

Chinese Chemicals

Tougher Chinese environmental compliance continues to impact

3

Legislation

Are you aware of the new 'Chain of Responsibility' Legislation?

5

Herbicide

New Carfentrazone Herbicide For Marshmallow and Wild Radish

6

'Lucky Dip' Farm Chemicals! What risks are you taking?

Is being cheap the only important factor when buying chemical?

If quality is important then without analysing every chemical you buy, the only thing you have to go by is a trusted brand.

Blindly buying any brand product from unknown suppliers via the internet or local resellers simply because they're cheap is fraught with risk.

You really should know what you're buying and who you're to get comeback from if there's something wrong with the product.

Low barriers to entry, fierce competition, and low Australian chemical market regulations have brought lower chemical prices – with a downside – sometimes quality is sacrificed for a low price.



Buying lucky dip chemical can be a foolish game

Good Formulation

Senior 4Farmers Production Manager and experienced chemical formulator, Karl Haslberger said, "People shouldn't count on just comparing the active ingredient. You can't always trust that to start with."

"Even if two products have the same active, a good formulation based on quality raw materials is everything.

"Cheap product is easy to make by using inferior materials. Commonly, there are several formulas for the same chemical".

"Sometimes the supplier let alone the retailer of cheap products don't have a clue or care about quality. Registering a product with a good formula is simple. But who is to say it's made to it".

Karl cites the example of the 800kl of Trifluralin imported last year by various suppliers - a rubbish product with an unregistered formula. There is evidence the suppliers knew that before importation and would have definitely known if they had bothered to look at it. The decisive factor it was cheap, forget about quality!"

Trust 4Farmers

The philosophy of 4Farmers is to make better value chemicals, not just cheaper. Value relates to price and quality.

4Farmers has its own registered product range it stands behind. There's no wheeling and dealing the cheapest product from anywhere.

Many products are made in our own plant and what isn't is tested in our own laboratory to ensure its standards. When you buy a 4Farmers product, you're buying a brand you can trust.

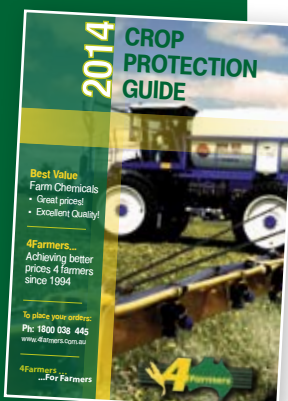
New, bigger Crop Protection Guide

It's now available - the 2014 4Farmers Crop Protection Guide.

We had overwhelming demand for this guide last year which is free to all clients of 4Farmers.

It is packed with information on rates, adjuvants, range of control and lots of other important

information for all 4Farmers herbicides, insecticides, fungicides, seed dressings, and other spray products. It also has heaps of other handy reference material crop protection and best application of chemicals.



4Farmers Products

With Cross Reference to similar trade name products

Herbicides	Similar Product
2,4-D Amine 625, 750	Various
2,4-D Ester 800	Various
2,4-D Ester 680	Various
2,4-D plus Picloram	Tordon™ 75-D
Atrazine 900 WG	Atradex®, Gesaprim®
Bensulfuron 600 WG, 600SC	Dupont Londax DF®
Bromox MA	Bromicide MA®
Bromoxynil 200	Buctril®
Brown Out	Spray.Seed®
Carfentrazone 240 EC	Nail®
Chlorsulfuron 750 WDG	Glean®, Siege®
Clethodim 240EC	Select®
Clodinafop 240EC	Topik®
Clopyralid 300EC, 750SG	Lontrel®
Cyanazine 900 WDG	Bladex®
Dicamba 500 EC	Dicer 500®
Diclofop-Methyl 500	Hoegrass®
Diflufenican 500SC	Brodal®
Diiflufenican/Bromoxynil (RP)	Jaguar®
Diuron 900DF	Diurex WG®
Fluazifop 212EC	Fusilade®
Flumetsulam 800 WG (RP)	Broadstrike®
Fluometuron 900WG	Nu-tron 900 DF
Fluroxypyr 200 EC	Starane™
Glyphosate 470,450,360,540	Roundup®
Glyphosate 875	BiDri700®, Roundup Dry®
Glufosinate-Ammonium 200	Basta®
Haloxypop 520EC	Verdict®
Imazethapyr 700WG	Spinnaker®
Ipyr 750WG	Arsenal®
Ipic 240	Flame®
LV MCPA 570	Nufarm LVE Agritone®
LVE MCPA/ Diflufenican	Tigrex®
MCPA 500, 750	Various and Agritone®
MCPA/Picloram	Tordon™ 242
Metolachlor 720EC, 960 (RP)	Dual®
Metribuzin 750WG	Lexone®, Sencor®
Metsulfuron Methyl 600WG	Ally®
Oryzalin 500SL	Surflan®
Oxyfluorfen 240EC	Goal®, Striker®
Paraquat 250	Gramoxone®
Pendimethalin 330EC	Stomp®, Argo®
Propyzamide 500SC, 900WG	Kerb®, Edge®
Quizalofop-p-ethyl	Targa®
Simazine 900WG	Gesatop®, Simagranz®
Sulfometuron 750WP	Oust®
Sulfosulfuron 750	Monza®
Tralkoxydim 400WG	Achieve®
Tri-allate 500EC	Avadex®
Triasulfuron 750WG	Logran®
Tribenuron Methyl 750	DuPont™ Express®
Triclopyr 600EC	Garlon®
Trifluralin 480EC	Treflan®
Trifluralin 600EC	Treflan 600®
Tri-pick	Grazon®
Turf ControlSC	Spearhead®

New Product

(RP) denotes products with Registration Pending at printing

Seed Dressings	Similar Product
Imidacloprid 600 SC	Gaucha®, Emerge®
Imid-Triadimenol	Zorro®
Iprodione 500 (RP)	Rovral Aquaflow Fungicide®
Procymidone 500 SC (PR)	Sumislex
Tebuconazole 25T	Raxil®
Triadimenol 150 + WP	Baytan®, Baymax®
Triadimenol 150 liquid	Baytan®, Baymax®
Triticonazole 200	Real®
Fungicides	Similar Product
Azoxystrobin 500 WG	Amistar WG®
Carbendazim 500	Bavistin®, Spin®
Chlorothaloril 720	Bravo®
Epoxiconazole 125 SC	Opus 125®
Flutriafol 250SC	Impact®, Intake®
Iprodione 500	Iprodione Aquaflow 500 SC®
Mancozeb 750 WG	Penncozeb 750 DF®
Procymidone 500	Fortress 500®
Propiconazole 250EC, 500EC	Tilt®250,Throttle®500Folicur®
Tebuconazole 430SC	Folicur®
Triadimefon 125EC	Triad®, Slingshot®
Triadimefon 500 Dry	Tee-Fon 500®
Triadimenol 250EC	Bayfidan®,Shavit®
Insecticides	Similar Product
Abamectin 18EC	Vertimec®
Alpha-Cyber 100EC, 250SC	Fastac Duo®, Dominex®
Bifenthrin 100EC	Talstar®
Chlorpyrifos 500EC	Lorsban®
Cypermethrin 260EC	Scud®,Sonic®
Dimethoate 400EC	Rogor®
Fenamiphos 400	Nemacur®
Imidacloprid 200SC	Confidor®
Lambda-Cyhalothrin 250SC	Karate Zeon®
Omethoate 290	Le-mat®
Pirimicarb 500	Aphidex®,Pirimor®
Rodenticides	Similar Product
Rat and Mouse Bait Pellets	Talon®
Zinc Phosphide Unsterilised	MouseOff ZP®
Mouse Bait	
Strychnine Alkaloid Crystals (RP)	
1080 Oat baits	
Other Products	Similar Product
Ammonium Sulphate	
Boom Clean Dry	
Citric Acid	
Ethephone 720 SL	Galleon® Growth Regulator
Farm Pro 700	LI 700®
Foam marker	
Metaldehyde Snail/Slug Bait (RP)	
Glyphosate Wetter	Gly Wetter Plus Surfactant®
Penetrator	Pulse Penetrant®
Speedy Spray Adjuvant	Enhance®
Sunshade Spray Adjuvant	
Turbo Charge	AntiEvap®
Wetter 1000	Supercharge®, Uptake®
Zinc Phosphide Mouse Bait	Mouse Off®

Tougher Chinese environmental compliance continues to impact



Increasingly tougher environmental restrictions on chemical manufacture in China continues to present significant challenges for the import of farm chemicals.

Chinese local officials have their jobs on the line to ensure the areas they control are compliant to the new laws. With such high stakes they're passing on the same pressure to their constituent chemical plants.

Not only are the more common chemicals like Glyphosate and Trifluralin being affected, but a whole range of chemicals. For example products like Tralkoxydim and QPE supplies could be restricted and/or suffer price rises as a result.

The trend of weakening Chinese and Australian currencies against a resurgent USD is also placing upward pressure on chemical prices compared to the same time last year.

Farmers should take note that supply of

some chemicals could be tight. Ordering pre emergents promptly if not already done is recommended as well as considering post emergents as early as feasible.

Glyphosate

Last Spring we reported the jump in Glyphosate pricing which topped out around US \$7/kg for technical grade active constituent (TGAC).

We advised clients that prices were unlikely to reach the 2008 levels of up to US\$14/kg. This proved correct as prices soon eased to around US\$5.20/kg in December.

Historically, this price is not especially low. At the time of writing they're rising again –US\$5.50/kg. At this level for TGAC, plus manufacturing and supply chain costs, quality Glyphosate 450g/L product costing in the low \$5's/L ex GST would not be unreasonable.

Trifluralin

Prices for this are starting to firm at over US\$4/kg TGAC.

The Australian market seems to be in short supply. It would be no surprise if suppliers have reduced their exposure to this product because of the recent history of low, risky, volatile margins and the impact of newer products for pre emergent ryegrass control.

At time of writing, securing extra shipments before the end of March to cover shortages seems to be problematic. If a shipment can be secured, 21 days is needed for shipping, plus processing time when it gets here, before being ready for dispatch.

Therefore sharp retail prices might still be in the mid to high \$'s but clients who dither may not get supply until early May.

Paraquat

As explained in the last 4Front edition, Paraquat supply within China is banned after June 30. Accumulated stocks at that point could be retailed in China over the next couple of years.

Chinese domestic buyers, cautious about high prices have been reported to be holding back from topping up their stocks. It seems they're unlikely to get relief and will need to get in the market at these levels which may push it higher.

Production for this chemical is tightly regulated in China with production restrained even further by tight supplies of one of its raw materials.

Recent formulated Paraquat 250 prices in China have been around US\$4.50/L but this is set to spike higher. Fair local prices are currently over AUD\$6/L. Longer term prices might ease when Chinese demand passes.

New website coming soon

It has been a long time in the making, but we're pleased to report that our new, website will soon be on air.

This website has a host of information, not just on our products but lots of information

on farm chemicals that you're find useful.

It also includes all the back issues of 4Front so if you're wanting to track down an old article, it's readily available.



The weight of a liquid chemical and its relationship to quantity

With the raised priority being given to transport load weights, it is important for farmers to be aware of the weights of a container of liquid chemical.

An understanding as to how containers of liquid are filled may explain things...

As everyone knows liquid chemicals are sold by volume. However, the most precise and practical method for filling drums is to measure liquid into a container by its weight.

The specific gravity of some common chemical products is as follows;

Product	kg/litre
Glyphosate 450	1.199
Glyphosate 470	1.201
Glyphosate 540	1.383
Trifluralin 480	1.063
Triallate 500	1.063
Paraquat 250	1.199
Ester 680	1.147
Amine 625	1.181

For example Trifluralin has a known specific gravity of 1.063kg/l.

To fill a 1000L IBC, the IBC is placed on electronic scales and zeroed.



Accurate electronic scales ensure the right volume of liquid goes in the drum

The container is filled until the weight is at least 1063kg.

An IBC weighs approximately 62kg therefore a full 1000L IBC of Trifluralin should weigh the contents weight plus the weight of the container - at least 1125kg.

Apparent discrepancies

Occasionally a query arises about a container that seems to be under-filled.

Accurate weighing of the product has proven the container did contain exactly the right amount of liquid.

Aside from graduation marks that might have been inaccurately put on a drum, drums are sometimes slightly distorted.

Drum distortions can become worse over time.

This is especially so when solvent based chemicals are stored in an unfluorinated drum or put into an unfluorinated drum that once stored solvent based materials.

Solvents can cause the plastic of a drum to suck in (panelling) or lose shape.

Fluorination is a process that exposes the surfaces of plastics to elemental fluorine under strictly controlled conditions of time, temperature, and pressure. Hydrogen atoms on the exposed surfaces are replaced with fluorine atoms, creating a permanent fluorocarbon barrier on all exposed surfaces that protects it from damage caused by the chemical.

Typically orange ringed 110L drums are fluorinated. Other drums, like blue ringed 110s, 200L drums and usually IBCs are not.

Economical mice bait 'ready to roll'

Since 4Farmers registered its unsterilised ZnP Mouse Bait in mid 2012 there have been no concerns about farmers having an affordable, effective and readily available means of control.

"If farmers want mouse bait manufactured in their area they can just contact us and we're happy to help out," explains Neil Mortimore, 4Farmers GM.

"We just need to establish a facility suitable to license for manufacture of an S7 product".

4Farmers has one of only a couple of registered products that can be made with unsterilised grain and suitable for regional baiting stations.

The main reason mice bait was short in 2011 was due to lack of sterilised grain. With

4Farmers product this is a non issue.

Supply of Zinc Phosphide is not generally a problem either. So farmers should feel more relaxed if a plague does break out again.

The 2011 mouse plague saw 4Farmers come to the rescue with a realistically priced mouse bait.

"We could have charged anything but that is not the philosophy of 4Farmers," Neil said.

"That year we produced the product under an emergency permit.

"It is now registered by the APVMA like any other regular chemical product and production is ready to roll as soon as we have demand," he said.

He added: "We're not sure that farmers



will ever be able to manufacture bait with powdered zinc phosphide on their farm.

Many farmers are not really bothered if they have a 4Farmers manufacture plant close by".

"None the less we are still continuing to work on products we think will be cheaper and better. This it is a long process".

Farmers: Are you aware of the new 'Chain of Responsibility' Legislation?

Are you aware of the 'Chain of Responsibility' Legislation coming into effect nationally from March 2014?

It is important that farmers become aware of this because in one way or another farmers are involved in transportation - the transporting of stock, grain, farm chemicals, farm fencing materials and so on.

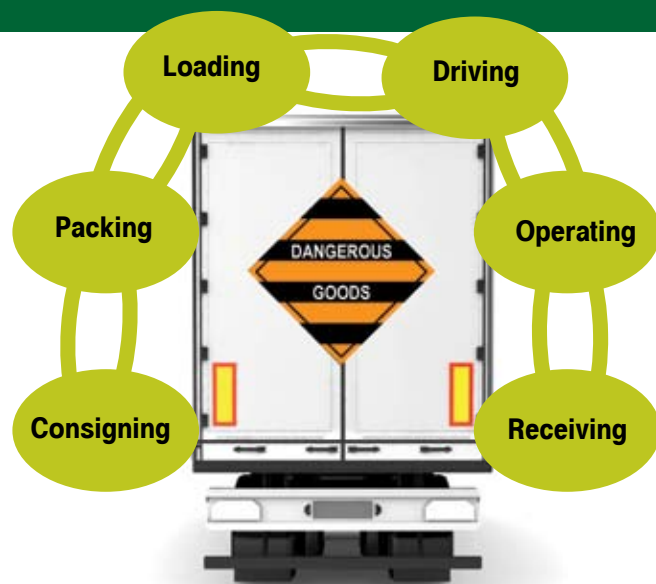
The 'Chain of Responsibility' legislation means that if you use road transport as part of your business, you share the responsibility of managing the risk.

This means anyone who has control in the transport chain - including the consignor, loader and packer, driver, receiver - can be held legally responsible if, by their actions, inactions or decisions, they cause or contribute to a breach of the road laws.

The following activities are considered to be part of the chain...

- **Consigning** - a person or company commissioning the carrying of goods
- **Packing** - placing goods in packages, containers or pallets
- **Loading** - placing or restraining the load on the vehicle
- **Driving** - the physical act of driving a vehicle
- **Operating** - operating a business which controls the use of a vehicle
- **Receiving** - paying for the goods/ taking possession of the load

Whichever activity you perform in the 'Chain', the legislation requires you to take reasonable steps to manage the risk and ensure road safety is not compromised.



For instance as a consignor or receiver, you have a responsibility for ensuring goods carried on your behalf:

- » Do not exceed vehicle or permitted dimension limits
- » Do not cause vehicle or permitted mass limits to be exceeded
- » Are appropriately secured.

Because you're involved in the Chain of Responsibility, we urge you to become familiar with the legislation.

Further Information

For more information about the Chain of Responsibility call Main Roads, Heavy Vehicle Operations on 138 HVO (138 486), or visit www.mainroads.wa.gov.au

Low dioxin, 2,4D products now offered by 4Farmers

**LOW
DIOXIN**

You may recall the controversy some months ago that followed the ABC 4Corners Television report about the claims of dangerous levels of Dioxins in some manufacturer supplies of 2,4D products.

In order to put our clients' minds at rest, 4 Farmers is now sourcing 2,4D containing the same levels of Dioxins that have been approved in the U.S.A. and Europe.

As we mentioned in the last edition of 4Front the Australian regulatory body, the APVMA had not set compliance standards for Australia which suggested that in their judgement there was not cause for concern.

However, as the issue raised concerns, 4Farmers decided it would be prudent to ascertain if we could obtain supplies that met international standards so that any potential risk to our clients was averted.

There have been dioxin standards placed on 2,4-D products used in America and Europe. Only more purified products have been allowed into these countries which is what 4Farmers is now obtaining.

We believe we may be among the few to be meeting this standard as it is not compulsory in Australia to offer farmers this level of protection.

New Carfentrazone Herbicide For Marshmallow and Wild Radish

4 Farmers new registration, Carfentrazone 240 EC (similar to Hammer®) is available this season as a spike in knock down chemicals for pre emergent or fallow situations.

Until now it has been considered an expensive chemical. However it is yet again another chemical 4Farmers has made decisively more affordable. It adds to the numerous other examples of why it is important farmers should support a business with their interests at heart.

Carfentrazone is well known in its ability to assist with control of a wide range of broadleaf weeds and is especially notable for its control of Marshmallow weed.

Less known is the potential niche for this Group G chemical to be used in a post emergent program for broad spectrum broadleaf control including Wild Radish.

In an independent trial

commissioned by 4Farmers, 100ml/ha Carfentrazone 240 + 330ml/ha MCPA Amine 750 achieved 84% weed control after 38 days. This was significantly higher than 660ml/ha Precept® or 750ml/ha Tigrex® each with 69% control after the same period.

The potential to more economically use Carfentrazone in crops will be of interest to growers looking to reduce reliance on Group I phenoxy herbicide control and Group F Diflufenican, or expensive proprietary products.

4Farmers will be working to expand its Carfentrazone label to in crop weed control like other similar products as soon as possible.

A technical tip with Carfentrazone: it can work better applied at night or in low light conditions. Similar to products like Paraquat, this technique allows the chemical to better translocate through the plants to provide more effective kill.



Carfentrazone is good on Marshmallow

% Wild Radish Control		Days After App.	
Product	Rate	16	38
Carfentrazone 240+ MCPA Amine 750	50ml+330ml	55	65
	75ml+330ml	68	74
	100ml+33ml	78	84
	125ml+330ml	81	88
Precept® (+Hasten 1%)	660ml	48	69
Tigrex®	750ml	59	69

Independent Trial, York WA, 2013

Trifluralin and Triallate beat Sakura® and Boxer Gold®

In independent trials conducted for 4Farmers last season Trifluralin and Triallate mixtures outperformed Sakura® and Boxer Gold®.

Product and Rate	Ryegrass plants/m ² 8 wks after sowing
Boxer Gold® 2.5L/ha	107
Sakura® 118g/ha	171
Trifluralin 2L+Triallate 1.5L	56

For ryegrass control and sound ryegrass weed resistance management, farmers should consider Triallate and/or Metolachlor, each from chemical group J and K respectively.

Either or both of these chemicals mixed with Trifluralin can give more robust control and be much more cost effective.

Prosulfocarb, the main active in Boxer Gold®, is actually in the same group as

Triallate. The other active in Boxer Gold® is Metolachlor.

The performance in our trial of Sakura® last season reflected the same sobering field result for many farmers", says 4Farmers General Manager Neil Mortimore.

"The product from Group K is not the silver bullet some are hoping for and arguably wasted a valuable shot from this group.

"If farmers use Sakura® they should consider adding Trifluralin or Triallate. This puts two chemical groups in the application for better resistance management. It also gives a back up if conditions aren't ideal."

Triallate Believer

Scott Hoyle, who continuously crops 2000ha near Minlaton on the Yorke Peninsula South Australia, relies heavily on Triallate for ryegrass control.

"Typically across my program, I use 2 to 3L/ha of Triallate plus maybe 1L/ha Trifluralin. I

may consider adding Metolachlor in the mix in future".

Scott said that with higher rates of Triallate he gets good control that fits very well into his resistance strategy.

"Triallate appears to work well under marginal conditions which are common with earlier sowing relative to other alternatives that can cost a lot more. It also seems safer on the crop even at high rates compared to other alternatives".

"I like to support 4Farmers because of what they have done in the chemical industry and especially what they did during the mouse plague. They didn't have to supply cheap mice bait but they did".

"In any case, I have found 4Farmers products like Triallate and Trifluralin are top quality and great value".



**Scott Hoyle,
Minlaton SA,
"Triallate is an
important chemical
for my property."**