

# tips & tools

## FEEDBASE & PASTURES



# Making phalaris-based pastures more productive and persistent

Phalaris is one of Australia's best temperate pasture species. It can produce a huge quantity of highly nutritious feed when managed correctly. It is also a perennial that survives some very harsh conditions.

## Tactics

### Late summer/autumn

Remove dry pasture residue by grazing pastures to 1,000kg DM/ha to assist germination of desirable annual species, such as sub-clover.

### Autumn (after break/opening rains)

Allow pasture to accumulate to 1,500kg green DM/ha (around 5cm) before heavy grazing. This allows leaf area to increase and encourages further growth of both phalaris and clovers. It may take up to six weeks.

Either defer grazing on most paddocks by feeding supplements to stock on a 'sacrifice area' or keep graze periods short using a four-paddock rotation until pasture accumulates. Begin with brief graze periods (three to four days) to prevent overgrazing the initial growth (for example, graze 500kg green DM/ha down to 400kg). As a feed wedge (accumulated and saved herbage) begins to accumulate, increase the graze period up to two weeks, with a six-week rest.

Maintain pastures between 1,000–1,500kg green DM/ha (around 3–5cm). In vigorous and mature pastures (with good plant density, adequate fertility and large plants), graze for two weeks with a four to six week rest to enable regrowth. Young pastures (less than two years old) should only be grazed lightly to allow phalaris to tiller and sub-clover to grow.

### Winter

Increase rest periods as growth slows to maintain pastures at between 500–1,500kg green DM/ha (around 1–5cm) to increase phalaris content or sustain winter-active varieties. In mature and vigorous pastures a rotation of two-week graze and six-week rest may be sufficient, while degraded pastures may need longer rest periods of 9–12 weeks.

## Key benefits

- Use seasonally specific tactics to optimise phalaris-based pasture production
- Apply grazing management to encourage establishment and production from phalaris-based pastures

Winter-active varieties on lighter soils are particularly vulnerable to overgrazing at this time.

Beware of phalaris dominance during deferred periods. If clover content declines, reduce rest periods or set stock for a season.

Care for young pastures by restricting grazing pressure to maintain more than 1,000kg green DM/ha. This will help control weeds, prevent stock from selectively grazing young phalaris plants, encourage tillering and maintain good sub-clover growth.

Control annual grasses and broadleaf weeds if invasion is severe. Spray-grazing and winter-cleaning, combining grazing with recommended herbicides, can be used.

## Spring

Vigorous phalaris stands need to be kept under control (less than 3,000kg green DM/ha, 15cm) to prevent rank growth, control annual grass, and encourage clover seed-set by minimising shading. Cut vigorous phalaris pastures for hay early to mid spring, before most phalaris stems have elongated and produced seed heads. This makes high quality hay and allows plants to recover before soils dry in summer.

Increase phalaris content by allowing seed-set. Degraded pastures and paddocks of winter active phalaris varieties are revived by allowing plants to send up seed heads. Grazing pressure may need to be reduced or deferred.

Protect new phalaris stands (autumn sown) by allowing plants to seed. Avoid cutting young pastures for fodder conservation. Minimise seed-set of annual grass weeds by maintaining young pastures at 1,000–1,500kg green

DM/ha (around 3–5 cm) by rotational grazing. Allow dead material to accumulate in northern climates to protect plants from high summer temperatures.

## Summer

Increase plant survival by maintaining at least 1,000kg DM/ha. Dry stems and leaves protect plant crowns from exposure as well as suppressing new tiller growth if summer rains occur, increasing survival. In northern climates maintain low grazing pressure or rotationally graze to encourage annual summer grasses to grow between phalaris plants. These grasses provide quality leafy feed over summer and reduce grazing pressure on phalaris tillers.

## Management tips

Persistence of winter-active varieties relies upon more lenient grazing with regular spells (rotational grazing). Semi-winter-active phalaris types can withstand continuous grazing and benefit less from rotational grazing. Rotational grazing increases phalaris content, compared with set stocking, mainly by increasing individual tiller-plant size. Rotational grazing favours perennial species. This generally leads to less sub-clover and annual grasses, compared with set stocking.

Phalaris should be grazed at least two or three times in spring, before stem elongation, to boost tillering. After stem elongation has commenced, avoid high density grazing so that seed can be set and root reserves can be replenished.

### Encourage persistence

During dry springs do not graze established phalaris pastures below 1,500kg green DM/ha (around 5cm). Allow phalaris to set seed every two to three years, particularly in the year following a drought. Avoid grazing new growth following summer rain, as it will weaken new tiller buds, resulting in their death.

### New pastures

Autumn sown phalaris may be given its first, quick graze in early spring to a height of 10cm. This controls weeds and encourages tillering. Avoid grazing after September in northern areas. Newly sown phalaris should be allowed to set seed before any high density grazing or haymaking.

### Avoid staggers

Rotational grazing can increase the prevalence of phalaris staggers, especially after the autumn break. Stock grazing young phalaris plants for the first time should be supplemented with hay to reduce the occurrence of phalaris toxicity. Avoid sudden changes from dry feed to

green phalaris and move stock onto new feed in the afternoon when toxin levels are lower. Cobalt bullets may help. Check with a local veterinarian if stock are affected by staggers.

## Plant facts

Phalaris spreads by tillers from buds, and regenerates poorly from seedlings in grazed pastures. Varieties fall into two groups:

**Semi-winter-active types** (Australian, Seedmaster, Uneta and Perla Retainer) have a spreading habit that enables persistence under unfavourable soil and grazing management conditions. Persistence is increased by extended seed head development and summer dormancy.

**Winter-active types** (Siroso, Sirolan and Holdfast) are more productive and palatable to stock in autumn and winter. They have a more erect (upright) habit, allowing a higher component of annual grasses. They have a relatively low tolerance to set stocking or very short rest periods, which can result in poor persistence, especially when combined with soil acidity and low fertility. They can break dormancy after summer rain.

At the end of spring, phalaris replenishes root reserves as a survival tactic for summer. This occurs at the same time as the plant sets seed. Mature seed heads are a signal plants are storing energy reserves. If overgrazing prevents phalaris completing this function, persistence is affected. Phalaris survives dry periods as dormant underground buds at the base of flowering stems. It only produces leaves following rain, after it consolidates its root system.

## Acknowledgments

Greg Lodge, NSW Agriculture

John Graham and Paul Quigley, DPI Victoria

Kathy Junor, editor

## Further information

This *Tips & Tools* is part of a series on grazing management that provides best practice pasture management information. These *Tips & Tools* can be found at [www.mla.com.au](http://www.mla.com.au) under Information Centre. To obtain MLA publications, call MLA on 1800 675 717 or email [publications@mla.com.au](mailto:publications@mla.com.au)

For further assistance, contact your local pasture or livestock advisor.

## Glossary

**Feed wedge** accumulated herbage saved for grazing by animals at some later date.

**Spray-grazing and winter cleaning** weed manipulation techniques using herbicides and grazing pressure.

**kg green DM/ha:** The weight of just the green component (ie growing).

**kg DM/ha:** Kilograms of total dry plant matter per hectare.



Level 1, 165 Walker Street  
North Sydney NSW 2060  
Ph: 02 9463 9333  
Fax: 02 9463 9393  
[www.mla.com.au](http://www.mla.com.au)

Reprinted July 2006  
ISBN: 1 74036 879 7  
© Meat & Livestock Australia  
ABN 39 081 678 364