

Why renovate pastures?

Introduction

From the time a pasture becomes properly established its production gradually declines and often the feed quality also reduces. Commonly there is a loss of high quality pasture species over time, often due to pest attack. There are many reasons for renovating a pasture such as:

- To take advantage of a new advance in pastures (such as novel endophytes)
- To replace a poor producing or poor quality
- To re-establish a pasture species lost to pests (such as white clover lost to clover root weevil)
- To provide an opportunity to alleviate or remedy soil damage such as pugging
- To address a serious weed and/or pest problem

Costs of regrassing

The cost of regrassing can be difficult to accurately determine and varies depending on the situation. The following figures (table 1) are a guideline only.

Table 1: Example of Regrassing costs with full cultivation

Activity	Assumptions	\$ per ha	% of Cost
Spraying	Application \$30/ha plus herbicide \$50/ha	80	9.0
Ground Prep/ Sowing	\$95 ploughing, \$35 Grubbing x 2, \$35 Roll, \$60 Drill and Roll	260	29.2
Ryegrass Seed	20kg @ \$5.5 per kg = 110	110	12.3
White Clover Seed	4kg @ 10 per kg = 40	40	4.5
Fertiliser / Lime	Estimated at \$100 per hectare	100	11.2
Total		About \$600	-

Table 2: Example of Regrassing costs with direct drilling

Activity	Assumptions	\$ per ha	% of Cost
Spraying	Application \$30/ha plus herbicide \$50/ha	80	14.7
Ryegrass Seed	20kg @ \$5.5 per kg = 110	110	20.2
White Clover Seed	4kg @ 10 per kg = 40	40	7.3
Fertiliser / Lime	Estimated at \$100 per hectare	100	18.3
Direct Drilling	Quoted as \$80 per hectare	80	14.7
Slug Bait	Mesurol @ 10 kg/ha, \$135/10kg = \$135/ha	135	24.8
Total		About \$550	-

The other major cost is the feed lost while the paddock is being renovated. Assuming a 'rule of thumb' value of 15 cents per kg drymatter, the cost depends on how long the paddock is out of production, this is calculated at \$207 for 6 weeks or \$277 for 8 weeks¹. The total cost of renovating pasture is calculated at \$880/ha with cultivation at 8 weeks or \$810/ha at 6 weeks production loss.

Benefits of regrassing

Assuming the only benefit of regrassing was increased pasture production, regrassing is still very much economically viable. Assuming the new pasture produced just 3000 kgDM more than the one it replaced, this is worth \$450, recovering most of the cost within a year and returning a profit within two years.

Sowing a new cultivar should also greatly improve feed quality, so animals perform better and the return becomes even greater. Replacing a pasture particularly in the case of using a new species, should also improve feed quality and the amount of energy produced by the pasture per hectare.

Data shows that Matrix yields 4,800 kgDM/ha more than Nui² and the ME level is on average 1.3 greater. (11.7 versus 10.4). In a year Matrix produces 75,435 more MJME/ha than Nui, which based on recently published figures from Dexcel would be worth \$1,495/ha on a dairy farm.

This would represent a potential two fold return on regrassing within one year of pasture establishment.

Summary

The reason for regrassing is that there are potentially massive performance gains and profit increases to be had from replacing old pasture with new high performing cultivars.

Footnotes

1. Value assumes 12000 kgDM produced per year and the production lost is simply a factor of that.

2. Nui is used as it is a 'standard' existing cultivar, this is Nui the same age and condition as Matrix and measured in on-farm trials.