

Old Enough to Know Better

by Paul Martin, Director, Rainbow & Brown



We've all seen the news coverage of the dreadful floods in Queensland. Appalling loss of lives, with homes, livelihoods and whole communities devastated. And this is not the first time; the same area was flooded to even higher levels back in 1974. I remember it well.

But some people don't seem to remember it, and not necessarily because they aren't old enough. I saw a piece in the Sydney Morning Herald a few days ago in which the writer, Gerard Henderson, remarked on a press release put out by Australian Greens leader, Senator Bob Brown. Brown's press release was headlined 'Coal barons should help pay for catastrophes', and predictably called for the imposition of a new tax on the coal industry to pay for environmental and natural disasters such as the Queensland floods.

Bob Brown is even older than me, by a few years, so he must remember those floods of 1974 perfectly well, although I'll forgive him for not recalling the even worse Brisbane floods way back in the 1890s. However, as the floods of 1893 and 1974 were pre-global-warming events, I think we can conclude that they are (to borrow an apt phrase from Bob's hero, Al Gore) 'inconvenient truths'. Best not referred to.

A brief aside, before I resume my rant about Bob's argument ... consider his press release's headline. He didn't say 'coal industry', because that's workers and families and support industries and whole communities and so forth. That's us, in other words. The voters. He said instead, 'coal barons'. Some rich fat bastard with a big cigar, in other words. Not us. Default position for the Greens of course.

Anyway, to return to Senator Brown's actual point, which is that *coal barons should pay for natural disasters because burning coal causes climate change* (which used to be called global warming until it stopped getting warmer: another inconvenient truth). There are three problems with his argument.

First, it ignores history; in this case the 1893 and 1974 floods.

Second, it's a claim built on what crusty old logic-crunchers call *petitio principii*, or begging the question. It assumes the truth of something without any evidence other than that implied in the claim itself. Bob has no evidence that the recent floods were caused by climate change, so

he simply assumes that they were, and he just looks the other way when 1974 and 1893 start waving at him.

I don't comment on the deeper assumption in Bob the Senator's reasoning, which is that burning coal actually causes climate change; nor on the even deeper one yet, which is that non-natural climate change is actually occurring. Oops, I did comment. Sorry. So now I might as well go a little further down that path and point out that the 'coal barons' aren't personally burning very much coal, anyway. Alas, we all are. It's us.

Third, Brown's argument is alarmist nonsense, and should be taken no more seriously than the reading of tealeaves or animal entrails. Possibly even less. Senator Brown was graduating from university in 1968 when the American academic Paul Ehrlich published the global best-selling book *The Population Bomb*, so Bob can hardly have missed it. Ehrlich insisted that world population growth would cause a global famine in the 1970s and 80s, which would kill hundreds of millions, and there was now no chance to produce all the necessary food to avert disaster; it was already too late (does that last bit sound familiar?) There would then follow a catastrophic global war during the 1990s and the earth as we know it would be finished. None of it happened, of course. Why? Because Ehrlich's arguments were based on misinterpreting the data and on false reasoning, most especially on begging the question. Plus he was just naturally full of crap anyway.

Senator Brown must also remember, as do I, the frightening 'New Ice Age' that was forecast in the 1970s. We were about to enter a period of disastrous global cooling (well, global bloody freezing, actually). And guess what? We couldn't prevent it because it was yes, you've guessed it ... it was too late! Most of the experts quoted at that time have since disavowed their alarmist predictions of course, and claimed that it was all just a media beat-up.

And maybe that's the one part of the history of eco-alarmism that Senator Bob Brown does remember all too well: the ease with which untreated and unregulated Green emissions can trigger a runaway global media beat-up. And we won't be able to stop it either ... it'll be too late.

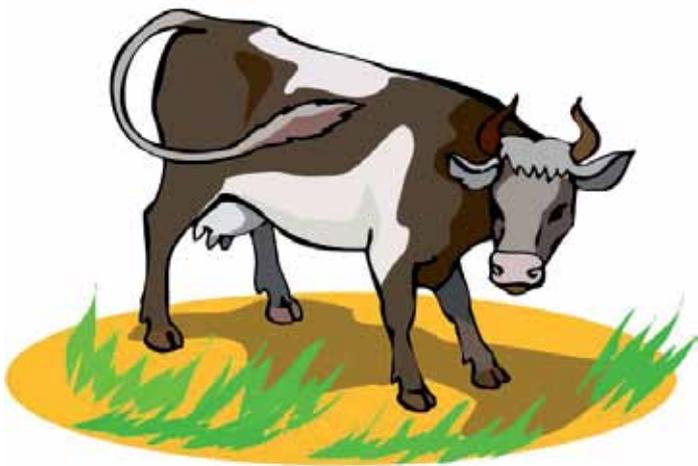
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Gibber 900 in the

Who'd have thought it?

Recently we had a long chat with the dairy farmer who did the original trials of our growth promoter, Gibber 900. He told us something that we didn't expect.



Gibber 900

In case you aren't up with the play, Gibber 900 is a remarkable product containing the natural plant growth promoter gibberellic acid. It's a substance that's been used for many years in horticulture and other applications, but it's only in recent years that we have started to see what it can do on pasture.

And what it can do is quite amazing. It's been used in the spring and autumn feed pinch periods to naturally boost the growth of pasture in conditions where low ground temperatures are limiting growth. So that's in the range of 6-13° ground temperatures.

Original Trials

When we did the original trials, the results achieved were that dry matter production was boosted, compared with untreated areas, by an average of about 65%! The extra growth begins to become clearly evident about 7 days after spraying, and the rate of growth then rapidly increases until about 18-21 days after treatment, at which time the maximum extra grass production has been achieved. And it affects the growth of both clover and grass species equally well.

Obviously, with those figures and timings, Gibber 900 is perfectly suited to a rotational grazing system, although it does produce impressive results in less intensive set stocking situations as well.

Satisfied Users

There are several hundred very happy Rainbow & Brown customers who've been using Gibber 900 for a couple of years now, and in that time we've learned a lot more about the product. One thing is that it can be used several rotations in succession, with no apparent loss of soil nutrient levels as long as they were reasonable to start



Summertime

with. We originally had recommended that two consecutive rotations was the right way to go, and for most people that was enough. It got them nicely past their traditional seasonal feed shortage period. But some wanted more, and they got it. One Waikato customer told us he'd used it for six successive rotations, just to see how far it could go. And he discovered that the results seemed just as good after treatment number six as they were after number one. And also that there was no apparent detrimental 'slump' effect on his normal pasture growth rates even after he then stopped applying the Gibber 900.

Tank Mixes

Other customers used Gibber 900 in conjunction with either urea or organic fertilisers, and reported excellent results. This was especially true with the liquid organics; the two materials just seem to go very well together.

Ground Temperatures

The third revelation was that quite a few people used Gibber 900 outside of our suggested ground temperature range of 6-13°. In fact, towards the finish of our own original trials we'd ended up with ground temps of up to 18°C, and yet measurements and observations both confirmed that same healthy extra margin of feed production over untreated pasture.

Drought Breaker?

It was that last observation, about the ground temperatures, that prompted the owner of the original trials farm to try something radical this summer. It's a dairy farm in Northland, and of course the area was affected badly this season by drought conditions coming into summer. Feed was short, and things were not looking too flash for the district's dairy farmers.

However, it finally rained in mid-December, and that's when the farm owner took a calculated punt that the Gibber could help get the most out of that precious rain. In spite of the high ground temperatures of 20-21°C, he applied Gibber and Nitrosol together as soon after the rain as the first signs of fresh growth appeared. And the results were spectacular! He described it to us as a 'huge response'.

Ready in 14 Days

He said that instead of the expected period of 21 days after the rain, his treated paddocks were fully ready to graze in

just 12-14 days. And at times the stock literally couldn't eat all the extra feed that was being produced. His estimate of the extra pasture production is between 70% and 100% more than was occurring on untreated areas. He assured us that nobody around him had experienced a similar recovery after the rain, and that neighbours have been coming over to have a look at what he's been doing.

He also makes a couple of other related observations. First, he's increasingly convinced that the use of his organic fertilizer applied with the Gibber 900 gets the best out of both substances. And second, that when it's hot in the daytime, the best time of day for Gibber 900 application is early morning or late evening. This point sounds very likely to be simply a question of applying in optimum plant uptake conditions, and makes sense.

A final observation made by the trial farm owner was that even for the next rotation after the application was made, the recovery and re-growth rate of that pasture remained visibly superior to similar untreated paddocks.

Strategic Use of Gibber 900

So it's certainly looking very clear that there are situations outside of the spring and autumn seasonal feed pinches where Gibber 900 can recover ground lost due to the effects of drought or other weather influences. When the grass starts to grow again, Gibber 900 can have a very useful multiplying effect on total feed production, and thus on your season's recovery.

Cost Just \$12.58/Ha

A 270g regular pack of Gibber 900 costs \$434 delivered, and treats 30 hectares of pasture. That works out at just \$12.58 per hectare, exclusive of GST. And the extra production generated? It depends on the 'normal' (i.e. untreated) growth being achieved at the time, but in the original trials it averaged around an additional 250kg of dry matter production per hectare. That's a pretty good return, for just \$12.58!

Gibber 900 is available in two sizes:

**45g trial pack (treats 5 hectares)
\$77 incl GST & delivery**

**270g regular pack (30 hectares)
\$434 incl GST & delivery**



Glycerine Savings

We still have stock of the special deal that we announced on premium-quality glycerine in our last newsletter.



Glycerine is regarded by dairy farmers as the best emollient for use as an additive with teatsprays, where the glycerine emollient helps to maintain teat condition and to prevent teat damage. It is especially useful in adverse weather conditions (both very wet and very dry), when teat damage is more likely, but it can be effectively used throughout the whole season.

We are offering glycerine at savings of between 5% and 25% (depending on where you have been buying it).

No limit per customer, and the offer ends when the stock is sold out.



Here's the sizes & prices:

5L..... \$60

20L\$145

100L.....\$650

200L.... \$1055

These prices *include* both GST and delivery. Note that all sizes except for 200L are packed in cartons containing multiples of our popular 5L jerry can style containers; the easiest pack size to handle for accurate and safe dispensing.

FROM THE ARCHIVES...

Here's a collection of short facts and tips from articles published in the past on subjects we are still regularly asked about.

Tank Life of Spray Mix

Made up spray mixes that contain added SuperWetter penetrant should be used within 24 hours. That's because the organosilicone wetters such as SuperWetter will begin to break down in water. If you are caught out with a mixed tank for longer than a day or so, it's advisable to add more SuperWetter penetrant before using it.

Kikuyu Control in Pasture

If spraying out kikuyu-infested pasture with glyphosate, you'll get best results if you DO NOT use an added penetrant. Sounds strange, but there are plenty of customer reports to support its truth. To selectively spray kikuyu *without* damage to grass or clover, use Triclo herbicide at 2L/Ha during Autumn, ensuring there is sufficient soil moisture for reasonable grass growth conditions. To completely eradicate kikuyu from pasture you may have to do one or two similar follow-up applications at 4-6 week intervals.

Spraying Around Trees

Use Cobber herbicide to safely spray around the base of many common shelter and ornamental trees. Species that are tolerant to Cobber include conifers, poplars, willows, *Casuarina*, *Cryptomeria* and

Eucalyptus. Many other trees and shrubs are also tolerant to Cobber, and even if tolerance is unknown it's pretty safe to conduct a small-scale trial patch to make certain. Always use a directed spray to minimise overspray & drift. Put temporary sleeves around the lower trunk of immature trees. Weeds well controlled by Cobber in this situation include gorse, broom, thistles, ragwort, Old Man's Beard, clover, and a very handy range of other broadleaf weeds.

Barberry in Autumn with Glyphosate

A South Island customer has successfully sprayed barberry in autumn using just Glyphosate 360 alone at 1L/100L and NO added penetrant, without doing damage to nearby natives such as manuka that he wanted to keep. He says that the key to achieving this unexpected selectiveness is to have no penetrant. Presumably this means that the species that are less easy to penetrate are thereby "protected" from the glyphosate's effects, while the more susceptible and easily penetrated barberry is still vulnerable. We recommend caution however, and the trial spraying of a limited amount first, just to make sure that your local condi-

tions and your spray technique will produce the same results.

Ragwort Seeds

Do herbicides kill ragwort seeds? A study was conducted by AgResearch. They sprayed ragwort and nodding thistles at three stages of development: flower in bud; flowers partly open; and flowers fully open. They used 600g/kg met-sulfuron-methyl (i.e. MSF600) at label rates. Seeds subsequently collected from flower heads at all three stages of development failed to germinate. In discussion with us, one of the researchers indicated that when sprayed at the immature stage (when the seed is still milky) the seeds will probably be killed by glyphosate and 2,4-D as well as by metsulfuron.

Agapanthus

Surprisingly, one of the most common questions we're asked is how to kill agapanthus. Seems that the idea you'd first think of (glyphosate) doesn't work. Nor does the idea you'd have after that (MSF600). What does work, according to one of our professional spray contractor customers, is Triclo used at the gorse rate of 300ml/100L water, with 100ml SprayWetter per 100L added to the tank.

WEED FILE:

HEDGE MUSTARD



Sisymbrium officinale

DESCRIPTION

Hedge mustard is an annual, sometimes biennial, weed that can germinate at any time of the year, though it's usually going to appear in either spring or autumn. It's actually a member of the brassica family, which makes it a relative of species like turnips and cabbages.

Hedge mustard is also known by some other names, including tumbleweed and wireweed (incorrectly, in the case of wireweed; see below). And it was originally known as Oriental mustard, although this too refers to a slightly different plant.

In form, the plant is quite variable during its life. Initially it forms a rosette, and at that stage is easily confused with other rosette weeds. But then it produces flower stems that grow up to 1 metre in height, and this makes accurate identification easier.

The rosette is 15-30cm in diameter and has broad hairy leaves of a dull green colour, deeply divided into pairs of rounded lobes, and with a similar rounded tip lobe. Leaves on the flower stems are more spear-shaped, although still with smaller pairs of lateral lobes, but the tips are distinctly pointed.

The stems are upright, and become very hard as they mature, which is why the plant is often known as wireweed. Technically it's not; there is another plant correctly called wireweed (*Polygonum aviculare*). But that said, the stems of hedge mustard are indeed like wire!

Once the leaves die off the plant slumps into a rounded tangled and dry mass that's easily blown about by the wind, inspiring the other common partial-misnomer of tumbleweed.

The plant flowers from October to January. The small yellow flowers appear on the tips of the flower stems. The flowers are smaller (just 3mm in diameter) than the somewhat similar wild turnip plant, and are a good identification feature.

The fruit appears on the stems as pods, reaching 15mm long by just 2mm wide, and the pods are closely pressed against the stems; another useful identification feature for hedge mustard.

The root system consists mainly of a long taproot.

HABITAT

The preferred habitat for hedge mustard

is pasture, crops and cultivated land, and roadsides. It also often appears along fence lines.

It occurs throughout New Zealand, and is most common in the Waikato and Bay of Plenty regions

MANUAL CONTROL

On small blocks hand pulling of scattered hedge mustard plants is feasible, and the removed plants should be placed immediately in a bag, to prevent seeds escaping when the removed plant dries off.

HERBICIDE CONTROL

The best time to spray hedge mustard is in autumn and winter, while it is in the seedling stage. It's much easier, and cheaper, to kill at that point than it is as a fully mature plant.

Brassica Crops

Because hedge mustard is itself a member of the brassica family, it is very difficult to remove selectively from standing brassica crops – the weed and the crop share the same herbicide resistance characteristics.

Cereal Crops

- **MCPA 750** at 1.5L/Ha in 200-300L water, boom sprayed when the weed rosette is at the 2-6 leaf stage, and when the cereal crop is between 5 leaf and jointing.

Pasture

- **MCPA 750** at 1.5L/Ha in 200-300L water for hedge mustard seedlings, or at 2L/Ha once the weeds are larger in size.

- **2,4-D** used at the label rates is another good option for pasture use against hedge mustard (*at the time of writing Rainbow & Brown has a 2,4-D product in registration; watch for it soon!*)

Note that both MCPA 750 and 2,4-D will suppress clover in pasture. Rainbow & Brown has a clover-friendly option in development for 2011.

Spot Spraying

If spot spraying is required, along a fence line for example, either of the above herbicides will be effective (e.g. **MCPA 750** at 5ml per litre of water). Or you can use pretty much any general-purpose herbicide, such as **Glyphosate** at label rates.



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WEED FILE: NETTLE



Urtica urens

DESCRIPTION

Nettle is an erect annual weed that is very commonly called stinging nettle because of the nasty sting it inflicts upon brushing contact with unprotected skin. This stinging sensation is actually the result of poisons being released by the fine bristles on the nettle's leaves.

Oddly enough, if you boldly seize the plant these bristles are often flattened before they can penetrate, and you don't get stung. Presumably that's the origin of the phrase "to seize the nettle". Stock tend to distrust this advice, because they will avoid grazing where nettle patches are present. The nettle plant grows up to about 50-60cm in height.

Leaves are dark green and heart shaped with distinctively jagged edges. Individual leaves are up to 8cm long and are arranged in opposite pairs on the stem. They are covered in fine stinging bristles. The stems are round in cross-section, and branched. The stems also have a covering of the same fine stinging bristles that are found on the leaves.

The flowers and the fruits of the nettle are not obvious, being green and light brown, and being hidden away along the axils and undersides of the leaves.

The root system is a shallow taproot.

HABITAT

Nettles are found throughout New Zealand with the preferred habitat being in gardens, sheep camps, under trees, along riverbeds and in waste areas. Nettles also often appear in sites that have been disturbed for cropping or pasture renewal purposes.

MANUAL CONTROL

If you are prepared to *seize the nettle* then manual removal is effective for sparsely distributed plants. They come out easily because of the shallow root. However, nettles usually establish themselves in fairly extensive patches, which would necessitate herbicide control instead.

HERBICIDE CONTROL

Nettles are more easily controlled if sprayed at the seedling stage, up to 4 leaves or so. Beyond that control becomes less certain, and multiple treatments will probably be required to get a thorough kill.

Cereal Crops

- **MCPA 750** at 1.5L/Ha in 200-300L water, boom sprayed when the nettle is at the 2-4 leaf stage, and when the cereal crop is between 5 leaf and jointing.

For linseed and grass seed crops, use **MCPA 750** as above, but at just 0.75-1L/Ha, and when the nettles are as young as possible and actively growing.

Pasture

- **MCPA 750** at 1.5L/Ha in 200-300L water.

- **2,4-D** at 2-3L/Ha for a 680g/L active formulation (*at the time of writing Rainbow & Brown has a 2,4-D product in registration; watch for it soon!*)

Note that both MCPA 750 and 2,4-D will suppress clover in pasture. Rainbow & Brown has a clover-friendly option in development for 2011. The more clover friendly product MCPB can also be used on very small (2 leaf) nettle seedlings, but at 6L/Ha it is quite expensive.

Spot Spraying

- **GrassMate** at 6ml/L of water used in a knapsack or other hand sprayer.

Horticulture & Glyphosate Resistance

Note that nettle is fairly resistant to glyphosate and quite high rates. Several applications are required to make any worthwhile progress at all. In situations like orchards where MCPA or 2,4-D are too risky to use, the best option is to use a product containing glufosinate-ammonium.



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WEED FILE: REDROOT



Amaranthus powellii

DESCRIPTION

There are three closely related plants that are all called redroot, and the most common is *Amaranthus powellii*. The others are *A. retroflexus* and *A. hybrids*. And there's a fourth that's commonly called purple amaranth. For control purposes they can all be considered together, but this Weed File will concentrate on describing the most common of them, which is most widely called redroot, or sometimes called Prince of Wales feather.

Redroot is a summer growing annual weed. It dies off with the autumn frosts.

The plant is very leafy and grows quite tall; up to 1 metre in height in good conditions, although much less in poor sites.

The leaves are variable in size (2-10cm), and are oval shaped. They are hairy on the under surface. Generally the leaves are green in colour, but they very often turn pink/red in autumn.

Stems are erect, and reddish in colour, especially lower down on the plant. The stems form numerous short, leafy lateral branches. These laterals remain short when the redroot is growing in a standing crop, but spread in situations where the redroot plant is isolated.

The flowers are green and quite small, growing in spikes with many short laterals. The flowers appear in the December to February period.

The fruit is formed in seed heads that can be up to 200mm long and droop from the stems. The seeds themselves are small, black to dark brown, and shiny.

The plant has, not surprisingly, a fleshy red taproot.

HABITAT

Redroot appears throughout New Zealand, but prefers warmer conditions than do many other summer annual weeds, which means it is usually most troublesome in the North Island.

It appears often in waste places and in

cultivated ground, and is a particularly common unwelcome guest in crops including maize. In that situation redroot forms quite dense patches of erect plants, making it a very competitive crop invader. It does also appear in pastures, again often in dense stands.

HERBICIDE CONTROL

Redroot is readily controlled by most of the common herbicides, so the choice of what to use is really a matter of the situation in which the redroot is growing.

Cereal Crops

- **MCPA 750** at 1.5L/Ha in 200-300L water, boom sprayed when the weed is young and active, and when the cereal crop is between 5 leaf and jointing.

For linseed and grass seed crops, use **MCPA 750** as above, but at just 0.75-1L/Ha, and when the weed is as young as possible and actively growing.

Fodder Brassicas

- **Replicate** at 350ml/Ha will suppress redroot in brassica crops. Apply up to the 8-leaf seedling stage of the redroot, and use 500ml crop oil per 100L of total spray.

Pasture

- **MCPA 750** at 1.5L/Ha in 200-300L water on actively growing redroot seedlings at the 4-6-leaf stage.
- **2,4-D** at 1.5L/Ha for a 680g/L active formulation to redroot at the small plant stage (*at the time of writing Rainbow & Brown has a 2,4-D product in registration; watch for it soon!*)

Note that both MCPA 750 and 2,4-D will suppress clover in pasture. Rainbow & Brown has a clover-friendly option in development for 2011.

Spot Spraying

- **GrassMate** at 6ml/L of water used in a knapsack or other hand sprayer.

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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.....	\$51
10L.....	\$80
20L.....	\$143
200L.....	\$1227

GLYPHOSATE 450 450g/L GLYPHOSATE AS THE ISOPROPYLAMINE SALT



ACVM No P7223

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

- More concentrated for maximum economy
- Same user-friendly benefits as Glyphosate 360 (above).
- 25% stronger so goes 25% further (20L = 25L of the 360g/L product).
- Use 800ml/100L (hand) or 2.4-4L/ha (pasture).
- Add SprayWetter penetrant for best results.

5L.....	\$59
10L.....	\$90
20L.....	\$164
200L.....	\$1482

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	\$55
500g	\$78
1kg	\$100

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



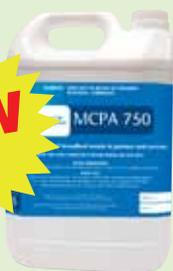
ACVM No P7417

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.....	\$95
5L.....	\$195
10L.....	\$380
20L.....	\$695
100L.....	\$3395

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	\$85
10L	\$140
20L	\$255
200L	\$2400

COBBER 300g/L CLOPYRALID as the amine salt.

ACVM No P7790

For control of hard-to-kill and multi-crown thistles in pasture plus certain broadleaf and brush weeds.
(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.
- Also useful in cereal, Brassica and maize crops, plus forestry, orchards and shelter belts..
- Use 1-2L/Ha by boom or 100-200ml/100L spot spraying. Also good for wiper application.

2L.....\$189
5L.....\$378
10L.....\$726
20L.....\$1349

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.
- Depending on underlying fertility and pasture quality, this increase can be 250kgDM/Ha extra.
- Cost effective at just \$14.16/Ha, simple to apply with any spray gear.
- Sizes: 45g (5Ha) trial pack and 270g (30Ha) regular pack.

45g\$77
270g\$434

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.
- Use 2g per plant or 30-55g/sq.m

5kg\$77
10kg\$148
20kg\$255

**NOW
BACK IN
STOCK**

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\$97
1kg\$874

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
5L.....\$195
10L.....\$380
20L.....\$695

REPLICATE 150g/L PICLORAM and 225g/L CLOPYRALID BOTH AS MONOETHANOLAMINE SALTS

ACVM No P8050

For control of broadleaf weeds in fodder brassica crops and in Ratiata pine. (Approved Handler certificate required)

- Controls black nightshade, fathen, redroot (suppression), thornapple, woolly nightshade, fleabane, foxglove, fireweed, tree lucerne, wattles, gorse, broom.
- For brassicas apply at 350ml/Ha, by aerial, ground or CDA spray. Best results when applied to weeds at 2-8 leaf seedling stage.
- For Radiata pine use 2-2.5L Ha by air.

2L.....\$302
4L.....\$568

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.....\$74
5L.....\$164
20L.....\$603

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
10L.....\$128
20L.....\$245

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 11th 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, with no retailers, agents or middlemen involved, which is why our prices are so attractive ... it is effectively the "wholesale" price, direct from the manufacturer.

• People

The directors of Rainbow & Brown are Paul & Chris Martin, who've both been involved in the NZ agricultural chemicals business for nearly 20 years. Both are actively involved in running and building the business. If you phone us, your most likely contact will be Rachael, our office manager. If you call in at the factory, you'll also meet Clinton, the factory manager.

• Ordering

You can order anytime by phone, online at 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 will 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 (9.00 to 4.00 May-July).

• 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 subscribe to the free Weed Files library. It's at www.rainbowbrown.co.nz

• Approved Handler Certificates (ERMA)

You do NOT need an Approved Handler certificate to purchase any current Rainbow & Brown product except for Cobber and Replicate herbicides. 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 and Replicate herbicides or to apply them in any circumstances.