



Geoff and his wife Joanna Fitzgerald are the owners of Maungahau Farm. Geoff is a member of the 'Sustainable Helicropping Group' and has been using Helicropping to grow forage crops and renew pastures for the last 5 years.

Welcome to Maungahau Farm

Maungahau Farm is a 430 ha property on medium hill country near Otorohanga, near the headwaters of the Puniu river. Perhaps only 30% of the farm could be described as being "tractor country". It is dotted with catchment ponds and has a very pleasant three hectare lake which is used for functions.

Geoff & Joanna purchased the property in 1999 as dairy support for their then dairy farm operation. They have developed it into a profitable stand-alone property with multiple income streams, with an emphasis on improving hill country dry matter production while protecting the soil and environment.

They have been growing all their crops and renewing pasture with Helicropping for the last five years – initially with a winter focus, and now predominantly summer crops.

300 ha is effective for stock, with the remaining 130 ha being a deer hunting block with 100ha of mature native bush and a lodge.

The farm has multiple stock enterprises. The 400 ewe flock weans approximately 600 lambs, with a further 600 lambs bought in for finishing on the crops grown. Dairy grazing is important, with around 300 R2 heifers carried annually. Geoff & Joanna rear a further 350 four day old dairy-beef calves, with 200 sold at eight months age, and 150 finished to 240 kg CW and sold on the local market.

The Helicropped crops grown are an essential part of the operation, supplying feed during the summer pinch period for finishing lambs, cattle and ensuring the dairy grazing heifers are well grown. The ultimate goal is to improve the hill country pastures, lifting soil fertility using the crop, introducing perennial rye and clover, while suppressing browntop and Yorkshire fog.

After five years of Helicropping experience, Geoff & Joanna have settled on using a brassica rape crop sown with Tonic plantain as their summer crop for all animal classes. Sown in late October, it is normally grazed 2-3 times over the summer, before helicopter oversowing new perennial pasture soon after March/April grazing. This rape crop is grazed for a final time in June/July, with the full new pasture as part of the offer.

Going into winter with full pasture cover is key to minimising soil loss on Geoff & Joanna's farm. Developing this sequence of overlap from cropping to pasture renewal is an excellent example of farmer innovation.

Craig Shearer from Western Helicopters establishes their crops. It takes 6 hours flying time to put on the spray, seed, slugbait and fertiliser for a 40 ha cropping programme.

All the work is done in one morning, and Geoff jokes "we didn't even open the gate!"

Craig is geared up to apply the sprays using low drift Accuflow nozzles to ensure only the targeted paddocks get the spray. Using his specialised mixing system, he applies a mix of all the other components through his hopper. Recognising that the ballistics of seed, slugbait and Cropzeal Boron Boost are very different, Craig flies an overlap pattern to ensure even spread of all components of the crop.

Six hours after beginning, 40 ha of crop is established, and they "go home for lunch". Slowly over the following few weeks the crop emerges out of the dying pasture.

The permanent pasture phase in early April took two hours helicopter time to apply seed plus DAP to the 40 ha.

Maungahau Farm Facts

Farm Size	430 ha
Effective	300 ha
Stock finished annually	300 R2 dairy heifers 1200 lambs (50% bought in as stores) 200 x 8 month old beef cross calves 150 x R2's at 240 kg CW
Hunting Lodge block	130 ha (includes 100 ha mature bush)
Rainfall	1500 - 2000 mm
Soil type	Ash
Deficiencies	Cobalt /selenium
Critical feed period	February - April
Animal health	Comprehensive plan for all stock
Soil testing	Biannually



Value proposition – why do it?

The use of Heli-cropping on Maungahau Farm is seen as an opportunity to develop a variety of terrains into new pasture, through a cropping programme.

Heli-cropping enables areas of poor fertility pasture to be improved with minimal soil disturbance, whilst growing profitable crops as part of a wider pasture improvement programme.

Financial Analysis – The cost of heli-cropping a summer rape crop

In general terms the cost of establishing a crop using a helicopter will be similar to doing it using cultivation techniques. Depending on farm proximity and helicopter ferrying time, it may be more or less expensive.

Plan to manage the crop as you would a tractor planted crop. Control weeds prior to sowing and after emergence if required. Control pests such as slugs and snails, springtails and be aware of greasy cutworm, just as you would for crops established using cultivation.

Other costs to consider:

- Lime requirement
- Fencing off wetlands
- Developing overland flow catchment areas

The key to being successful with any cropping, is utilising the crop for greatest gain.

Spending \$1500/ha on any crop, needs to be returned with interest.

Activity	\$ / ha
Day 1	
1. Spray out old pasture using label rates of Weed Master/glyphosate Plus an insecticide to control springtails	
2. Broadcast slugbait and rape seed (+ Tonic plantain if it suits)	
3. Broadcast fertiliser: 400 to 500 kg/ha Cropzeal Boron boost for the brassica rape crop	
3-4 weeks later	
4. Spray weeds and pests if required	
After second grazing – re-establish perennial pasture	
5. Broadcast seed + DAP	
Input Costs (Fertiliser, Herbicide, Insecticide, Seeds etc)	\$1,000.00
Helicopter Costs (40 ha established in 6 hours flying+regrassing – Note with the rape/ plantain NO side dress nitrogen was applied due to SMCO/scald risk plus no insecticides were required due to multigraze)	\$500.00
Total cost per / ha	\$1,500.00