



Trial Overview

Recently, growers have experienced disappointing results with the number of vines germinating in cane crops after application of pre-emergent herbicides. There are several factors that influence pre-emergent efficacy, including soil type and CEC, trash cover, product rate, rainfall timing and weed pressure.

A demonstration trial was established to compare the performance of 3 residual herbicide alternatives to commonly used Diuron®, applied to the trash blanket after harvest. The products applied included an isoxaflutole + terbuthylazine mix and an imazapic + hexazinone mix. Both offer broad spectrum control of grass and broadleaf weeds, and the third product was straight isoxaflutole offering pre-emergent grass control.

Water samplers were also installed at the site to examine runoff losses on this soil type.

Site Details

Region: Marian, Pioneer River catchment

Crop Class: 1st Ratoon

Variety: Q208

Spray timing: Broadcast, onto trash blanket post harvest, 300 L water/ha.

Soil Type: Sandy Clay Loam

Slope: Less than 2%

Irrigation: High pressure overhead

Weed Pressures: Guinea grass, siratro, red convolvulus vine and blue top

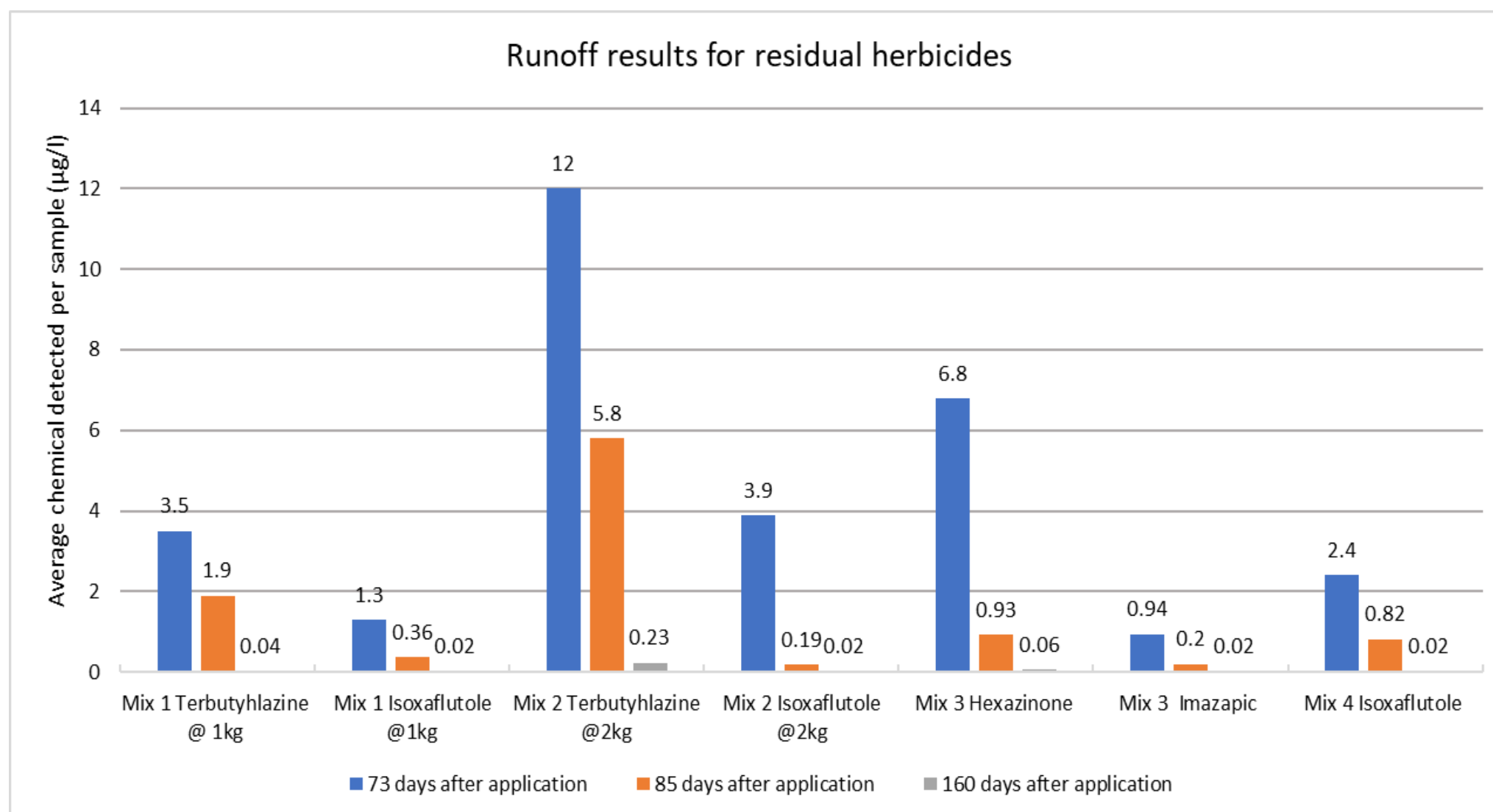


Figure 1- Broadleaf weeds emerged within 8 weeks post application in all treatments.

Treatment Details

Demonstration Mix	Product application rate/ha	Approximate product cost \$/ha	Knockdown option	Approximate knockdown cost \$/ha	Total Product cost \$/ha
Mix 1 Terbuthylazine + Isoxaflutole	1kg/ha	\$42/ha	2,4-D 625 @ 1L/ha	\$6/ha	\$48/ha
Mix 2 Terbuthylazine + Isoxaflutole	2kg/ha	\$84/ha	2,4-D 625 @ 1L/ha	\$6/ha	\$90/ha
Mix 3 Hexazinone + Imazapic	500g/ha	\$58/ha	2,4-D 625 @ 1L/ha	\$6/ha	\$64/ha
Mix 4 Isoxaflutole	200g/ha	\$32/ha	2,4-D 625 @ 1L/ha	\$6/ha	\$38/ha

Run-off results



Findings

- All products tested gave good residual control of grasses, up to 12 weeks after application, by which time the crop was shading in
- All products had broadleaf weeds emerging through the trash blanket by 8 weeks after application. There was very little practical difference in broadleaf weed control between treatments – while the straight isoxaflutole treatment had more broadleaf weeds emerged, all treatments required a follow up knockdown application.
- Switching to knockdown products for broadleaf weed control may provide up to \$50/ha in chemical savings
- Herbicide runoff results reinforced previous findings – as product rate increases, runoff risk increases. Choose an appropriate rate to do the job, consider where knockdowns only can be used for broadleaf weed control, the longer the time between product and application, the lower the risk of runoff.
- Knockdown herbicide strategies require flexible application – consider investment in inter-row or high clearance applicators

SUMMARY

It's time to reconsider your broadleaf weed and vine control program – if the vine problem is increasing, consider a knockdown strategy – this will provide improved control and significant cost savings.



Figure 2- High clearance sprayers provide greater flexibility of product choices and spray timing.

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