onset of the dry season or in the early stages of drought, urea can be used to stimulate the appetite of ruminants and improve the utilisation of dry low quality feed. Ample roughage is essential for this to occur.

For beef cattle, a typical urea rate is 60 grams (g) per head per day. Cattle should be introduced to urea slowly by building up to this rate. Start with 15 grams/head/day initially, and increase by this amount weekly until the desired rate is reached. This not only applies to stock being introduced to urea for the first time, but also when there has been a break in the feeding program, e.g. due to wet weather.

## Feedlots

For cattle being finished in feedlots, a rule of thumb is that non-protein sources of nitrogen should not make up more than one-third of the crude protein in the diet, and that urea should not be added at more than 1% of the diet for palatability reasons.

## Gran-am

Incitec Pivot Gran-am (granulated ammonium sulfate) can be used as a source on non-protein sulfur.

About ten times as much nitrogen as sulfur is required in the diet or supplement. This ratio can be achieved by adding one part Gran-am for every five parts urea in the mix. The rate at which urea is administered can be reduced by about 10% to allow for the extra nitrogen in the Gran-am.

## Muriate of Potash

Supplementation with potassium may be necessary where cattle are finished on grain diets. Cereal grains are much lower in potassium than green feed, which contains more than enough potassium to meet animal requirements.

Incitec Pivot Muriate of Potash can be used as a source of potassium in feedlot rations.

Potassium bicarbonate is recommended where cereal grains are fed in high amounts and may be causing acidosis, as it acts as a pH buffer in the rumen.

## Urea Poisoning

While urea poisoning may be attributable to accident, poor management or faulty equipment, the most common causes are:

- Increasing the supplementation rate too quickly, especially when stock are hungry.
- Stock drinking concentrated solution off the top of dry licks after rain.
- Urea not being properly dissolved in wet licks.
- Stock being able to drink liquid mixture instead of licking it off roller drums.

## Advice

A more detailed Agritopic is available on this topic.

Professional advice should be sought on formulating supplements and rations, e.g. from animal nutritionists, as supplementation rates vary with the quality of the feed on offer and the class of animal.

Various publications are available from State Departments of Agriculture and Primary Industry on livestock supplementation.

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