Dairy Australia

FEED PLANNING

Planning your summer cropping

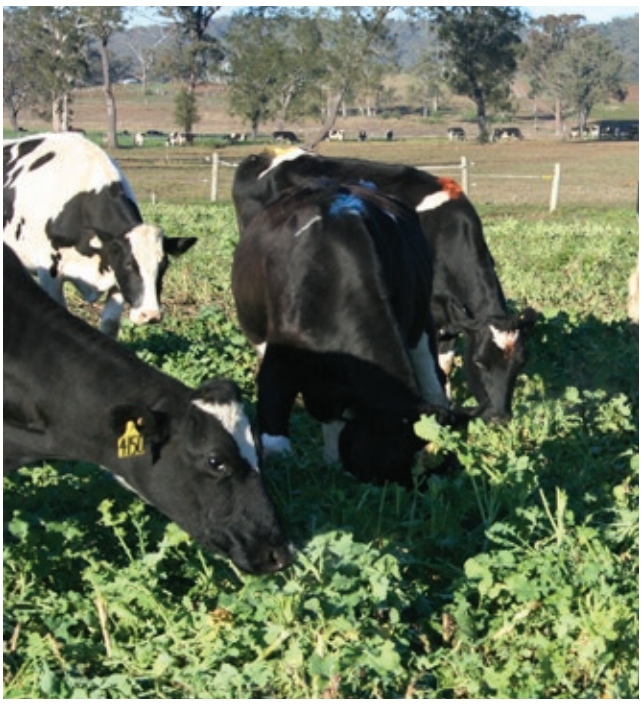
With the tight fodder supplies affecting all dairy regions, now is the time to plan your summer cropping program if you have access to water or soil moisture that will support growth.

Summer crop options

For many farmers this spring and summer, a high priority is to grow as much dry matter as possible to fill a yield and protein gap. Some of these crops have the ability to be conserved but others will be direct grazed. Most annual crops will be grazed before autumn resowing commences.

Options for summer crops will depend on your region and your access to water or soil moisture. Planning is important to get the best production from your investments. It is also important to purchase seed as early as you can, as seed will be in high demand.

The following is an outline of some of the actions you could take to start the planning process for your summer cropping program.



Plan your feedbase for your farm system and needs

1 Consider the climate and market outlooks for the upcoming season.

2 Ensure that you have soil moisture or are able to secure water to support crop growth. If you need to buy water, estimate the likely cost per tonne DM grown based on water cost ($/ML) and expected water productivity of each crop t DM/ML).

3 Consider all your options. Growing crops vs buying or contracting. Align your decisions with your budget and your appetite for risk.

4 Consider how the crop will meet the diet requirements of your herd and work with a nutritionist to develop a feed plan to ensure that the diet is balanced and milk production is maintained.

5 Ensure you have the infrastructure and system to conserve and feed out the crop, or the ability to direct graze crops that can be direct grazed.

6 Work with your agronomist to select a species and variety that will suit your production requirements.

7 Select and prepare your paddock well – this includes getting soil testing completed to ensure that nutrient and pH levels are at the required level for the crop you choose to grow. Assess any soil constraints within the paddock that will affect the growth of the chosen crop.

8 Manage weeds early. Weeds compete with crops for moisture, sunlight and nutrients.

9 Sow seed when the soil temperature is ideal for your crop and sow into moisture if possible.

10 Aim for correct seed placement, and seed-soil contact for a better emergence rate.

11 Use your agronomist to help plan and manage your crop through the season, reducing risk and helping to optimise production.

Options for summer crops include maize, sorghum, millet, chicory, and brassicas. For some, quick spring feed using annual or Italian ryegrass could be options to consider.

Of the many summer crop options, which one you choose depends on your region and climate, access to water, soil fertility, pH and physical constraints, management and infrastructure.

The following table highlights some of the features and limitations of some of the more widely chosen crops. Seek advice from your local agronomist and/or nutritionist for detailed information.

Table 1 Features of summer crop options

Crop	**MJ ME/ kg DM**	**% CP**	**Potential yield** t DM/ha	**Water productivity** t DM/ML	**Advantages**	**Disadvantages**	**Potential health risks**
Turnips	12–13	12–18	Up to 12	3.9[i]	Exceptional nutritional value Range of different maturity times allows for grazing during summer or autumn	Highly variable yields Needs adequate soil moisture	Low in effective fibre, feeding with silage can cause health problems. Strict allocation needed
Chicory	11–13	20–26	8–16	1.8–2.2[ii]	High nutritional value Reliable summer growth	Subject to wastage, need good grazing management Susceptible to trampling	Minimal risks if less than 50% of diet
Regrowth brassicas	11–14	15–25	Up to 17, depending on cultivars	2.4–2.9[iii]	Higher autumn growth potential than most perennial and annual pasture species Regrowth, unlike turnips	Strict grazing management needed	Similar to turnips, low in fibre, feeding with silage can cause health problems. Strict grazing management needed
Millet and sorghum	8–11	7–18	Sorghum 10–20, Millet 10–14	3.5–3.9[iv]	High tolerance to water stress Accumulate DM rapidly in warm conditions	Poor nutritional value Growth restricted by cool summer conditions	Prussic acid in sorghum, needs strict grazing management, gradual introduction to crop
Maize	10–12	7–8	Up to 25	5.0[v]	High yield potential of good quality feed No prussic acid	Low protein content Higher summer rainfall or irrigation needed	Mycoestrogen and mycotoxins when crop/ silage management sub-optimal

NB Yields and nutritional values are determined by management practices and will vary due to variety, region, irrigation or dryland, soils and fertiliser practices.

These ranges are estimates of water productivity and may vary depending on soil type, fertilizer regimes and other stress factors.

i Rawnsley & Donaghy; ii estimated; iii Future Dairy; iv Sorghum (Future Dairy), Millet 2.5 2.8 t DM/ML water; v Maize: 5.0 t DM/ML water (Donaghy & Rawnsley); 3.6 t & 4.8 t from Future Dairy in separate studies.

FOR FURTHER INFORMATION

For more details on growing these five summer crops, please visit **feed.dairyaustralia.com.au**

Dairy Australia Limited ABN 60 105 227 987
E enquiries@dairyaustralia.com.au
T +61 3 9694 3777
F +61 3 9694 3701
dairyaustralia.com.au

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