

Worlds within Worlds

by Paul Martin, Director, Rainbow & Brown



Worlds within worlds fascinate me. Here's a photograph of a half square yard or so of beach, and yet it looks like nothing if not a God's Eye View of some vast terrestrial landscape. Parts of the South Island, seen from 35,000 feet, look a lot like this.

When I was about nine my parents gave me a microscope for Christmas. It was a somewhat risky gift - as far as I know I'd never demonstrated any particular interest in science. But from my first glimpse down that enchanted tube, I loved it. I can still recall my own gasp of surprise when I first saw a fly's wing magnified beyond imagination. And its eye, revealed in all its startling geometry, left both of us bug-eyed, although by then the fly had no choice.

Once I'd exhausted the immediate 'gee-whiz' possibilities of insects and of my own body (hair, loose bits of skin, slivers of toenails, and certain bodily fluids that naturally commended themselves to a nine-year-old boy), I looked around for further subjects.

Without much expectation, I tried a grain of sand and the maximum magnification setting. Oh My God! It was a new world. Literally. It looked like all the earth's wild places, as seen from an approaching alien spaceship. My imagination unleashed, I saw mountains, rivers and even (I felt nearly certain of it) minuscule cities and towns. I longed for just one more click of magnification, at which I was confident that tiny roads and even diminutive cars would be discernible.

I'd read *Gulliver's Travels* and had been enthralled with the idea of a smaller world and a bigger world, but that was now unmasked as mere kids' stuff compared with the breathtaking vision revealed in that grain of sand. This was



unimaginably smaller than Swift's Lilliputian fantasy, and this was *real!* I wondered if somewhere in one of those wee cities on that grain of sand was a microscopic (ha-ha!) boy, squinting at that very moment into *his* microscope at another grain of sand. Seconds later the full import of that idea hit me: what if we are just a grain of someone else's sand? I went to the window and looked cautiously to the sky, but it was just too far to see anything with the naked eye.

And that's why, when some years later Stephen Hawking rose to prominence with his smug musings about quantum mechanics, I felt ripped off. I'd figured all that stuff out as a nine-year-old. Plagiarist bastard, Hawking!

We recently had a family gathering in Australia for our annual mid-year birthday party. That's when we decree everyone's birthday to be on the same day, so we have a big party and everyone gets a gift. All the names go into a hat a couple of weeks beforehand and this year I drew Mitch, who is my eleven-year-old great-nephew and, as it happens, is also the first male child born into my family since me.

I bought him a microscope. And he loved it. Worlds within worlds.

IN THIS ISSUE:

• WINTER SALE

Hot savings for the cool season

• 4 NEW WEED FILES

• WINTER CLOSE DOWN:

Check the dates, don't get caught out!

• ALSO:

- Tips for spraying seedling gorse
- Glyphosate Report
- Barberry Control with Glyphosate

• FULL PRODUCT RANGE:

Details, sizes & prices

WINTER

HOT DEALS FOR THE COOL SEASON!

Yes, it's true! It's time again for our traditional Winter Sale, when you can save up to 25% or more off our already absurdly low prices.

This year we're going for big savings on five products: Glyphosate 360, Glyphosate 450, MSF600, GrassMate and Ranger.

We're including glyphosate because we don't have any idea what's going to happen to its price in the new season (i.e. from Spring), and we want to live dangerously.

MSF600 and Grassmate have very limited quantities at this price, and will sell out for sure during the sale period. So if they take your fancy, act fast.

The Winter Sale commences right now, as you read this.

The rules of the sale are:

- No limit per customer, and it's first-in first-served.
- You must pay your invoice in 7 days after you receive the goods.
- Sale ends on Tuesday 30th June, or earlier on any item if sale stock is sold out.

Full details of the Winter Sale prices, and your savings, are on the page opposite.



WINTER CLOSE DOWN

It's that time again, when our lavishly overpaid but nevertheless relentlessly self-serving staff begin insisting on some kind of annual holiday. In the good old days we worked from before dawn till midnight, seven days a week, often in the driving snow. And in bare feet too. Alas, that kind of commitment and loyalty is no more. Now they want to be paid, AND have time off as well. Whatever next? Lunch breaks?

So, just to keep the peace, we're closing for a mid-Winter break. We'll close at 4:00 pm on Friday 3rd July and re-open at 8:30 am on Monday 27th July. ***So if you'll need any products between those dates, order them early.***

CLOSE – Friday 3rd July RE-OPEN – Monday 27th July

SALE

MSF600 (LIMITED STOCK)

The most cost-effective gorse and brushweed spray on the market, and also great as a spot spray for thistles and ragwort.

\$125/kg

SALE \$110/kg for
min. order of 2kg,
save \$30



GRASSMATE (LIMITED STOCK)

Grass-friendly herbicide for both brushweeds and flat weeds. Tremendously versatile choice.

5L - ~~\$245~~ **SALE \$210**, save \$35

10L - ~~\$450~~ **SALE \$405**, save \$45

20L - ~~\$795~~ **SALE \$740**, save \$55



GLYPHOSATE 360

The world's favourite non-selective general purpose weed spray, in the traditional 360g/L strength.

5L - ~~\$80~~ **SALE \$65**, save \$15

10L - ~~\$130~~ **SALE \$95**, save \$35

20L - ~~\$245~~ **SALE \$165**, save \$50

200L - ~~\$4955~~ **SALE \$1535**, save \$420



GLYPHOSATE 450

The same versatile general purpose stuff as Glyphosate 360, but in the more economical 450g/L strength for greater savings.

5L - ~~\$90~~ **SALE \$70**, save \$20

10L - ~~\$158~~ **SALE \$110**, save \$48

20L - ~~\$255~~ **SALE \$195**, save \$60

200L - ~~\$2290~~ **SALE \$1850**, save \$440



RANGER

Buttercup & docks spray for use at an amazingly low 20g/L, so 100g treats 5Ha for both docks and all buttercup species at the same time.

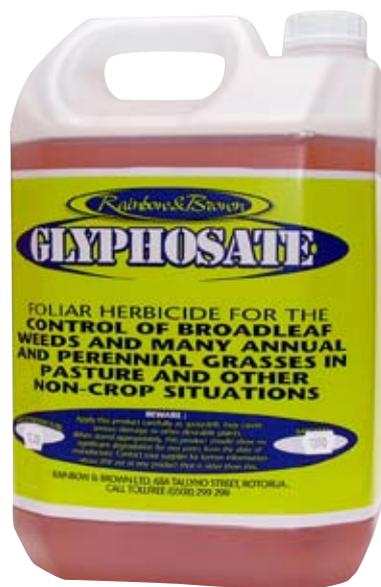
100g - ~~\$95~~ **SALE \$70**, save \$25

1kg - ~~\$855~~ **SALE \$645**, save \$210



Glyphosate Report

and other good news.



Glyphosate

In recent weeks materials prices for glyphosate have dropped a bit, gone back up, dropped again, and then ricocheted off all the walls. Buying these materials has been like betting on an invisible roulette wheel. Also placing your bets in US\$ but only winning (if at all) in Pesos.

At the moment the NZ\$ has strengthened a bit, and that has helped a little with this month's Winter Sale special. The prospects for the new season, from spring onwards, are still unclear. We don't think there will be any further reductions, there may well be some medium term rises again during the spring. So what that means is that our Winter Sale special prices in this issue are currently looking likely to be about as good as it gets.

Other Products

Some of the materials for other products have also now begun to rise, mainly due to reductions in production volumes in some overseas factories severely affected by the world financial carnival. This suggests that there could be moderate increases in the retail price of other herbicide products as well in the new season.

Who Knows?

We're sorry that it's all a bit uncertain. We'd like to be more decisive, but alas we'd only be telling you more than we know.

Barberry Control in Autumn using Glyphosate

A South Island customer tells us that he 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. It's a very good idea (thanks Graham). We do recommend caution however, and the trial spraying of a limited amount first, just to make sure that your local conditions and your spray technique will produce the same results.



Whoops! Blunder in Gorse Weed File

Several readers spotted our boo-boo in the weed file for gorse, where we incorrectly said that the handgun rate with MSF600 herbicide is 30G/100L. It is in fact just **20g/100L** and we apologise for the mistake. If you are a subscriber to our weed files, you will now automatically receive an amended version of the gorse weed file, along with the four new titles in this issue. If you're not a subscriber, you really oughta be ... check the website to get on the list for this free service. These sharp-eyed readers will now be invited to become honorary proof-readers for all future newsletters. Thanks!

Out of Stock (Grrrrr!)

Due to the effects of the world economic whatchamacallit on some of our suppliers we are now temporarily out of stock of:

- Buckshot granules
- Triclo herbicide

We'll be back in stock of both for the new season, starting in August. Hopefully that will not be too inconvenient at this time of the year as neither one is a particularly important product during the winter months.

Spraying seedling gorse in pasture

A customer (Bill's his name) who does lots of spraying recently gave us some very good tips based on his experience with seedling gorse control



in pasture. He used Grassmate at just 2L/ Ha plus SuperWetter at 100ml/100L water. The gorse was around 8" to a foot high, and growing in quite newish grass/clover pasture.

The gorse had browned off within a week of spraying, leaving the grass undamaged and with only minor and short-lived clover damage. He was very pleased with this excellent result at such a low application rate, especially as it is highly cost-effective.

Bill also mentioned that if you have seedling gorse in a pasture, do not mow until after you have sprayed. Mowing beforehand just seems to encourage the gorse to harden up, and become less easy to kill with the spray. If you have any similar tips that could be useful to others, please let us know. And thank you, Bill.

WEED FILE:

PARSLEY DROPWORT



DESCRIPTION

Parsley Dropwort – *Oenanthe pimpinelloides*

Parsley dropwort is very often known as 'carrot weed' although it is not closely related to the wild carrot species.

It is common in Northland and South Auckland, but also exists in other North Island locations. It grows in pastures as well as waste areas, roadsides, disturbed ground, sports fields and lawns.

Parsley dropwort is a perennial weed, and can be highly invasive when growing in its preferred conditions. It grows very aggressively in pasture, where it is a serious problem because stock will not eat it due to its unpalatable taste. This lack of palatability is especially the case when the plant forms upright flower stalks in late spring.

In appearance, it is a parsley-like plant, spreading from a central stem, and reaching a height of 30-90 cm. The leaves grow on stalks in a rosette arrangement, with opposite leaflet segments, appearing much like the herb parsley (hence the name). The flowers appear in spring at the top of the taller flower stalks, in small clusters (umbels) of individual white blooms about 4mm diameter. The flowers appear from October to April.

The roots of the dropwort parsley have small black tubers towards the ends. These tubers can enable regrowth of the plant following control attempts.

Inclusion of parsley dropwort in hay will lower the quality of the hay, and is also responsible for the spread of the weed to further locations if the affected hay is sold and transported.

The sometimes-confused wild carrot is not similar at all, and is distinguishable by its leaves, which are almost identical to those of the common vegetable garden carrot.

Parsley dropwort might also be confused with the hemlock, which has similar white flowers on umbels. However, the hemlock has leaves that are distinctly fern-like in shape.



HERBICIDE CONTROL

The only effective method of control is with herbicide. Boom and spot spraying are commonly used, but there is very good potential to use wipers after late spring, when the parsley dropwort is taller than the pasture.

Spray:

- **2,4-D** sprayed by boom at 3L/Ha (using a 680g/L strength 2,4-D) is the most commonly used treatment, applied in autumn, early winter or early spring. Note that in Northland this herbicide cannot be used in spring after August.
- **MSF600** sprayed by handgun at 30g/100L water, plus 100ml **SuperWetter** penetrant, is effective in waste areas where pasture grass damage is not an issue.
- **Glyphosate 360** sprayed at 4-5L/Ha by boom for cleaning out prior to pasture renewal or cropping, will also take out the parsley dropwort present. If using **Glyphosate 450** then the rate is 3.2L-4L/Ha.
- **Cobber** sprayed at 100ml/100L water is an effective spot spray treatment and can be sprayed over pasture and ornamental grasses, although it will damage clover.

Wiper:

- **MSF600** at 2g/L water and **Glyphosate** at 1L per 2L water are both effective applied by wiper, and can be very cost-effective compared to the boom spray options if terrain permits wiper operation.

Note: The small tubers on the roots of parsley dropwort can enable it to regrow after control attempts, and it is therefore not realistic to expect permanent eradication from a single treatment. Follow-up treatment of regrowth will be necessary.

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WEED FILE: MANUKA



DESCRIPTION

Manuka – *Leptospermum scoparium*

Manuka is a perennial scrub native to New Zealand and to parts of south-eastern Australia. It is a member of the myrtle family, and is often called tea-tree, apparently because Captain Cook used its fragrant leaves to make tea. There is a similar, related species (*L. laevigatum*) found in many coastal areas of NZ that has a clearer claim to the name tea-tree, but the name is widely used for both.

Manuka is a shrub or small tree with very attractive flowers, generally white or pink, growing in dense masses of separate individual blooms directly on the stems of the plant (i.e. without stalks). The flowers have no smell and generally appear from September to March.

The fruit of the manuka takes the form of small woody five-celled capsules of about 7mm diameter. These split to release large numbers of very small and slender orange-red seeds which are spread mainly by the wind.

Leaves are small, up to about 10-12mm in length with pointed tips, and have a pleasant and strong myrtle fragrance when crushed.

Manuka oil, extracted from the crushed leaves, is highly prized for various health and medicinal properties, probably at least partly derived from a natural antibiotic substance (leptospermone) found in the oil.

Honey made from manuka flowers is also much sought after, both for its taste and its claimed medicinal benefits, and a significant industry in manuka honey exists in NZ.

Manuka is common (sometimes all too common) throughout NZ, and tends to do best in marginal areas and on incompletely developed land. It is a strong competitor as a seedling, and will often become established in serious numbers on hill country that has been cleared as a preliminary step to pasture improvement. While generally appearing as a shrub, manuka is capable of growing to 3 or 4 metres in height, and can form very dense

thickets if not checked by early eradication.

Manuka can be confused with tauhini and kanuka. Tauhini has leaves with more rounded tips, and with near-white undersides, while kanuka is a taller plant but with smaller, narrower leaves and smaller flowers growing in groups of 2 or 3 blooms.

PHYSICAL CONTROL

Manuka is a good candidate for physical control methods such as scrub-cutting, slashing, and grubbing-out. Stumps left after manual cutting or slashing will normally die, and regrowth of cut manuka is not usual.

HERBICIDE CONTROL

Spraying can be successfully done at any time of the year, as long as the manuka is actively growing at the time it is sprayed. Complete coverage, especially of large bushes, is essential to obtaining a good result.

- **MSF600** sprayed by air at 300g/Ha plus 2L **SuperWetter** penetrant in 400L water.
- **MSF600** sprayed by hand at 30g/100L water, plus 100ml **SuperWetter** penetrant.
- **Glyphosate** sprayed by hand at 1L/100L water by hand, or 9L/Ha by boom, in both cases also using 100ml **SuperWetter** per 100L water.

Notes:

Glyphosate is preferred if hand spraying of smaller manuka growing in close proximity to valuable trees including orchards, because it has no soil residual effect. Nevertheless, the spray must be shielded to prevent drift or overspray.

MSF600 will not kill most native grasses, providing some grazing incentive for stock to penetrate and smash down the dying manuka thickets. MSF600 is the most cost-effective choice for larger spraying jobs targeting manuka.



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WEED FILE: BROOM



DESCRIPTION

Broom – *Cytisus scoparius*

Broom is a woody deciduous shrub with many branches of ridged green stems which have very sparse numbers of very small leaves. Indeed some stems can be entirely leafless.

It grows throughout New Zealand, and is most commonly found in and around riverbeds, on low fertility hill country and forest areas, as well as the margins of grazing land. It can form extremely dense thickets, and although it is not as spiny as gorse can still make movement very difficult or impossible for stock. It is tolerant of cold conditions, and can be readily found at high altitudes and southerly latitudes.

Broom has very attractive golden-yellow flowers in spring (and sometimes later), which are followed by the emergence of explosive seed pods. The flowering normally follows that of any gorse in the same locations, and can be distinguished at distance due to being a lighter yellow than the gorse flowers.

The leaves, in addition to being both sparse and small, are trifoliolate in form. They fall from the stems very easily.

There is a similar species, Montpellier broom, which is distinguished by having many more leaves and smaller flowers.

MANUAL/MECHANICAL CONTROL

Small plants can be dug or grubbed out, but this should be done before fully-developed seed pods are present to prevent accidental release of seeds onto the disturbed ground. Small bushes can also be slashed and the area cultivated, especially if heavy grazing can follow to clean up seedling growth.

Goats can also provide reasonable control of broom by grazing, especially smaller and seedling growth.



HERBICIDE CONTROL

Because of the scarcity of leaves on broom, there is generally less than ideal leaf area to receive and take up sprayed herbicides. This has led to many instances of disappointing results with some sprays, including metsulfuron (e.g. MSF600). However, not everyone agrees with this, and many users report perfectly satisfactory results. Most of the reports of poor results appear to be from the South Island, although we don't know if this could indicate a regional resistance of broom to that herbicide.

In all cases spraying is most effective at the time of maximum leaf cover. This usually occurs in spring and early summer.

Stump Swab:

Broom cut by chainsaws and scrub cutters will usually regrow from dormant buds on the stumps, so treatment of the stumps with herbicide is essential.

- **MSF600** at 5g/L water swabbed onto fresh cut stumps.

Spray:

- **Triclo** at 300ml/100L water plus 100ml **SuperWetter** organosilicone penetrant, applied by handgun; or **Triclo** at 10L/Ha plus 2L **SuperWetter** in 400L water by aerial spray.
- **GrassMate** at 250ml/100L water plus 100ml **SuperWetter** organosilicone penetrant, applied by handgun; or **GrassMate** at 10L/Ha plus 2L **SuperWetter** in 400L water by aerial spray.
- **MSF600** sprayed by handgun at 35g/100L water, plus 100ml **SuperWetter**, or by air at 300g/Ha **MSF600** plus 2L **SuperWetter** in 400L water. Note: Not all authorities agree that metsulfuron herbicides are entirely effective against gorse ... see 'Herbicide Control' introductory paragraph above.
- **Glyphosate 360** sprayed by handgun at 1L/100L water plus 100ml SuperWetter.

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WEED FILE:

BUTTERCUP

CREEPING



CREEPING



GIANT



DESCRIPTION

Giant buttercup – *Ranunculus acris*

Creeping buttercup – *Ranunculus repens*

These are two similar species of buttercups, and they have so much in common that it is sensible to discuss them together.

Both types of buttercups are perennials. The giant buttercup forms a bush up to 1m tall, while the creeping buttercup is lower, with stems creeping along the ground for up to 1m.

Both have glossy yellow flowers with five petals, and of up to 25mm diameter. The flowers appear at the top of erect flowering stems. The giant buttercup flowers during Nov-Apr, while the creeping buttercup flowers Oct-Feb.

The leaves provide the best means of identification between the two types. Those of the giant buttercup are deeply jagged and appear as a single leaf, whereas the creeping buttercup leaves are more rounded and are clearly divided into three leaflets, the central of which is on a short stalk.

Buttercups are found throughout New Zealand, and prefer wet conditions, so are a particular problem on dairy farms and in high rainfall areas. Cattle and horses avoid eating the leaves, although sheep will eat them.

The seeds of the giant buttercup are often transported in hay, which is the most common source of new infestations.

Creeping buttercup has a very effective stolon system which allows it to quickly invade nearby weed-free areas where it will normally out-compete pasture grasses and clovers.



MANUAL CONTROL

Isolated plants will often appear on the margins of good pasture areas, and these can successfully be dug out and removed before they can invade too deeply into the

pasture. It is essential that the entire root system is removed with the plant, because buttercups will regrow from rhizomes left in the soil on root segments.

HERBICIDE CONTROL

Best results will be achieved if plants are sprayed at their most active growth period, generally from right through spring and early summer to February.

Spray:

- **MCPA** and **MCPB** used alternately over successive springs, generally at around 6L/Ha, has been a popular approach. However, in many areas buttercups have developed a resistance to these herbicides, so close observation of results is necessary to ensure that control is good and uniform.
- **Ranger** herbicide (thifensulfuron-methyl) sprayed by boom at just 20g/Ha is very effective, and resistance to this herbicide does not appear to occur. This herbicide is also very effective against docks at that same application rate, so if both species are present they can be controlled with a single herbicide application. Nevertheless, a follow-up treatment is likely to be required the following spring.

Note: **Ranger** herbicide will cause some yellowing and reduction in vigour of pasture species. The grass soon recovers, although clover is slower to recover and may take up to four months.

- **Glyphosate 360** sprayed at 4-5L/Ha by boom for cleaning out prior to pasture renewal or cropping, will also take out any buttercups present. If using **Glyphosate 450** then the rate is 3.2L-4L/Ha.

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GLYPHOSATE 360 360g/L GLYPHOSATE AS THE ISOPROPYLAMINE SALT



ACVM No P5441

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.....	\$80
10L.....	\$130
20L.....	\$215
100L.....	\$1025
200L.....	\$1955

WINTER SALE

See page 3 for details

GLYPHOSATE 450 450g/L GLYPHOSATE AS THE ISOPROPYLAMINE SALT



ACVM No P7223

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.....	\$90
10L.....	\$158
20L.....	\$255
100L.....	\$1225
200L.....	\$2290

WINTER SALE

See page 3 for details

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



ACVM No P7027

The low-cost, proven choice for gorse and brushweeds.

- 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	\$125

WINTER SALE

See page 3 for details

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

Grass friendly control of brushweeds and broadleaf weeds in pasture.

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

2L.....	\$130
5L.....	\$245
10L.....	\$450
20L.....	\$795
100L.....	\$3650

WINTER SALE

See page 3 for details

COBBER 300g/L CLOPYRALID as the amine salt.



ACVM No P7790

Controls hard-to-kill thistles in pasture.

- 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.....	\$185
5L.....	\$370
10L.....	\$710
20L.....	\$1320

BUCKSHOT 20g/kg PICLORAM GRANULES

ACVM No 7717

Granular herbicide for direct spot application.

- 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\$65
 10kg\$110
 20kg\$200

RANGER 750g/kg THIFENSULFURON-METHYL GRANULES

ACVM No 7668

Selective herbicide for use in pasture, wheat barley and oats.

- Controls buttercups (annual, creeping and giant) and docks.
- Scoop and measuring cylinder included.
- Use at 20g/Ha, so 100g pack will treat 5 hectares.

100g\$95
 1kg\$855

WINTER SALE
 See page 3
 for details

TRICLO 600g/L TRICLOPYR AS THE BUTOXYETHYL ESTER

ACVM No P7189

Controls broadleaf & brush weeds without pasture damage.

- Blackberry, broom, gorse, lupin, tuts, 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.....\$125
 5L.....\$235
 10L.....\$405
 20L.....\$705

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.....\$72
 5L.....\$160
 20L.....\$590

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.....\$70
 10L.....\$125
 20L.....\$240

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 10th 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. We're just a small family, but a happy one.

• 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.
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 herbicide. To apply MSF600, GrassMate, 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.