

# Managing Your Summer Pastures

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A Farm Advice Sheet from **SowtheSeed**

## Manage summer for end of season production

Looking after summer pastures, holding cow production and maintaining cow condition are vital to ensure that autumn production is maximized, and target pasture covers and cow condition on the 1<sup>st</sup> June are achieved. A few simple steps can make a considerable difference to pasture growth later in the autumn.

- Leaving appropriate residuals will aid pasture re growth when there is adequate moisture.
- Maintaining leafy quality pasture will limit 'pasture pulling' damage.
- Make allowance for adequate protein and energy intakes with summer crops and other supplements if pasture is limiting, to maintain production levels into late summer and autumn.
- Ensure cow condition is maintained throughout a period of low pasture growth.

Pasture harvest has a very strong correlation with profitable dairy farm systems ([SowtheSeed January 2010](#)) so it is important that summer and autumn pasture growth is not limited by grazing decisions made through the summer. Stocking rate, supplement use, summer crop yields, leaf appearance rate and round length are all very important factors to monitor throughout the summer. Residuals are important so that pasture growth in the autumn is not limited when there is sufficient soil moisture available.

Maintaining cow condition throughout late lactation is a much more efficient use of energy than mining cow condition and hoping to put it back on later in the season. The energy cost of gaining bodyweight is greater than the energy gained from the mobilisation of bodyweight to maintain (a) milk production and (b) body function, therefore it is physiologically and economically more efficient to maintain this.

## Feed demand vs Feed supply

Adjusting stocking rate is also an important tool. If pasture growth is very slow then unloading culls early may be beneficial in the long term to allow the remaining cows to milk for longer. For example, a 300 cow herd culling 10 cows may lighten the feed demand by around 1200kgDM per week. This will allow either (a) limited feed to be targeted to better producers or (b) residuals to be better protected without extra supplement. In this situation ensuring that there are sufficient numbers for next season by having accurate identification of empty cows is vital. In split calving situations, drying off autumn calvers early will reduce feed demand quickly and preserve feed and cow condition to allow a better response to feed post-calving.

Post-grazing residuals are a good indicator of how well cows are fed. It is desirable to leave at least 3-4cm or 1,500-1,600 kgDM/ha of residual throughout a dry summer period as ryegrass stores its reserves above ground in the basal stem (not in the roots). Leaving the ryegrass reserves will allow pasture to recover quickly once

there is sufficient moisture available. This adds another dimension as supplements and summer crops will be required to leave sufficient residual if there is not enough pasture quantity available. Standing cows off on a feed pad or equivalent or in extreme cases using a sacrifice paddock, are steps that can be taken to protect residuals. It is important that the leaf appearance rate is monitored carefully once soil moisture reaches the point where it is not limiting to ensure that the round length is appropriate, allowing grazing to occur at close to three leaves (see [SowtheSeed Aug 2009](#)).

Round length should be set at three times the leaf appearance rate in late December and early January, while there is sufficient pasture growth to do this. Grazing at three whole leaves will allow plant reserves to be replenished allowing good post grazing recovery and maximum dry matter (DM) accumulation. As pasture growth slows, the round length will need to be held where it is and a combination of summer crops and other supplements used to balance the ration to maintain residuals, cow condition and milk production. The aim should be to return to grazing at close to three whole leaves by mid April (earlier if soil moisture levels are good).

Pasture quality in the summer is largely determined by what has occurred through the late spring with regards to targeting residuals, identifying surpluses and/or topping to obtain the desired residual ([SowtheSeed Oct 2009](#)). With this in mind it is important that grazing decisions in the summer are made which will benefit pasture quality and quantity in the autumn. Nitrogen applications will largely be dependant on soil moisture availability (and/or irrigation). Applications in late November and December can help to maintain a leafy sward. Once soil moisture conditions become limiting however, the round length will need to be maintained where it is as above.

### **Feed quality affects cow performance**

Summer pastures are often lower in protein, higher in NDF, and relatively high in DM% compared to leafy early spring pastures. With well maintained residuals and good pasture species it is very rare that protein levels will drop below the 18% crude protein (CP) required by dairy cows in mid-lactation. Where there is a larger proportion of summer grasses (paspalum, kikuyu) and supplements being fed (maize silage, tapioca) there may be a requirement for a protein dense supplement to be included (soya bean meal, canola, brewers grain, pasture silage) for cow performance not to be limited. Summer meal blends (PKE + Soya or PKE + Canola) may be beneficial if there is not much extra protein required in the diet. If there is a large feed deficit (>4kgDM/cow/day) then cheaper feeds (PKE, pasture silage) and/or adjusting stocking rate should be considered first.

In an ideal situation, pasture quality will have been maximised by controlling surpluses and residuals through the spring to allow a leafy, highly digestible sward, of 11.0 MJME/kgDM and higher. This combined with nitrogen applications while there is adequate soil moisture will allow protein levels to be maximised. On an un-irrigated property, pasture digestibility, energy density and protein availability are largely determined by rainfall events. Where pasture quality has not been maintained by grazing and/or topping to desired residuals, high NDF stalk and stem can limit cow intakes. Dry weather conditions can influence pasture quality and in

the Waikato summer pasture has varied from 8.8MJME/kgDM in the drought of 2008 to >12.0MJME/kgDM in the wet summers of 1996 and 1998 (DairyNZ data).

Table 1: Summer feed options and their relative feed qualities (Rumen8, NFRFC)

Description	DM%	MJME/kgDM	Crude Protein %	NDF
Summer pasture	20-30	9.5-11	18%	40-50%
Turnips	10-15%	11.5	14%	27%
PKE	88-90%	11.5	16%	60-70%
Maize silage	30-38%	10.8	12%	42%- 50%
Pasture silage	20-35%	10.5	18%	45%-55%
Tapioca	90%	12.7	13%	15%
Canola	85%	12.1	35%	10-20%

### Summer crops

Summer crops such as turnips and chicory provide a good source of energy and to a lesser degree, protein. Summer crops offer insurance in a season of limited pasture growth and in good growing conditions summer crops can allow supplementary feed to be saved for later and round length to be adjusted easily.

Generally brassica crops such as turnips should not make up more than a third of the diet of a dairy cow due to issues surrounding cow metabolism. A fibre source such as pasture silage, which has relatively high levels of protein, is worthwhile particularly if the pasture content in the diet is low.

Chicory adds another dimension to the grazing rotation. It should be grazed on a 21-22 day rotation, which generally means break feeding strips/blocks to be fed each day and back fencing to maximise re growth. Where there are distant paddocks and/or limited area to provide enough area for the whole herd, chicory has been grazed as one grazing (every 21 days). This is not ideal as the DM % in chicory is low, and has a large amount of rapidly available energy which could cause rumen dysfunction. Ideally a similar amount of crop every day would keep the rumen microbe population at a steady state which will allow efficient digestion of nutrients available.

Pasture DM% will generally be higher in the summer, which can lead to underestimating the amount of pasture available. Even under irrigation, DM in pastures can be at 20%, whereas in the spring it can typically be 15% or even lower. It is important that residuals are not grazed too low as this limits growth rates post grazing and also forces cows to eat low quality pasture components (dry stem).

Other considerations through the summer are facial eczema outbreaks. The spores (*pithomyces chartarum*) are present in the base of the sward so the harder that stock are pushed into the bottom of the sward the higher the risk of ingesting spores is. By protecting residuals (3-4cm or better) there is also a reduced risk of pastures 'pulling' which will ensure pasture persistence into next season.

## Conclusion

Careful integration of dietary allowances for dairy cows should be monitored throughout the summer period to maximise dry matter grown and harvested in late summer and the subsequent autumn. Cow condition should also be maintained throughout to allow cows to maximise days in milk. Taking care of pasture components (in particular ryegrass) will ensure that pasture DM accumulation in the autumn is maximised once soil moisture is sufficient. Stocking rate, supplement rate and type, and the inclusion of summer forage crops should all be monitored carefully to ensure that residuals and cow condition are not compromised.

If you have any further questions please contact your Intelact consultant or call Intelact Head Office on 0800 735 588.