PRACTICALITIES

WEED CONTROL IN DIRECT SEEDING AREAS - SELECTIVE HERBICIDES

by Alan Grist & Peter Thompson

WEED control is crucial if direct seeding is to work. Main Roads have won numerous awards for their superb roadside revegetation projects involving direct seeding, and here they explain a little of how it is done.

Main Roads have seen tremendous results in roadside rehabilitation by direct seeding native seeds along the roadsides in the south-west. This method of establishing native vegetation has transformed what was once pasture or cleared road verge into lush vegetated strips.

Preparation prior to seeding is aimed at establishing a good seedbed by topsoil management, cultivating and adding organic matter in the form of natural mulch. Once the preparation work has finished and the seeding is complete, nature takes its course and in time the seeds begin to germinate. Due to the improved soil condition of the direct seeding sites, especially the sites in pasture areas, weeds such as capeweed, lupins, annual grasses and veldt grass start to show their presence. Grasses (narrow leaf) can be controlled in broad-leaved crops or vegetated areas with the use of selective herbicides such as *Verdict* ® or *Fusilade* ®. The control of broad-leaved weeds in a broad-leaved crop or natural vegetation is somewhat more difficult.

Main Roads South West (MRSW) has been conducting trials with selective herbicides to control broad-leaved weeds such as capeweed, lupins and wild radish that have germinated in some of the direct seeding sites. Trials consisting of various rates of *Lontrel* ® have indicated that effective control of certain broad-leaved weeds could be gained without off-target damage to desirable plants. Results indicated that:

- *Lontrel* @ 500ml / ha controls capeweed and lupins in their early growth stages.
- *Lontrel* @ 750 ml / ha controls capeweed and lupins in their more advanced growth stages without damage to the desirable plants.
- *Lontrel* @ 1000 ml / ha results in damage to desirable plants.

These results have led to our current extensive use of *Lontrel* at 500 ml / ha.

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MRSW spray vehicle applying herbicides to a direct seeding site.

Lupins showing signs of stress following an application of Lontrel

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Herbicide blends of *Lontrel* and *Verdict* in combination with a good wetting agent have been used to successfully control both broad- and narrow-leaved weeds at our sites. On occasions *LeMat* ® has been added to the tank mix to control red-legged earth mite infestations. Overspraying the sites with these chemicals in the early stages of weed growth allows the native seedlings to germinate and grow without competition for moisture and nutrients. The time of application is sometimes a difficult decision, because while you are waiting for most of the weed seed to germinate, the early-germinating ones are growing larger every day. MRSW has adopted spraying early in winter to control the early weeds and then applying a follow-up spray over the sites if necessary.

Undesirable plants that are not controlled by the selective herbicides are treated with glyphosate-based products, applied with a hand-held wick applicator. This is a very labour-intensive task, however it is very effective in the control of such weeds as wild radish, nightshades and marshmallows. Boundaries of the sites are treated with glyphosate @ 2 or 3 litres / ha depending on target growth and species.

The procedure for rehab site maintenance in general, consists of:

- firstly maintaining a chemical boundary 2-3 m wide around the site
- overspraying with selective herbicides
- treating persistent weeds with wick applicators.

Thus the combination of selective and non-selective herbicides play a major role in the maintenance and success of MRSW's rehabilitation projects.

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