Spray misting – a new method for prickly acacia control

Spray misting using horticultural mist blowers for the foliar application of fluroxypyr based herbicides (e.g. Starane ™ Advanced) to control prickly acacia is approved under Minor Use Permit PER82366. Spray misting can be done in pasture, rangelands, stock routes and other non-crop situations throughout Queensland. PER82366 is available at the Australian Pesticides and Veterinary Medicines Authority website (http://permits.apvma.gov.au/PER82366.PDF).

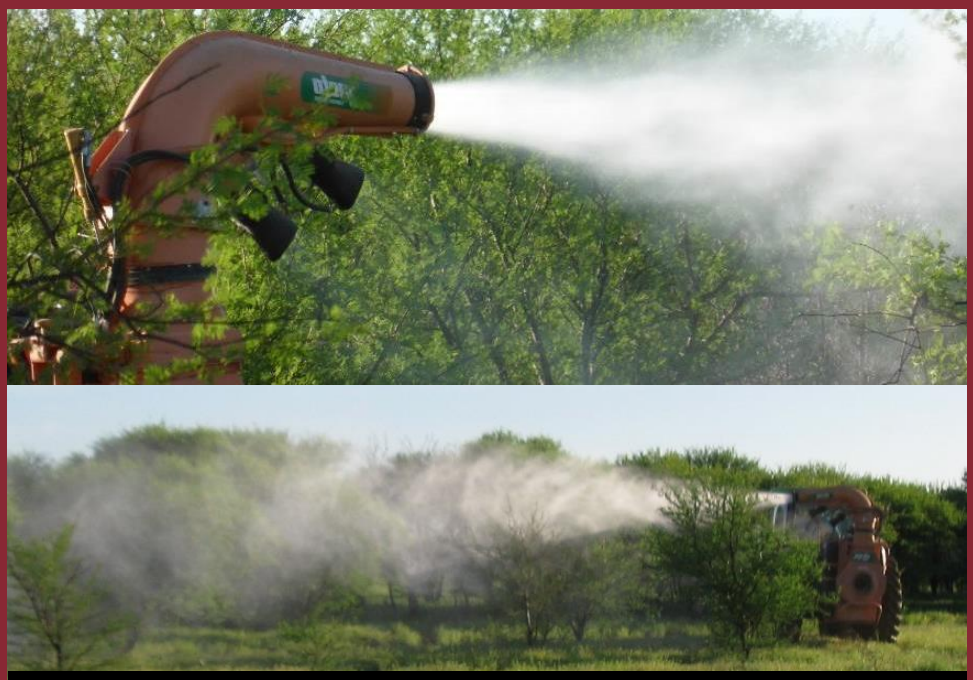

Image 1: A horticultural mist blower treating prickly acacia

Where to use spray misting

Spray misting provides a cost effective initial control treatment for high to very high density prickly acacia infestations. It is particularly useful for rapid treatment of dense linear stands of prickly acacia (e.g. along drainage and fence lines) although its use is not limited to these areas.

Weather and plant conditions are critical to maximise control

As a rule of thumb:

- Wind speed between 3 and 15 km/h provides sufficient air movement to deliver the herbicide to the target without carrying herbicide excessive distances to non-target areas
- Temperature below 32°C and humidity above 30% reduces mist evaporation which aids herbicide effectiveness
- Plants must be healthy with fresh growth evident to ensure optimal herbicide uptake and effectiveness

This factsheet was co-developed by Southern Gulf NRM and the Department of Agriculture and Fisheries through the Queensland Government funded War on Western Weeds initiative.

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Key points for spray misting application

- Spray mist only once per year - allowing prickly acacia to recover between applications is important for effective herbicide uptake. Unhealthy plants that aren't actively growing will not absorb herbicide effectively and mortality will be reduced
- Use herbicides only in accordance with directions on registered labels
- Restrictions apply near surface waters and sensitive crops/gardens/vegetation
- Prior to spray misting refer to PER82366 (link above) for further details on application rates, application methods and restrictions

High mortality achieved in field trials

- Field trials indicate a mortality rate of up to 90% (Image 2) can be achieved 20 to 30 metres from the application point
- Best results (highest mortality) are achieved for plants up to 3m tall that are not podding. Plants over 3m tall may not die but will be severely damaged, eliminating pod production for at least one year following treatment thereby lowering the soil seed bank over time
- Follow-up control is a critical part of an effective prickly acacia control plan and should occur before plants begin to produce pods

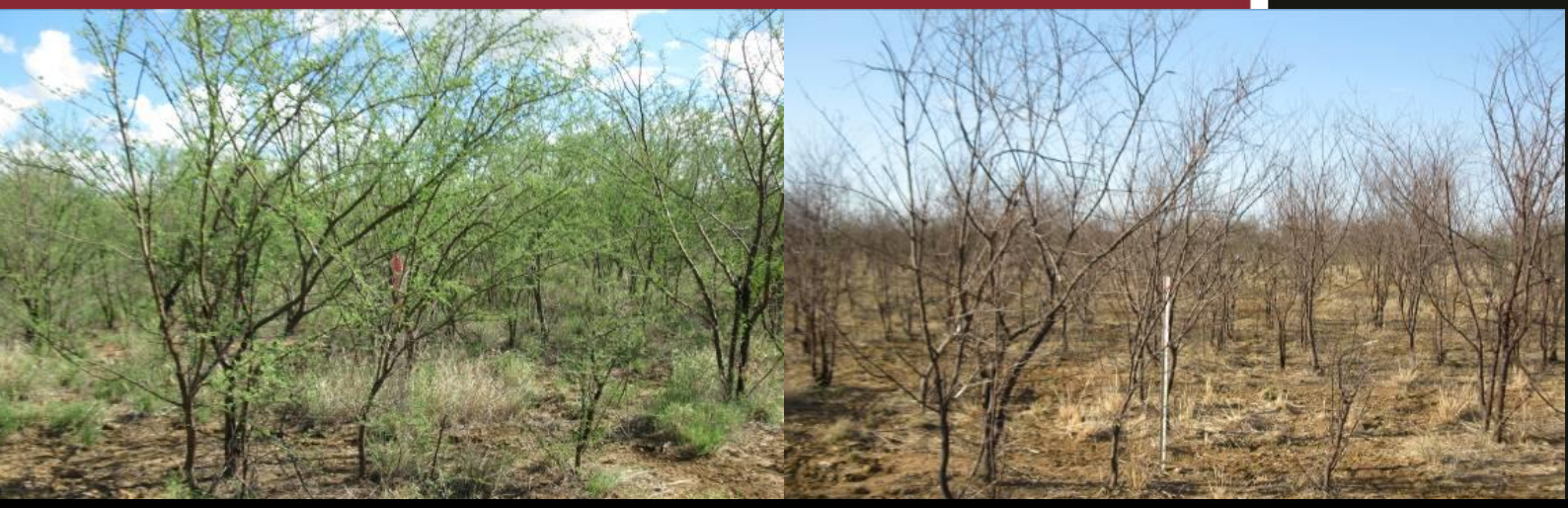

Image 2: (left) prickly acacia plants prior to treatment and (right) high prickly acacia mortality following a single spray misting treatment with Starane ™ Advanced and Uptake ™ Spraying Oil

Acknowledgements

The refinement of spray misting for prickly acacia control has been a collaborative effort between the Department of Agriculture and Fisheries (DAF), Desert Channels Queensland, Southern Gulf NRM and participating landholders. DAF recognises the valuable contributions of all participants and thanks them for their substantial commitment of time and resources.

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Spray misting flowchart

Consider prickly acacia treatment types for your infestation/situation and identify misting as a potential control option.

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Density of prickly acacia infestation is greater than 250 plants per hectare. (Other control options may be more cost effective at lower densities.)

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Majority of prickly acacia trees are less than 3 m tall.
(Trees greater than 3 m may experience lower mortality although seed production will be eliminated for at least one year following treatment.)

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Obtain expert advice or consider how misting could be best applied to your prickly acacia situation.

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Consult APVMA permit PER82366 before misting and consider seeking expert advice (http://permits.apvma.gov.au/PER82366.PDF).

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Consider legislative obligations when managing weeds in proximity to native vegetation and water course situations.

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Arrange access to misting equipment.

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Undertake spray misting and monitor results with expert advice if required.

Further information

Specialist advice is available from the **Tropical Weeds Research Centre** (call **47 615 700**). Further information is available from **SG NRM** (call **1800 676 242** or visit **http://www.southerngulf.com.au/resources/fact-sheets/**) or from **Biosecurity Queensland** (call **13 25 23** or visit **http://bit.ly/2tZlGT9**)

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