



Feed Shortage 2018

Turnips

Summer cropping options

Turnips (*Brassica rapa*) are one of the main brassica forage crops grown on dryland dairy farms in southern Victoria. Their high potential for growth during summer and exceptional nutritional value for dairy cows makes them a valuable option to grow dry matter throughout the summer as well as fit into a perennial ryegrass based dairy system.

Turnips provide feed throughout summer and autumn to compliment the pasture system, depending on the variety that is sown. A range of different maturity times allows crops to be available for grazing during the summer and autumn. Turnips can be considered in situations where pasture quality and quantity will be limiting milk production. Turnips have a high yield potential, but this can be variable as they are sensitive to lack of moisture and insect damage. One grazing only is obtained from turnips, as compared to regrowth brassicas where more than one grazing is obtained over a longer period.

Performance

Turnip yields of above 10 tonnes are achievable, however, climatic conditions and weed and insect management can greatly influence this yield. Subsequently the cost per tonne of DM consumed is also highly variable.

Turnips are a high energy feed (similar to barley) suitable for lactating dairy cows and are a valuable source of crude protein during the summer and autumn.

Agronomy

Soil moisture conservation is key to the successful establishment of turnips, particularly in areas, where late spring and summer rainfall is not reliable. Selection of paddocks early, cultivation and good weed control will help conserve moisture for turnip growth.

A full inversion technique (mouldboard ploughing) reduces weed germination in comparison to chisel ploughing and could be an option as broad leaved weeds cannot be controlled chemically in the turnip crop.

Sowing date can range from September through to December, depending on the climate, particularly soil moisture and the variety chosen. Check with your local agronomist for varieties that are suitable for your area, the sowing rates and seedling densities aimed for. Lower sowing rates encourage bulb development, where high sowing rates allow early yield and a high leaf:bulb ratio.

Sow turnip seed to a depth of 5–10mm in a firm and moist seedbed and roll after sowing to improve the seed-soil contact.

Phosphorus at rates of 20–25kg/ha is generally required at sowing, and other nutrients such as molybdenum (Mo) and boron (Bo) are needed by turnips to reach maximum growth potential.

Insecticide coated seed is available to protect the seed and seedling during early establishment.

Management

Turnips are grazed only once and the grazing is over a shorter period than for other regrowth brassica species. The benefit of this is that paddocks are available for resowing earlier than if longer lasting varieties are sown.

To achieve high utilisation and avoid health disorders, careful grazing management and allocation of turnips is required. Stock should be given access to turnips slowly and build up to maximum allowance over at least a week. Start the strip grazing process slowly and provide access for only 1–2 hours initially.

Turnips are low in effective fibre and therefore fibrous supplements such as silage can be combined with turnips to reduce potential for animal health issues. Allocate a maximum of 5–6 kg turnips per day per head to reduce animals health risks.

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