



Feed Planning

Fitting winter crops into your grazing system

Autumn is a critical time to plan and invest in your feedbase. Many farmers consider a range of autumn sowing options. Depending on the region, the options may typically include:

- › Re-sowing a new permanent perennial ryegrass or fescue sward
- › Sowing an annual ryegrass or a bi-annual Italian ryegrass
- › Sowing a winter cereal
- › Sowing lucerne
- › Sowing a seed blend or mix that will complement each other and provide extra dry matter in early winter, for example rye-corn and annual ryegrass or forage rape & ryegrass.

Winter cereals are emerging as an option to increase flexibility and water use efficiency, particularly in dry seasons. These may be grazed, or used as a component of a partial mixed ration or total mixed ration to compliment nutritional requirements. Winter cereals might be used as part of a long term paddock rotation strategy and as a risk management strategy.

This fact sheet highlights some of the questions farmers may consider before deciding what autumn cropping programme to undertake.

Fitting winter cereals into your system

Always identify clearly where a winter cereal fits into your farming system and compare the options against other forage types suitable for your business, as well as the cost of substitute feeds on the market. Having a clear understanding why sowing a winter crop is the best option for your farm, backed up by financial analysis of how it costs compared to other options is also important.

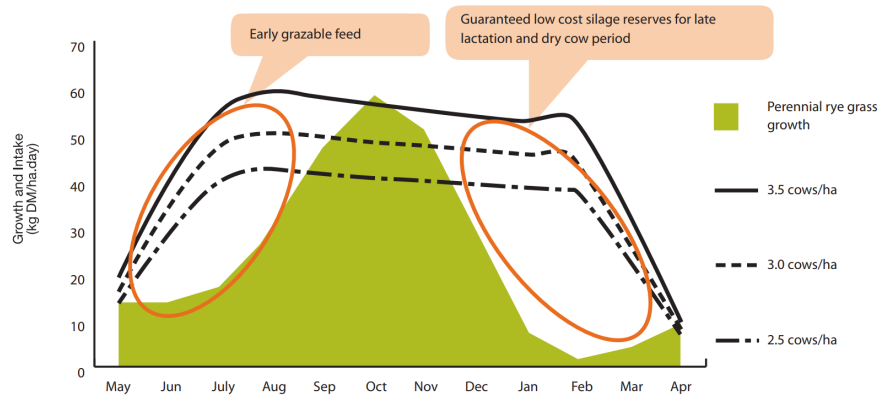
Key messages

- ✓ Identify where a winter crop fits into your system – know your monthly feed demand
- ✓ Winter cereals generally provide more quick, early autumn feed than ryegrass
- ✓ Cereals are often more suited to areas with low autumn rainfall levels
- ✓ Cereals can be a good risk management tool to diversify your feedbase.

The following are some factors to consider when deciding whether to sow a winter cereal crop:

- › Feed demand: What is the herd feed demand during autumn, winter and spring? Herd feed demand is directly related to the calving pattern and stocking rate. Farms that are predominantly or fully autumn calving will reach peak herd feed demand in early winter. On a perennial ryegrass based dairy system, the majority of annual DM is usually grown between August and December so there needs to be a strategy in place to provide feed in late autumn/early winter. Winter cereals can offer a good opportunity in these types of systems. Spring calving herds will have a lower herd feed demand in late autumn/winter and hence may not need as much area devoted to winter cropping. Figure 1 shows an example from Terang in south west Victoria of the typical perennial ryegrass growth rate and herd feed demand (May–July calving) at three different stocking rates, and where gaps in the feedbase will occur
- › For PMR & TMR systems, with split calving periods, winter cereals can provide a range of feed including silage, hay and grain, to be used at critical times throughout the year
- › Early new growth: Winter cereals are generally quick to establish and grow early. In some regions where perennial ryegrass does not usually persist over summer without irrigation, such as north east Victoria, sowing oats in late February/early March on 10% of the milking area successfully provides the first autumn grazing's when perennial pasture availability is very limited
- › Driving water use efficiency: Dairy Australia's Project 3030¹ showed good potential for winter cereals (oats, barley, triticale) in some areas of south eastern Australia (such as Yarram in Gippsland) where autumn/early winter rainfall levels are relatively low

Figure 1 Average perennial ryegrass growth rate (kg DM/ha. day) at Terang, Victoria, and potential intake requirements (kg DM/ha. day) for a dairy herd (May–July calving) at different stocking rates.



- › In these circumstances, their higher water use efficiency means they are likely to provide more feed than annual or perennial ryegrass in early winter. On the other hand, if long range forecasts indicate higher than average rainfall from April–June, ryegrass may be a better alternative than cereals
- › Risk management: Adding a winter crop can diversifying your home-grown feedbase options. A fast growing and water efficient annual may insulate your farm against a poor autumn. This combined with the flexibility of end products such as silage, hay or grain, can provide extra options if there is a poor finish to spring
- › Flexibility with irrigation water use: If you have irrigation available, this may also be a factor in your decision. Winter cereals' higher water use efficiency can driver a higher return on water applied, and the versatility in end product can provide options if water availability decreases at the end of the season. Taking winter cereals to grain in an irrigated system can also provide a critical opportunity for soil remediation through complete drying of the profile and increased integration of soil organic matter through stubble incorporation
- › Utilising fragmented land or outblocks: How your land is fragmented on the farm may also be a factor affecting your decision. Winter cereals may be grown effectively on run-off or lease blocks, or dryland areas in an irrigated system, grazed by young stock or dry cows, then harvested and used on the milking platform
- › Setting up long term rotations: Winter cereals are an excellent break crop to reduce weed burden and improve soil condition to prepare for a following pasture. For example winter cereals can dry down the profile to minimize the risk of water logging in young lucerne, and provide an opportunity to control broadleaf weeds before the establishment of lucerne.

Project 3030¹ was a project co funded by Dairy Australia, Gardiner Foundation, and Melbourne University that aimed to help farmers achieve a 30% improvement in farm profit by consuming 30% more home-grown forage (pasture plus crop). Research topics included pasture management as well as alternative forage crops. The project ran from 2005–2012.

Published by Dairy Australia Limited.

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