

# *Te Mara Farms*

## **Aerial Cropping and Regrassing**



## Update on Aerial Cropping and Regrassing System

1. July – August: Hoof and Tooth
  - a. MA Hinds were forced (unsuccessfully) to clean up the thick thatch left by R2 heifers, while being feed maintenance in a neighbouring flat paddock.
2. 1<sup>st</sup> Spray: Mid-October (goal was mid-Sept)
  - a. Hinds were removed allowing the grass to create fresh leaves.
  - b. 6L of Glyphosate with 500ml of Pulse (wetting agent) / ha.
  - c. Goal of 1st spray was to kill unpalatable grass species.
3. 2<sup>nd</sup> Spray: Early-November (goal was early-Oct)
  - a. 3L of Glyphosate with 500ml of Pulse / ha.
  - b. Goal of second spray is to remove the weed seed bank before crop establishment.
4. Summer Crop Seeding: As soon as practical in days following second spray
  - a. 450kg of DAP, 150kg of SerpS and 15kg of Boron / ha was used at seed application.
  - b. 1st paddock was planted with 22kg / ha of chicory.
  - c. 2<sup>nd</sup> paddock was planted with 12 kg / ha of Hunter Pasja.
  - d. Both paddocks were given 10kg of slug bait /ha.
5. Utilisation of crops: Mid-Oct until Mid-March
  - a. All yearling hinds set stocked on Pasja 3 – 4 weeks after planting, taken off mid-April.
  - b. Spikers got 3 grazing's off chicory, 4th & 5th grazing's given to MA hinds.
6. Summer crop removal: Mid-March.
  - a. Chicory sprayed with 2L of Glyphosate and 500ml of Pulse / ha for broad leaf weeds control, (predicted 50% loss in chicory plant population).
  - b. Pasja sprayed with 4L of Glyphosate and 500ml of Pulse / ha. Complete kill.
7. Establishment of Winter Grass: Early-May
  - a. Both paddocks were seeded with:
    - i. Italian ryegrass spread at 35kg/ha.
    - ii. 25kg of Slug Bait / ha (accidentally forgotten).

## Lessons learned

- Planning ahead and getting wind conditions correct is essential when dropping a small seed from a great height is essential.
  - Mild winds have the potential to create a crop failure through incorrect placement.
  - Once seed is mixed with fertiliser there is a short time limit for application.
- Seed coated or heavier seeds are more suited to aerial dispersal.
- 15% - 25% higher seeding rates give adequate germination rates.
- A thick grass residual thatch at seeding will significantly lower germination rates.
- Slug bait is a worthwhile investment when compared to the cost of reseeding.
- The use of three glyphosate sprays within a 6 month period is a 'relatively' cost effective method for removing the vast majority of hill country grass weeds.
- Wet weather assists the germination of seeds broadcasted onto uncultivated soil.
- Pasja requires a transition period. Where deer need access to both pasja and grass.

## Going forward

This technique will be something that we continue to develop and utilise. It has the capability to completely change the productivity of our hill country pastures.

We will look to run a minimum of 2 years and 4 sprays between old and new pasture.

This could allow us to:

1. Remove unwanted pasture species and weed species (particularly gorse).
2. Establish a pure sword of Pasja in the first spring for yearling hinds.
3. Establish a pure sword of Annual Grass for the first autumn for weaner deer.
4. Establish a pure sword of Chicory in the second spring for spikers.
5. Establish a mixed sword of Italian Ryegrass and Chicory (previously established) in the second autumn (which could possibly last into a third or fourth year).
6. Create new permanent pasture in a following spring.

## Te Mara Helicopter Regrassing Costs

NB. Some prices are based on public price lists rather than actuals.

Te Mara Costs			
Cost	Units / ha	\$/unit	Total
Chicory Seed	20	19.5	390
Pasja Seed	12	12.5	150
Annual Seed	35	3.8	133
Italian Seed	35	3.8	133
Heli Spray	6	120	720
Glyphosate	23	6.75	155
Wetting Agent	3.6	20	72
Slug Bait Bag	5	70	350
Perennial Seed	15	4.8	72
Clover Seed	4	10	40
Cropping Cost / ha			\$2,215

*NB. A saving of \$207 per ha is created from back to back cropping.*

Additional Fertiliser Costs			
Cost	Units / ha	\$/unit	Total
Heli Fert	2	180	360
Fertiliser	1	725	725
Total Cost / ha			\$ 3,300

## Helicopter Based Crop Costs

Helicopter Chicory Application Costs			
Cost	Units / ha	\$/unit	Total
Chicory Seed	20	19.5	390
Italian Seed	35	3.8	133
Perennial Seed	15	4.8	72
Clover Seed	4	10	40
Heli Spray	3	120	360
Glyphosate	15	6.75	101
Slug Bait Bag	3	70	210
Wetting Agent	1.8	20	36
Total Cost / ha			\$ 1,342

Helicopter Pasja Application Costs			
Cost	Units / ha	\$/unit	Total
Pasja Seed	12	12.5	150
Annual Seed	35	3.8	133
Perennial Seed	15	4.8	72
Clover Seed	4	10	40
Heli Spray	3	120	360
Glyphosate	17	6.75	115
Slug Bait Bag	3	70	210
Wetting Agent	1.8	20	36
Total Cost / ha			\$ 1,080



## Before

Pasja top, chicory bottoms





## Two weeks after seeding

Chicory top, pasja bottom





## Establishment

Chicory top, pasja bottom

