

# FOUR GREAT REASONS TO GROW **501 CHICORY**



# 1 LOW COST, HIGH QUALITY SUMMER FEED

We believe most farmers can grow *501 Chicory* for 14 c/kg DM, saving thousands of dollars in bought-in feed this summer.

The two keys to growing *501 Chicory* at half the price of PKE are:

1. Cropping paddocks that won't grow well over summer.
2. Achieving a high crop yield.

In most situations chicory can yield 12 t DM/ha, versus an old pasture growing 5 t DM/ha. This gives chicory a 7 t DM/ha advantage, and a 14 c/kg DM cost, as shown in the table below:

## Cost of growing *501 Chicory* with different yield advantages

		Cost of 501 Chicory <sup>1</sup>	True cost of PKE
Extra feed grown from <i>501 Chicory</i> (over runout pasture) <sup>2</sup>	9 t DM	11 c/kg DM	30 c/kg DM Based on: PKE at \$240/t or 24 c/kg PKE is 90% DM = 27 c/kg DM Plus handling costs = 3 c/kg DM
	8 t DM	12.5 c/kg DM	
	7 t DM	14 c/kg DM	
	6 t DM	17 c/kg DM	
	5 t DM	20 c/kg DM	

<sup>1</sup> Assuming \$1000 cost to grow chicory crop (direct drilled). <sup>2</sup> Estimated *501 Chicory* yield less the estimated loss of pasture DM.

The greater chicory's yield advantage over the runout pasture, the cheaper it is per kg DM.

Chicory is also much better quality feed compared to PKE or old pasture. And you don't have to feed it out mechanically.

	ME (MJME/kg DM)	Crude protein (%)
<i>501 Chicory</i>	12.5-13	20-26
PKE	11-11.5	14
Summer pasture	9.5-10.5	13-18

## 2 AVOID FEI PENALTIES

Milk your summer feed for all its worth by not letting Fat Evaluation Index (FEI) grade penalties guzzle up to 20% of your milk price.

Fonterra's FEI Grading System is designed to rate the suitability of milk fat composition for processing into various products.

Industry trials with lactating dairy cows have shown a very strong link between amounts of PKE consumed and FEI grading. With high levels of PKE feeding, milk fat becomes difficult to process and meet quality requirements for certain products.

Farmers who have relied on PKE to get through dry summer conditions will now need to consider other options. A great alternative is 501 Chicory which will have no negative effect on FEI grades, works out at about half the price and as shown on the next page..

Grading Framework		FEI Result	Demerit	Deductions
A	Meets requirements	<7.50		
B	Meets requirements but is approaching threshold limit	7.50 - 9.00	Alert	
C	Exceeds threshold limit	9.01 - 11.00	2 demerits	10% per collection day
D	Well in excess of threshold limit	>11.00	4 demerits	20% per collection day



DairyNZ's rule-of-thumb is to feed less than 3kg DM/cow/day of PKE to avoid FEI grading penalties.

# 3 KNOCK OUT YELLOW BRISTLE GRASS AND OTHER WEEDS

Yellow Bristle Grass is now a serious weed in many parts of the North Island. It can dominate pastures over summer, reducing feed quality and pasture persistence. An effective way to clean this invasive grass out of paddocks is to put them through a chicory crop using a triple spray programme.



This programme will also help eliminate other unwanted weeds and summer grasses from your paddocks, giving new pasture the best start in autumn. Seek specific herbicide advice for your situation.

## 4 GET RID OF BLACK BEETLE AND OTHER PESTS

One of the best things about *501 Chicory* is while cows love it, black beetle hate it.

As long as you spray the grass weeds out of your chicory, black beetle will pack their bags and leave in search of other feed. The same applies to most other pasture insect pests. This means no insecticide spray is required once the crop is established.

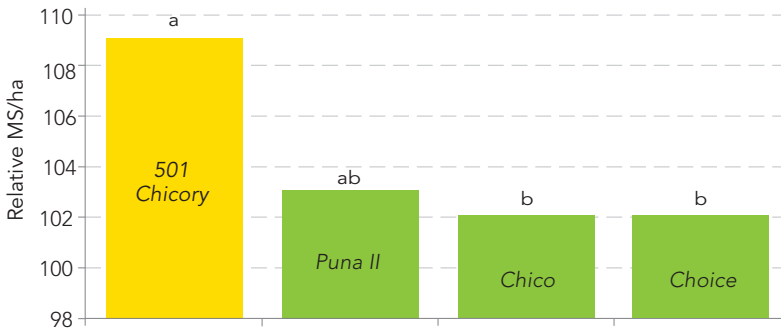


*"Feed a tonne of PKE and it's gone, but 501 Chicory will come back again and again and..."*

# WHY 501 CHICORY?

Chicory is best grown as a 6-8 month crop, so an annual type cultivar like *501 Chicory* is most suitable, because it will outyield some perennial types over the summer months. *501 Chicory* is fast establishing, and can give up to one full grazing more over the season than some other cultivars. Sow with *Morrow* red clover for a mixed sward.

Modelled Chicory MS production (Relative to trial mean = 100).



Data based on yield info from the combined trial analysis of Cambridge 11-12, and Canterbury 12-13. 2 trial lines have been removed from the graph. Assumptions used were: ME of chicory is 12 MJ ME/kg DM and 132 MJ ME to produce 1kgMS.



## How many hectares should you grow?

Chicory/cow to be fed	Area of chicory to sow	Daily area of chicory*
2 kg DM/day	2 ha/100 cows	0.1 ha/100 cows
3 kg DM/day	3 ha/100 cows	0.15 ha/100 cows
4 kg DM/day	4 ha/100 cows	0.2 ha/100 cows

\*Based on a 21 day round with pre-graze covers of 3,000 kg DM/ha and post graze residuals of 800 kg DM/ha

## 10 TIPS FOR SUCCESS

A high-yielding crop means low c/kg DM costs. Here's how to achieve this:

- Sow early (as soon as soil temps are 12°C and rising).
- Sow 501 AGRICOTE treated seed at 8-10 kg/ha for a straight sward or 6 kg/ha of 501 and 4 kg/ha of *Morrow* red clover for a mixed sward.
- Sow shallow (never deeper than 1 cm). Pay close attention to depth control when direct drilling.
- Sow with 150 kg/ha of DAP.
- Effluent paddocks give best yields and are often closer to the shed meaning less distance to walk for the milkers.
- Roll, roll, roll. Good seed to soil contact will speed up germination.
- Control weeds, and by doing so control insect pests too. For best results, apply flumetsulam to control broadleaf weeds and clethodim for grasses when weeds are less than 4 cm tall and before first grazing.
- Graze at Red Band gumboot height down to 3-4 cm.
- Don't spray the crop out too late in autumn. New pastures take priority – they must go in early enough to give them the best start.
- Don't keep the crop for a second summer. It might look great in autumn, but it will open up in winter, and go to seed next summer reducing yield and quality.



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