

Ozbreed and research

- Plant and Turf Breeding
- Green Wall
- Green Roof
- Erosion Control Plants and Turf
- Salt Tolerance of Plants
- Plants in Soft Fall Area
- How much Carbon plants lock into Soil.

Nurseries learning from the turf industry.

Prodiamine and Oryzalin research in pot
and field grown ornamentals.

Weed Control Techniques

- Weed Mats in Nursery
- Mulch or fibre pot mats
- Mulch on top of landscape pots for slow growing plants.
- Hand Weeding. Australia Worker costs 250 R per hour. Too Costly.
- Field. No plant is immune to steel.
- Granular post and Pre-emergents

Napsac



Boom Spray



Useful post emergents

- Post emergent used in turf to kill Sedges. Generally does not harm any thing else, but Test first.
- **SERVIAN** also sold as **Halo** or **Crown**.
- A.I.;- halosulfuron 750g / Kg
- 50 g pack = R 216.69
- Dosage;- 50 g / Ha.

Useful post emergents

- ❑ Low rates of Round up. We used to use half rate round up on Mondo, especially in cooler times.
- ❑ Are there other plants this can be used on?

Useful post emergents

- ❑ Lawn granular Weed and feed. A fertiliser high in soluble nitrogen with 50grams per kg of Iron (Fe) (Ferrous Sulphate.)
- ❑ Great for Liverwort. Some Broadleaf weeds. Sprinkle over top, including young cuttings.
- ❑ Experiment at increasing rates till liverwort dies, and plants don't. Beware of extra nitrogen.

Useful post emergents

- ❑ 2,4.D Amine.
- ❑ I have used it on Liriope, Dianella and Lomandra at half to slightly higher rates, to kill broad leaf.
- ❑ Permit use only in Australia off label.

Grass Killer

- ❑ Fusilade forte.
- ❑ A.I.;- fluazifop-P-butyl 125g / Lt
- ❑ 5 Lt. pack = R 1766.57
(Fusilade) also available in 25 Lt packs.
- ❑ We use it for lawn edging in large gardens.



Prodiamine



Oryzalin



Literature from USA

- USA research shows Prodiamine moves less deeply in the soil or potting mix than Oryzalin.
- Both these chemicals are listed for many plants in the USA. Oryzalin is not listed for many ornamental grasses. Prodiamine OK on ornamental grasses.
- Prodiamine did not do so well on broadleaf weeds in USA trials, but USA rates are low. Higher rates worked for broadleaf weeds in Australian trials.

Prodiamine

- 30ml per 100 square metres.

Result. 1 Fluid oz 1000 sq ft

- Broadleaf weeds were not stopped.
- Stopped most Grass weeds.
- No harm to health of any plant.
- Weeds were more numerous in control. (non treated plants)

Prodiamine



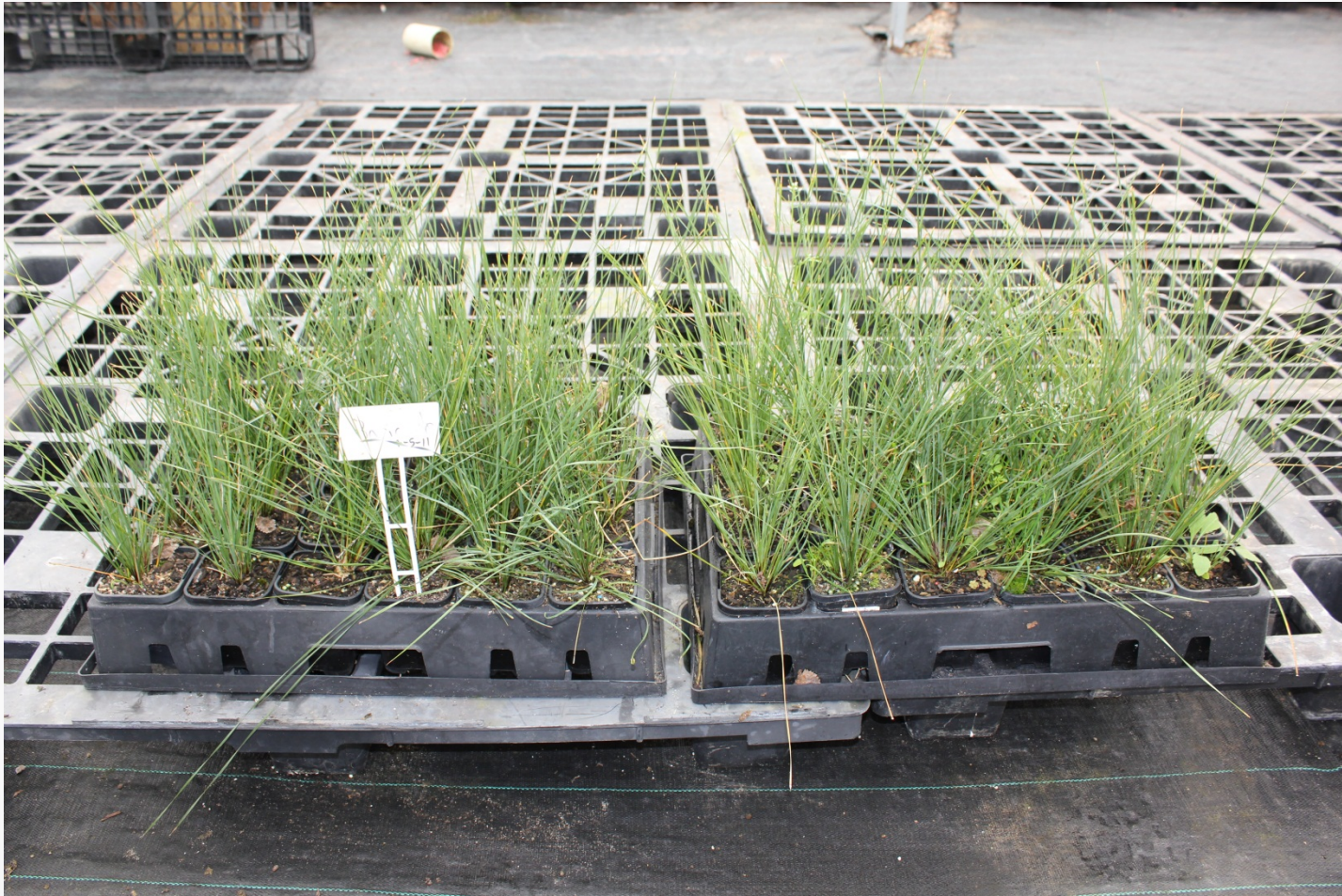
Prodiamine

- 45ml per 100 square metres.

Result. 1.5 fluid oz per 1000 sq ft

- Broadleaf weeds were reduced, but not totally eliminated.
- Stopped all Grass weeds.
- No harm to health of any plant.
- Weeds were far more numerous in control. (non treated plants)

Prodiamine



Prodiamine

- 60ml per 100 square metres. May need 70 to 80ml for some weeds.

Result. 2 to 2.5 fluid oz per 1000 sq ft

- Broadleaf weeds were totally eliminated.
- Stopped all Grass weeds.
- No harm to health of plants.
- Weeds were far more numerous in control. (non treated plants) No weeds in treated plants were noticed.



Prodiamine

- Both the garden and container trials showed similar results, although it was noted that the 45ml trial in the garden reduced weeds by more than in the containers. 3-4 months of control.
- Soils in the garden were clay. Less drainage should keep more chemical near top of soil.
- Syngenta looking at registering for ornamental pots, growing beds, and landscape plantings. ie; Plant plants, then spray Barricade over the top immediately. Water in.

Growing bed trials







Oryzalin

- 45ml per 100 square metres. Label Rate.
Result. 1.5 Fluid oz per 1000 sq ft
- Broadleaf weeds reduced only slightly
- Grass weeds reduced only slightly.
- No harm to health of any plant.
- Weeds were slightly more numerous in control. (non treated plants)

Oryzalin

- 80ml to 100ml per 100 square metres.

Result. 2.5 to 3 fluid oz per 1000 sq ft

- Broadleaf weeds reduced mostly at 80ml and totally at 100ml.
- No harm to health of any plant. More testing needed on more species. Agapanthus and grasses maybe harmed.
- Weeds were a lot more numerous in control. (non treated plants)
- Available and low cost in NZ, Australia, USA and South Africa. Prolan, Surflan etc.
- Same pre-emergent as in Rout, without the Oxyflefurofen which is a post and Preemergent.

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Oryzalin

- Informal garden trials showed us that we needed to use much higher rates to get good weed control. Eg; 80ml to 100ml per 100sq metres. 2.5 to 3 fluid oz per 1000 sq ft
- More assessment needed on species, but no plants in our trial were harmed. Eg. Liriope, Lomandra, Dietes, Agapanthus (some burn), Westringia, Callistemon all OK. Check USA Label.
- Will move deeper in soil compared to Prodiamine.
- If your woody plants have no weeds at application, it is far more cost effective than Rout.

Other Pre-emergents

- Rout.
- Good for trees and woodies if small weeds are already present.
- Post emergent and Preemergent Oxyfleurofen. Pre-emergent Oryzalin. Do not use on Dieties, Agapanthus, Liriope, or many Monocots and Dicots or soft type plants. Operator error frequent.



Other Pre-emergents

- Ronstar. Good for Woody plants.
- On Liriope, Agapanthus etc, spread around the plant by hand. Do not get in the crown of the plant.
- Water immediately. Operator error frequent. Oryzalin, Prodiamine better, safer, lower cost, and easier to apply.

Other Pre-emergents

- ❑ Snapshot
- ❑ Active Ingredient: Trifluralin + Isoxaben
- ❑ Widely Used in USA. Seems to be available in South Africa.

Controls more broadleaf and grassy weeds in more ornamentals than any other pre-emergent herbicide



Other Pre-emergents

- Merango. Indazalflam. Soon to come to Australia. Available USA.
- NZ and SA need to lobby.
- Has any one used it? Can it be used on potted plants or just on the ground.

Other Pre-emergent Discussion.

- Pendimethalin???
- Dacthal. 900g/kg CHLORTHAL-
DIMETHYL ???
- Any other type???

Carbon Trader



Activated Charcoal



Carbon Trader

- Replicated turf plots. Half sprayed with Carbon trader, half as control.
- Mixture of Activated charcoal and nutrients.
- Significantly improved the winter colour of the turf grass, and improved the winter activity of some types, particularly Kenda.





Average of Kikuyu clippings colour

Combined Scores	With Carbon Trader	Without Carbon Trader
Kenda	8	6.5
Village Green	5	2.75
Common	7	2.75
Average of all Kikuyu	6.67	4

Average weight of Kikuyu clippings in grams per plot.

Combined Scores	With Carbon Trader	Without Carbon Trader
Average of all Kikuyu	909	334









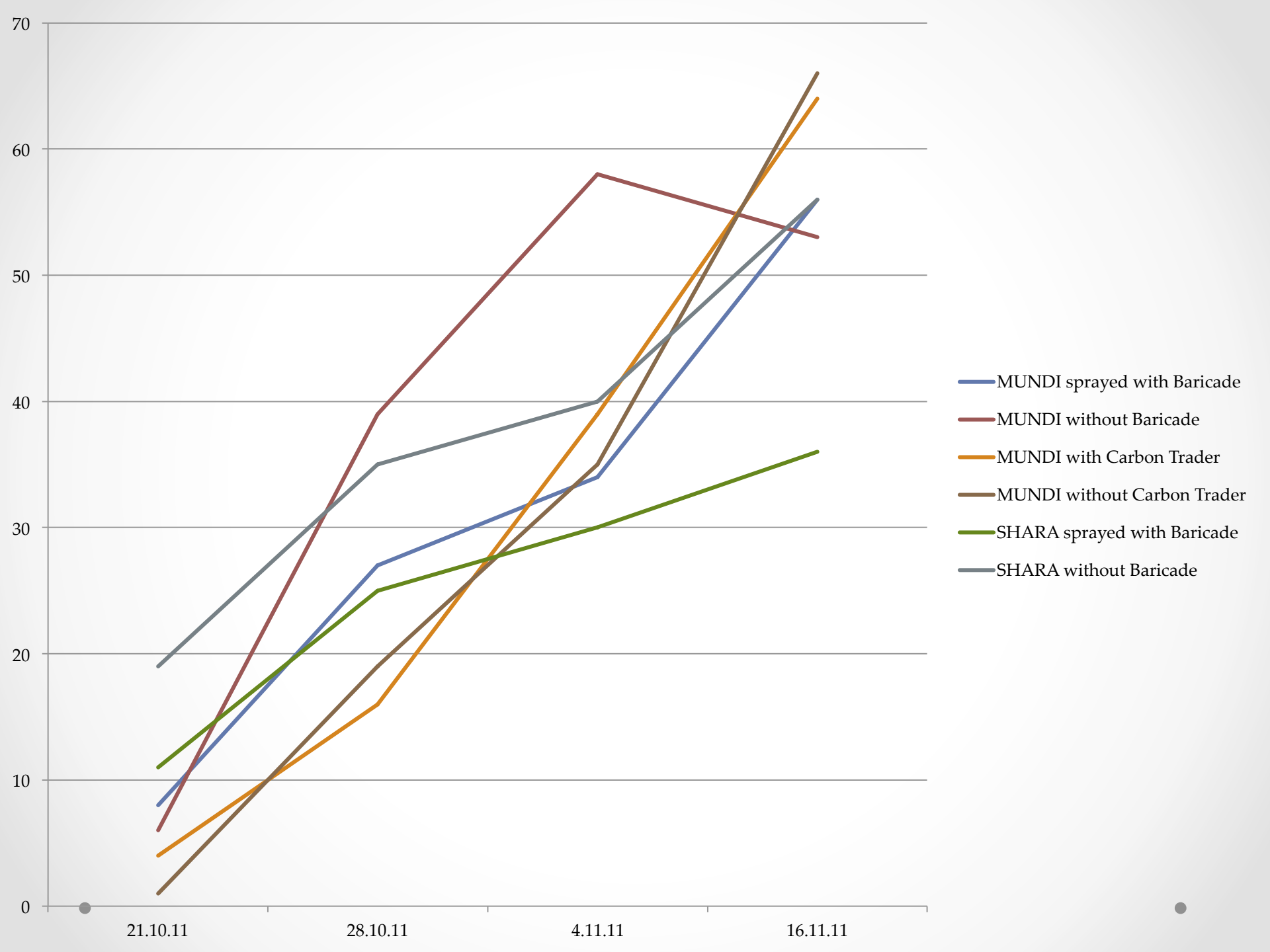






Number of plants rooted out of 98 cell tray

Date counted	MUNDI sprayed with Baricade	MUNDI without Baricade	MUNDI with Carbon Trader	MUNDI without Carbon Trader	SHARA sprayed with Baricade	SHARA without Baricade
21.10.11	8	6	4	1	11	19
28.10.11	27	39	16	19	25	35
4.11.11	34	58	39	35	30	40
16.11.11	56	53	64	66	36	56
18.11.11	56	54	64	70	44	58



Conclusion

The use of Prodiamine is widespread in the turf industry. This research shows that Prodiamine clearly reduces weed invasion without damage to most plants. Registration of this product would greatly help Australian Nurseries. Syngenta has indicated that they will aim for registration of this product over the next 6 to 12 months. The industry in other countries should lobby for this to happen.

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Further testing is needed for Oryzalin on plant damage, but higher rates it is effective for weed control in nurseries.

The fact that it moves deeper in the potting mix according to literature, means plants must have roots near the bottom of the pot before use to be safe.