

# Droning On!

by Paul Martin, Director, Rainbow & Brown



Recently I got a message to phone a Rainbow & Brown customer who apparently wanted to talk about aerial weed spraying using a radio-controlled drone!

My first thought was that this bloke must be crazy. I had a mental image of him sitting on the farmhouse veranda twiddling a black box while sending his noisy little toy out on multiple sorties to spray his thistles from its Coke-bottle spray tank, one thistle at a time.

However, and not for the first time, I found when I called him that I was quite wrong, and embarrassingly ignorant.

We had a fascinating chat about the current state of practical drone technology, and within a few minutes I was revising my opinion of him from 'Dreamer' to 'Visionary'. He explained to me that a payload of 40kg is practical now, and 200-400kg is not that far away! He wanted to know whether agricultural chemical technology could respond to this opportunity by developing newer and more concentrated herbicides, to maximize the amount of area a drone could treat with each load.

As we chatted I recalled another conversation I'd had many years earlier, when I worked for the aircraft company de Havilland. I was driving to a meeting with the company's Technical Director, a brilliant and visionary aeronautical engineer named Stan. To pass the time I asked this eccentric genius what he thought the most substantial new aeronautic development would be in my lifetime. Without hesitation, and with considerable enthusiasm, he answered, "Unmanned aircraft in all sizes and applications: military, surveillance, coastal protection, environmental monitoring, law enforcement, and ... agriculture!"

At the time, I thought, "Dreamer!" Surely that was nonsense, because aeronautics had already come about as far as it could go. Future developments would be just refining and tweaking the status quo, and finding new ways to sneakily reduce the legroom on commercial flights. I should mention that this was in 1978; way before most of us had even heard of unmanned aircraft, and certainly before anyone took it seriously. Stan had very accurately anticipated what would be happening in another 3 or 4 decades. That's why he had F.R.S. behind his name.

And it is indeed happening, just as this mad scientist/engineer had predicted. Drones are now doing good work (and, alas, some bad) all over the



world. There are many jobs that a drone can do much better, and much cheaper, than a manned aircraft. There is a wry saying in the US Air Force these days: The last fighter pilot has already been born.

But let's leave the Top Gun stuff aside and instead consider the agricultural applications. How realistic is it? Answer: totally feasible. All the required technology exists; combining GPS programming, real-time video, power systems, structural systems, imaging sensor systems, and communications & control systems. And the cost of all this technical wizardry is reducing fast.

I don't really know just how far the use of agricultural drones will go. But what I do know is that it *will* go. In fact it already is, particularly for surveillance tasks like crop and livestock monitoring. But carrying and delivering the substantial payload required for cost-effective aerial spraying is already happening as well. I Googled "aerial spraying by drone" and was astounded at the number of practical spray drones already available, their precision, and (in comparison with manned aircraft) their cost-effectiveness.

Does this mean that NZ farmers will operate their own drones? Or that new contractors will specialize in unmanned aerial spraying services? I'd reckon both. Maybe tech-savvy farmers will amortise the cost of buying themselves a drone by doing some spraying for others as well. And if it hasn't already happened, I imagine that existing Kiwi aerial spraying companies will move to using unmanned machines, maybe even completely.

Perhaps you are nearly as ill-informed on this subject as I am? If so, then both of us had better do some reading!

In fact, I'd better stop writing now, because I have already said rather more than I know. I think that's called droning on.

## IN THIS ISSUE:

- **GIBBER:**  
Boost your autumn pasture growth
- **SPECIALS:**
  - BuckShot
  - Gorse Enforcer
  - Gorse Big Deal
- **WEED FILES:**
  - Gorse - updated stump treatment advice
  - Pampas Grass
  - Wild Carrot
- **FULL PRODUCT LIST:**  
Sizes & Prices

# ***Boost Autumn Pasture Growth***

**Gibber growth promoter is a great way to maximize feed for autumn demand, and for going into winter.**

A single treatment with Gibber can produce the equivalent of around 250kg/Ha extra dry matter (DM) production. And the cost per hectare has never been lower at just \$5.77 plus GST!

Gibber900 is sprayed onto the pasture 1-3 days after hard grazing. The boost in growth becomes visibly evident after just 7-10 days, and the boost accelerates to its maximum effect at about 21 days.

Application can be done with any boom or rosette spray, at the rate of just 9g Gibber900 in about 100L per hectare, with 100ml SprayWetter penetrant added. The product comes with a 9g scoop for ease of measuring.

Gibber is available in two sizes, the 270g pack that treats 30 hectares, and the 45g pack that treats 5 hectares.

- **45g pack ... \$42.55**
- **270g pack ... \$198.95**

Prices include GST and delivery.



# Buckshot Clearing Sale

**Save up to 30%!**



BuckShot is applied direct as a dry granule to pasture weeds including thistles, ragwort, brushweeds, etc. It kills all the toughest weeds, and is effective at every stage of their growth.

BuckShot has always been the lowest-priced product of this type in NZ, and remains very popular for its performance and its value for money. But some people had difficulty using it in certain brands of dispensers; it could clog up.

## Good News

We now have a new version of BuckShot on the way; more free-flowing, but also a bit more expensive.

## More Good News: Everything Must Go!

So, we are now selling out all of the remaining stock of the current BuckShot, at a huge saving to you.

If you've never had a problem with dispensing (most BuckShot users haven't), then this is a once-only opportunity to grab some extra BuckShot at a fantastic price.

## How Much Will You Save?

You'll save up to 30% off the current price of BuckShot granules.

We're not yet sure of the final price of the coming New-and-Improved-Granule version of BuckShot, but it's a pretty fair bet that this special offer will be saving you around 40% off that new BuckShot v.2.0 price.



Size	Current Price	Sale Price	You Save
5kg	82.80	<b>57.50</b>	\$25.30 = 30%
10kg	149.50	<b>104.65</b>	\$44.85 = 30%
20kg	241.50	<b>193.20</b>	\$52.30 = 20%

Those prices *include* GST and delivery to the farm. There's no limit per customer, and this sale price remains in force until all present stock is sold out.

**CALL TOLL-FREE ON (0508) 299 299 Prices include delivery and GST**

# Gorse Enforcer

*A reduced price offer for Autumn*

We've revised our Gorse Enforcer package deal to take advantage of the lower cost of MSF600 when packed in the new 2kg bags instead of the plastic 500g jars. It's a combo deal that's sufficient for aerial spraying of four hectares at the full mature gorse rate of 500g MSF600 + 2L SuperWetter per hectare (and you'll still have 2L of SuperWetter left over for other spraying jobs).

*You get:*

**2kg bag of MSF600 herbicide**

*plus*

**2 x 5L of SuperWetter organosilicone penetrant**

**... all for just \$345 incl GST and delivery**

That's a saving of \$34.50 off our previous price on the Gorse Enforcer package deal. *It also drops the cost to less than \$80 per hectare, for herbicide AND penetrant!*

Order your autumn gorse control needs now at this great price.



# Gorse Big Deal

For larger gorse spraying jobs, we offer a special combination pack of MSF600 and AirWet LF penetrant (the full strength, low foam wetter, for aerial use).

**10kg carton of MSF600 (normally \$552)**

*plus*

**2 x 20L AirWet LF penetrant (normally \$989)**

**Gorse Big Deal Price ... \$1440.95 (save \$100)**

That's enough to aerielly spray 20 hectares of mature gorse, at a chemical cost of just \$72 per hectare, including GST & delivery.

And for combination quantities larger than 10kg + 40L, delivered to the one location, we can probably do better still. Call for a quote.



# 2,4-D Granules Update

After a frustratingly long time sourcing and registering a new source of our 2,4-D Granules, we are nearly there. We expect to have this popular product available again in the next few weeks.

If you're going to be doing some late autumn or winter 2,4-D spraying, especially

of seedling thistles and ragwort, call Rachael in our office (0508 299 299) when you're getting ready to order, to find out when our 2,4-D Granules is back into stock. It's a great product and terrific value too, and we'll do our best to have it available when you need it.

# Yellow Bristle Grass

Ouch! YBG (yellow bristle grass) is a serious problem in NZ, and it's getting seriouser.

We at Rainbow & Brown would like to do something about controlling this nasty invader, and we'd like your advice.

There seem to be two situations where effective and affordable YBG control is required: in pasture, and in herb & brassica fodder crops. And they don't have the same solution, so we are trying to

decide which way to go.

Please send us a quick email to [mail@rainbowbrown.co.nz](mailto:mail@rainbowbrown.co.nz), and tell us your priority for YBG control:

- In pasture
- In crops
- Both of the above

We need to make a decision about where to best invest our limited development and

registration funds, and your answer to the above multiple-choice question will help us to make the right call.

It only takes a minute, so please whip an email off to us right now. Just say 'a', 'b', or 'c'. But you're certainly welcome to say more than that if you like. Thanks!

## Great "How To" advice on Gorse stump treatment



Rainbow & Brown customer John Wilson has recently given us some expert practical advice, based on his 25 years of experience of personal combat with gorse.

This is John's stump treatment method, in his own words:

*"The advice I got from you was 2g of MSF600/litre of water i.e. 30/g per 15-litre knapsack for stump spraying. Generally I put some penetrant in also.*

*The way I work is to cut with the chainsaw for 10 - 15 minutes, I then spray the cut stumps, covering all of the stump that is above ground but of course paying particular attention to the cut surface. I cut the stumps as close to the ground as is easily practical.*

*This works on all sizes of plant. Often I miss cutting a few wispy bits of gorse and these I just spray with the concentrated mixture, likewise small plants. After 25 years of trying to clear gorse this is the method that I*

*have found most effective.*

*Of course, at least annual follow up to deal to new seedlings and regrowth from any missed stumps is essential.*

*One cautionary matter.*

*We had a major rain event in December 2011. Over my 28 hectares of hill above Stoke there were 19 slips in my total of 23 paddocks. Many of the slips were in areas that I had cleared the gorse! Where I hadn't cleared the gorse, there were less slips and those that did happen were much smaller. So I advise people to think carefully about whether they really need to clear all of their gorse, particularly on the steeper slopes."*

We hadn't previously been 100% happy with our Weed File advice for stump treatment of gorse, so we are most grateful to John for this proven and practical method, and we have revised our gorse weed file accordingly (in this issue).

## WEED FILE: GORSE

REVISED: APRIL 2016



### DESCRIPTION

Describing gorse to a Kiwi farmer is like describing a jockstrap to an All Black; hardly necessary (i.e. it's an uncomfortable fact of life and you already know what it looks like).

But for the sake of form, gorse is a woody, deep-rooted perennial brushweed that can grow to 4 metres high in dense, impenetrable stands. Its small green leaves are hard spines, and in autumn and spring it produces the masses of bright yellow flowers so beloved of tourists.

Alas, gorse also produces about 8,000 seeds per bush per year. And these seeds can survive in the soil for at least 30 years. So it's hardly surprising that controlling and ultimately eradicating gorse is a long-term proposition, involving a combination of several management practices.

### MANUAL & MECHANICAL REMOVAL

If stands of gorse are not too dense and mature, plowing or rotary slashing can be an effective approach. After plowing, seedlings and regrowth will require follow-up spraying with herbicide (see below). Slashing will need to be repeated, probably several times, interspersed with hard grazing by sheep, as well as some follow-up spraying as necessary.

Cutting smaller gorse with a scrub cutter or chainsaw and treating the stumps with herbicide, although labour intensive, is very cost-effective for isolated plants or small stands. Large individual gorse bushes can be successfully cut off just above ground level, and the stumps swabbed with herbicide (see below).

### BURNING

Gorse burns well and if conditions (and regulations) allow, burning can be a cost-effective option. But seeds are not killed by the fire, and even the burnt stumps will regrow, so follow-up spraying with herbicide is inevitable. Most authorities advise spraying with herbicide some months before burning, because the dying bushes will burn better.

### GOATS

Goats can contain or even eliminate gorse given time, but the property needs to be suitably fenced and carefully managed over several years. Up to 20 goats per hectare are required to make good progress.

### BIOLOGICAL AGENTS

There is a widely-occurring gorse seed weevil that has some impact during the summer months, but

is ineffective against seeds produced outside that season. Other biological agents are being developed and tested, and may prove beneficial in the future. Of course, they said that about the rabbit. And the possum. And the cane toad.

### HERBICIDE CONTROL

#### Stump Treatment

- **MSF600** at 2g/litre of water (i.e. 30g MSF600 in a 15L knapsack, plus 30ml **SuperWetter** penetrant). Effective year-round, and on gorse of all sizes.

Cut gorse stumps as low to the ground as possible, and then spray all of the above-ground stump within 10-15 mins, ensuring the fresh-cut surface is thoroughly treated. Follow up for any regrowth or new seedlings at least annually.

#### Spraying

The best option for dense and inaccessible stands. While gorse can be successfully sprayed year-round, the best time is during the flush of 'soft' growth that occurs a few weeks after flowering. The time when this occurs varies in different parts of the country, and even then varies a bit from year to year. It generally coincides with late spring, summer and early autumn.

- **MSF600** at 500g/Ha by air, in 400L water plus 2L **AirWet LF** penetrant.
- **MSF600** at 20g/100L by handgun (knapsack 5g/10L) plus **SuperWetter** at 100ml/100L water.
- **Grassmate** at 6ml/L water for hand spraying, or 10L/Ha by air, plus **SuperWetter** or **AirWetLF** at 100ml/100L water.
- **Triclo** at 6ml/L water for hand spraying, or 10L/Ha by air, plus **SuperWetter** or **AirWetLF** at 100ml/100L water. Warmer months only.
- **Glyphosate 360** liquid at 1L/100L, or **Granny** at 450g/100L, plus **SuperWetter** at 100ml/100L water.

#### Notes:

1. **GrassMate** is grass friendly. **MSF600**, **Glyphosate G360** and **Granny** are not grass friendly.
2. **MSF600** is the slowest acting (takes several months) but the lowest cost. It's also the most popular.



## WEED FILE: PAMPAS

REVISED: APRIL 2016



Pampas Grass – *Cortaderia selloana*

Purple Pampas Grass – *Cortaderia jubata*

### DESCRIPTION

*Note: The two introduced pampas grass pest species (above) are often confused with the native plant toetoe, also Cortaderia species, of which there are four varieties. An identification guide appears below.*

Pampas grass is banned nationally from being sold, propagated or distributed. It's an invasive plant that forms dense stands of up to 5 metres high (pampas grass) or 3 metres (purple pampas). Both species spread readily and smother other desirable vegetation. It is also a fire risk when dry in summer, and harbours rodent pests.

The plant is actually a perennial giant grass species, and forms thick tussock-like clumps. The leaves are long and slender and grow from the base. They are up to 2 metres long and 30-35mm wide, and have serrated cutting edges in both the pampas species. Rising above these are the flowers, appearing on long stalks as feathery flags that extend the height of the flowering plant considerably.

Pampas grass flowers from March to May, and the flower heads are generally white, sometimes pinkish or light purple,

Purple pampas flowers earlier; generally January to March. The flower heads are purple and fade to dull brown as they mature and produce particularly large amounts of seed.

In addition to the fire and vermin hazards that pampas stands represent, and their invasive effect on natural habitats, the seeds of the pampas are a serious problem if kiwifruit is grown nearby, sticking to the furry fruit skin and reducing its value considerably.

The roots of both pampas species are fibrous and dense, extending to 3 metres or more. This makes control by grubbing out very difficult in established stands.

### DISTINGUISHING PAMPAS FROM TOETOE

The best recognition features allowing you to distinguish between introduced pampas species and native toetoe species are:

- Toetoe generally flowers earlier; October to January.
- Toetoe has distinctive fine veins appearing on the leaves between the mid-rib and the margin of the leaf, while pampas does not.
- Pampas has distinctly curled woody shavings (leaf litter) at the base, while toetoe does not.
- Pampas leaves are easily snapped off cross-ways, while the toetoe leaf is difficult to break or tear.

### HABITAT

Having been introduced originally as a fast growing shelter belt plant, pampas grasses have now spread throughout NZ where they invade open areas of pasture land, and in particular bush margins, burned and waste areas and firebreaks, and once established they spread quickly. Native turfland is also highly vulnerable to pampas invasion.

### NON-CHEMICAL CONTROL

Smaller and isolated plants can be grubbed or pulled out by hand (wear gloves!) Grazing is not a viable control method because stock will prefer more palatable alternatives (including toetoe).

Chainsawing, slashing and even bulldozing can be effective, although there will be regrowth that will have to be sprayed for control anyway.

### HERBICIDE CONTROL

Because it is actually a giant grass species, the grass-friendly herbicides (GrassMate, Triclo, etc) are ineffective. The answer is to use a herbicide optimised for killing grasses, the obvious choice among which is of course Glyphosate, which is effective, safe to use, inexpensive and almost always available on hand.

Spraying can be effectively done from spring to autumn, or following flowering.

Because pampas will often be growing close to valuable species that would also be affected by glyphosate's non-selective action, it is wise to shield those plants with plastic or cardboard to avoid unwanted collateral damage.

In very dense stands it may be necessary to cut the foliage back before spraying, to obtain adequate penetration into the plant, but this does reduce the total leaf area and often means that follow-up spraying of regrowth will be necessary.

### Spraying

- **Glyphosate** at 100ml per 10L water (or **Granny** at 45g per 100L), plus 20ml of **SprayWetter** or **SuperWetter** penetrant.

Spray late spring to autumn for best results.

### Weed Wiping

Effective wiping may be possible if plant height allows (or if taller plants have been slashed down first). This will avoid unwanted damage to other plants in the treatment area, assuming they are shorter than the pampas.

- **Glyphosate** at 200ml/L of water (or **Granny** at 90g/L), plus 2ml of either **SprayWetter** or **SuperWetter**.



## WEED FILE:

# WILD CARROT

REVISED: APRIL 2016



*Daucus carota*

### DESCRIPTION

Wild carrot is sometimes called carrot weed, but that same moniker, 'carrot weed', is even more commonly misapplied to parsley dropwort, which is a different species that just looks a bit similar. We have a separate Weed File on parsley dropwort, available on the Rainbow & Brown website.

But we're talking now about the real wild carrot, *Daucus carota*. The familiar garden carrot, that Bugs Bunny and we eat, is just a selectively bred descendant of this same wild carrot plant. And that's the easiest way to tell the difference; parsley dropwort has fibrous roots with small dark tubers, while wild carrot has a slender white taproot and it smells exactly like ... a carrot!

One other source of confusion. Wild carrot is also sometimes confused with an unpleasantly poisonous bugger called hemlock. The problem is that all the above species have superficially similar aboveground appearance, including white flowers growing on stalks in a spray of clusters called umbels (i.e. umbrella-like).

But the root, and of course its smell, distinguishes genuine wild carrot from the others.

Had Socrates sniffed the root before scoffing hemlock, he'd probably still be with us today!

Wild carrot is an annual or biennial. It's an upright plant, growing to about a metre or a bit more in height. The leaves are fern-like, with individual segments being about 20-40mm long. Not surprisingly, the leaves look much the same as a garden carrot.

The white flowers appear, often in a spectacular though dismaying cloud of white, from August to May. They grow on tall, ridged stems that are branched, and have bristly hairs.

The fruit is egg-shaped with wee hooks that make it easy for stock to unwittingly disperse wild carrot in their travels.

### HABITAT

Wild carrot is very common in the North

Island of NZ, and in the north and east of the South Island. It's a particularly common roadside plant, a fact that's easily noticed when wild carrot's in flower. It also appears in waste areas, cultivated land, and in gardens. And, alas, in pasture as well.

### MANUAL REMOVAL

Individual plants are easily removed manually, but wild carrot usually becomes evident as a problem when it's got past the individual plant stage, and is more of a mass threat. So in most cases, spraying is the more practical choice.

### HERBICIDE CONTROL

Surprisingly, there's very little actually registered in NZ for selective wild carrot control.

- **2,4-D Granules** at 2.5kg/hectare will control seedlings, when applied in early spring or late autumn.
- **MCPA** will very likely do the same (it controls the similar parsley dropwort well at seedling stage) and might be the better choice if the paddock has lots of buttercup as well.
- **Glyphosate** or **Granny** will of course kill wild carrot at any stage of growth, but that's obviously not a pasture friendly solution.
- **Triclo**. Here's another possibility, though it's 'off-label' at the moment. Various USA agricultural authorities recommend, for all growth stages, a herbicide with the active ingredient triclopyr. That's the active in our own product Triclo; a product that is grass friendly, though it damages clover. The rates they suggest would equate to 7L/Ha of our **Triclo**, but we doubt that the rate would need to be that high in NZ pastures during active growth. So if you're spraying something else with Triclo and there's wild carrot present, please let Rainbow & Brown know the rate you used, the growth stage of the wild carrot, and the effect observed. If it's promising, we'll do trials to support a new label recommendation.



## GRANNY 800g/kg GLYPHOSATE AS THE MONOAMMONIUM SALT



ACVM No 7499

*Non-selective herbicide for spraying out pasture, and general weed control.*

- The stronger, smarter and most economical glyphosate option. 9kg is equal to 20L of G360.
- Water-dispersible granule, easily soluble.
- 4.5kg bag minimizes packaging disposal.
- No residual effect in soil; drill new seed in 2 days.
- Use just 425g/100L water (knapsack 65g/15L) for general spraying; 1.4-2.2kg/Ha for pasture spray-out.
- Add SprayWetter penetrant for best results.

2.25kg ...\$55.00  
4.5kg .....\$78.20  
9kg .....\$120.75

## GLYPHOSATE 360 360g/L GLYPHOSATE AS THE ISOPROPYLAMINE SALT



ACVM No P5441

*Non-selective herbicide for spraying out pasture, and general weed control.*

- Glyphosate is the world's most popular and trusted herbicide.
- Safe to use, fast acting, non-toxic & economical.
- No residual effect in soil; drill new seed in 2 days.
- Withhold stock 2 days to allow penetration through plant.
- Use 1L/100L (hand) or 3-5L/ha (pasture).
- Add SprayWetter penetrant for best results.

5L.....\$49.45  
10L.....\$82.80  
20L.....\$124.20  
200L...\$1046.50

## MSF600 Gorse & Brush Spray 600g/kg METSULFURON-METHYL



ACVM No P7027

*For control of gorse and other scrub weeds in pasture, waste areas and forestry.*

- The low-cost, proven choice for big and small jobs.
- Water-dispersible granule, easily soluble.
- Safe to handle, non-toxic to humans and animals.
- Gorse, blackberry, manuka, scrub, bracken, ragwort & thistles.
- For gorse use 20g/100L (hand), 500g/ha (aerial).
- Add SuperWetter penetrant for best results.

200g .....\$31.05  
500g .....\$46.00  
1kg .....\$78.20  
10kg ctn (5 x 2kg bags)  
.....\$552.00  
30kg+ - Ask for quote

## GRASSMATE 300g/L TRICLOPYR AS THE BUTOXYETHYL ESTER plus 100g/L PICLORAM AS THE AMINE SALT in the form of an emulsifiable concentrate



ACVM No P7417

*For control of brushweeds, broadleaf and erect weeds in pasture.*

- Kills gorse, broom, blackberry, tutus, sweet briar, matagouri & lupins.
- Also controls broadleaf weeds, including ragwort, thistles, fennel, nettle and inkweed at 2L/Ha.
- Add SuperWetter penetrant year-round.
- 10-12L/ha for brush species, and 250-300ml/100L handgun (gorse rate)

2L.....\$98.90  
5L.....\$197.80  
10L.....\$356.50  
20L.....\$598.00  
100L...\$2875.00

## MCPA 750 750g/L MCPA AS THE DIMETHYLAMINE SALT



ACVM No P8173

*For control of thistles and other broadleaf weeds in pasture and cereals.*

- Highly concentrated water soluble solution.
- Controls thistles of all species, especially in younger growth stages.
- Grass-friendly but higher concentrations damage clover.
- Economical at just 1.5-3.0 L/Ha use rates.
- Use late autumn through to summer.
- Works well with Cobber herbicide against resistant thistles.

5L ..... \$75.90  
10L ..... \$132.25  
20L ..... \$241.50  
200L . \$2277.00

See  
Specials  
page 4

## 2,4-D GRANULES 800g/kg 2,4-D dimethylamine salt as WATER SOLUBLE GRANULES

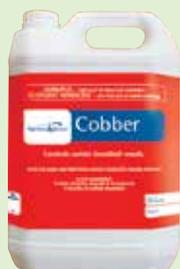


*For control of broadleaf weeds in pasture and cereals*

- Non-volatile formulation greatly reduces spray drift risk.
- Non-smelly, easy to handle, water soluble granules.
- Convenient 2kg foil bags for easy dispensing.
- Controls thistles and ragwort at seedling and rosette stages.
- \* Minimal clover damage, especially with winter spraying.
- Use 1-1.5kg/Ha in cereals, 1-3kg/Ha in pasture, depending on target species.

**10kg carton (5 x 2kg bags)**  
.....\$120.00

## COBBER 300g/L CLOPYRALID as the amine salt.



ACVM No P7790

*For control of hard-to-kill and multi-crown thistles in pasture.*  
*(Approved Handler certificate required)*

- Kills Californian, nodding, winged and variegated thistles incl large rosette and multicrown plants.
- Mix with 2,4-D or MCPA where thistles resistant to those herbicides exist.
- Use 1-2L/Ha by boom or 100-200ml/100L spot spraying. Also good for wiper application.

2L.....\$149.50  
5L.....\$276.00  
10L.....\$529.00  
20L.....\$977.50

## GIBBER 900 900g/kg GIBBERELIC ACID



ACVM No P8002

*Growth promoter to boost pasture production in cool weather feed shortage conditions.*

- High strength powder applied at just 9g/ha dissolved in water. (9g scoop included).
- Rapid increase of dry matter (DM) production during spring and autumn feed shortfalls; increases of 30-60% can be achieved within just 3 weeks.
- Just \$5.77/Ha, apply with any spray gear.

45g .....\$42.55  
270g ....\$198.95

## BUCKSHOT 20g/kg PICLORAM GRANULES



ACVM No 7717

*For direct spot application dry granule treatment of broadleaf, erect and brush weeds.*

- Controls ragwort, nodding thistle, gorse, inkweed, broom, docks, hemlock, sweet brier, woolly nightshade, tutsan, blackberry.
- Convenient and safe; apply by hand, by pogo stick applicator, or by applicator bottle.
- Carry Buckshot on the bike, tractor or ute for opportunistic spot weed control.

5kg .....\$57.50  
10kg ....\$104.65  
20kg ....\$193.20

## DECISION 800g/kg FLUMETSULAM IN A WATER DISPERSIBLE GRANULE



ACVM No P8368

*Control broadleaf weeds in new and established pasture, as well as for lucerne, chicory, clover and maize crops.*

- Clover-friendly control of annual & perennial buttercups in pasture.
- Good for autumn and spring application.
- Also controls chickweed, cleavers, mallow, oxeye, sorrel, spurrey, stinking mayweed and willow weed.
- 30g-65g/Ha depending on species and growth stage. Annual buttercups 50g/Ha, giant buttercups 65g/Ha.

200g ....\$110.40  
500g ....\$235.75

**RANGER** 750g/kg THIFENSULFURON-METHYL GRANULES

ACVM No 7668

*For control of docks and buttercups in pasture and cereal crops.*

- Selective herbicide for use in pasture, wheat barley and oats.
- Also controls oxeye daisy.
- Excellent added to Glyphosate when spraying out pasture.
- Apply by air or ground boom, and spot spray.
- Scoop and measuring cylinder included.
- Use at 20g/Ha, so 100g pack will treat 5 hectares.

100g .....\$74.75  
1kg .....\$684.25

**TRICLO** 600g/L TRICLOPYR AS THE BUTOXYETHYL ESTER

ACVM No P7189

*For control of brushweeds, broadleaf and erect weeds in pasture.*

- Grass and clover friendly.
- Blackberry, broom, gorse, lupin, tutus, fennel, sweet brier, Old Man's Beard, plus most broadleaf weeds in pasture.
- Apply in warmer months during active growing conditions.
- Add SuperWetter for gorse and all woody species.
- Brush weeds use 10L/ha or up to 300ml/100L by hand.
- Broadleaf weeds in pasture use 2L/ha or 200ml/100L.

2L.....\$95.45  
5L.....\$195.50  
10L.....\$345.00  
20L.....\$569.25

**AIRWET LF** 100% ORGANOSILICONE WETTER-PENETRANT

*Low foam formulation optimised for aerial spraying*

- Assists penetration, boosts translocation within the plant
- Reduces rain risk, normally to under an hour
- Much less foaming than typical competitive wetters, with no loss of performance
- Available in 20L jerrycans or 20L cartons (4 x 5L), and 1000L IBC tanks

20L.....\$494.50  
1000L.....Call for quote

**SUPERWETTER** 100% ORGANOSILICONE WETTER-PENETRANT

*Boost spray performance on woody & hard-to-kill species*

- Assists penetration, especially into stressed and dusty plants.
- Reduces rain risk period, normally to under an hour.
- Boosts herbicide performance by aiding in translocation.
- Use at 100ml/100L, or 500ml-2L/ha depending on species.

2L.....\$63.25  
5L.....\$138.00  
20L.....\$454.25

**SPRAYWETTER** 100% NON-IONIC SURFACTANT WETTER-PENETRANT

*Maximises herbicide performance in all situations*

- Permits faster & more thorough penetration into plant.
- Reduces rain risk period, normally to under an hour.
- Use when herbicide directions do NOT specify a SuperWetter.
- Use at 100ml/100L, or 500ml-2L/ha depending on species.

5L.....\$72.45  
10L.....\$120.75  
20L.....\$224.25

# THE BACK PAGE

## • Rainbow & Brown

Rainbow & Brown Ltd is a privately-owned NZ company. Our factory and office is in Rotorua. We're now in our 15th year of operation, and have been growing strongly every year. We have customers all over New Zealand, including farmers, horticulturalists, spray contractors, nurseries, commercial and private gardeners, and many other businesses. Our products are sold direct, which is why our prices are so attractive ... it is effectively the "wholesale" price, direct from the manufacturer.

## • People

The directors of Rainbow & Brown have been involved in the NZ agricultural chemicals business for over 20 years. They're actively involved in the day-to-day running and building of the business. If you phone us, your most likely contact will be Rachael, our office manager (and the real heart of the company!). If you call in to see us, you'll also meet Clinton, the factory manager.

## • Ordering

You can order anytime by phone, online at [rainbowbrown.co.nz](http://rainbowbrown.co.nz), or by fax, e-mail or by letter. If you call on the freephone number, you may at times get an answering machine. That means we're already on the phone, or doing something else. Or it may be after office hours (see below). Please just leave your name and number, and we'll soon call you back. Or if we've already got all your details, just leave your order (*with your name and phone number*) on the machine.

## • Delivery

We send your order within 24 hours. Delivery will usually take between 1 and 4 days. If it hasn't arrived after that time, *call us* immediately so we can track it down for you. Delivery of orders of 60 litres or less will normally be to your door, including rural delivery addresses. However, delivery of larger orders may be to the nearby freight depot or drop-off point we will arrange with you when you place your order.

## • Factory & Office Hours

If you want to collect your order from our Rotorua factory, you're welcome. It's at 68A Tallyho Street. Open hours are 8.30 to 4.30, Monday to Friday.

## • Payment

We send your invoice by mail, the day we send your order, so you'll know when it was shipped. Payment is due on 20th following month, and you can send a cheque or use direct payment to a/c No: 123155-0066374-00. The bank account number is also on both your invoice and your statement. We send statements out in the first week of each month.

## • Referral Rewards

Word-of-mouth is the best advertising, so if you recommend us to someone who then becomes a new Rainbow & Brown customer and mentions your name, we'll thank you with a \$10 discount off each different product in your next order. So if you order four different items, you now get a \$40 discount (previously \$10).

SMALL PRINT: The discount doesn't apply to products on special.

## • Website

Check out our website for full details and labels of all our products, plus Safety Data Sheets, and a small library of useful reference articles. You can also download from the free Weed Files library. It's at [www.rainbowbrown.co.nz](http://www.rainbowbrown.co.nz)

## • Approved Handler Certificates (EPA)

You do NOT need an Approved Handler certificate to purchase any current Rainbow & Brown product except for Cobber herbicide. To apply MSF600, GrassMate, MCPA, Ranger or Triclo in a "wide dispersive manner" (i.e. by boom spray), or apply it commercially (i.e. you're a contractor), or over water (i.e. you're a dickhead), you DO need an Approved Handler certificate to apply it, but you DO NOT need a certificate to buy it. You need an Approved Handler certificate to buy Cobber herbicide or to apply it in any circumstances.



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