ASSESSMENT OF THE "SPORE WATER" METHOD

Investigations by the Kangaroo Island Animal & Plant Control has led to the development of the spore water method for broadscale spray application of the bridal creeper rust fungus. This novel method of applying a *Puccinellia* fungus for biological control should be published in a scientific journal. However, more scientifically-measured data is needed at a range of trial sites across Australia, so that statistical analysis can be done to "prove" the method works. Following is a simple protocol to conduct the trial:

1. Select a trial site with a uniform, dense infestation of bridal creeper, where bridal creeper rust is not known to be present within 1 km.
   100 metres of infested roadside would be ideal. Rust must not already be at the site – otherwise you can't tell if the spore water treatment worked.

2. Divide and peg the site into ten evenly-sized plots at least 10 m in length.
   The 100 m roadside could be split into 10 × 10m long plots.

3. Randomly select 5 plots to be treated and 5 to be untreated. Record these on a sketch map of the site.
   Replication, randomisation and the untreated (control) plots are vital for a scientific trial.

4. Apply the spore water to the 5 treated plots. Be careful to minimise drift onto the 5 untreated plots.

5. At application record the following: date, location (ideally GPS recording), time of initial mixing of the leaves, amount of leaf material used, time of application, water rate and weather conditions for the following 24 hours.
   See the attached recording sheet.

6. Every month after application visit the trial site and assess the incidence of the rust in each of the 10 plots. Do the untreated plots first so rust is not accidentally spread from the treated plots.

7. Choose 3 random points within each plot. For each point look around for 30 seconds within a 1 m radius of where you are standing. Then score for bridal creeper rust as either:
   Absent – not seen on foliage (within 1 m)
   Low - foliage with only a few rust pustules present
   Medium - most foliage with several rust pustules but still mostly green
   High - most foliage covered with rust pustules and dead because of the rust

8. At the end of the bridal creeper season send your recording sheet to:
   Dennis Gannaway
   National Bridal Creeper Management Coordinator
   Animal and Plant Control Group
   GPO Box 2834 Adelaide 5001
   Department of Water Land and Biodiversity Conservation
   Phone: 08 8303 9748 *Fax:* 08 8303 9555
   Email: gannaway.dennis@saugov.sa.gov.au

Thank you for caring

Developed by Dr. John Virtue
Animal and Plant Control Group
Department of Water, Land and Biodiversity

RECORDING SHEET – SPORE WATER TRIAL

CONTACT DETAILS

Name:	
Address:	
Phone:	
Email:	

TRIAL SITE LOCATION

Name of trial site:			
Nearest town:			
GPS Location:	*Easting*	*Northing*	*Zone*

SPORE WATER PREPARATION

Date:		
Amount of leaves used:	*kg per*	*L water*
Water type (e.g. rain, tap, bore):		
Time (when spores washed into water):		

SPORE WATER APPLICATION

Date:		
Time (when sprayed):		
Water rate:	*L per*	*m^2 of ground*

Weather	Day of application	Day 2	Day 3
Maximum temperature:	*^oC*	*^oC*	*^oC*
Minimum temperature:	*^oC*	*^oC*	*^oC*
Rainfall:	*mm*	*mm*	*mm*
Sunny/cloudy:			
Relative humidity:	*%*	*%*	*%*

SITE MAP

(Sketch the arrangement of the 5 treated and 5 untreated plots)

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RUST INCIDENCE
A = Absent = not seen on foliage (within 1 m)
L = Low = foliage with only a few rust pustules present
M = Medium = most foliage with several rust pustules but still mostly green
H = High = most foliage covered with rust pustules and dead because of the rust

1 MONTH POST SPRAYING	Date:		
	Random Point 1	Random Point 2	Random Point 3
Untreated Plot 1			
Untreated Plot 2			
Untreated Plot 3			
Untreated Plot 4			
Untreated Plot 5			
Treated Plot 1			
Treated Plot 2			
Treated Plot 3			
Treated Plot 4			
Treated Plot 5			

2 MONTHS POST	Date:		
	Random Point 1	Random Point 2	Random Point 3
Untreated Plot 1			
Untreated Plot 2			
Untreated Plot 3			
Untreated Plot 4			
Untreated Plot 5			
Treated Plot 1			
Treated Plot 2			
Treated Plot 3			
Treated Plot 4			
Treated Plot 5			

3 MONTHS	Date:		
	Random Point 1	Random Point 2	Random Point 3
Untreated Plot 1			
Untreated Plot 2			
Untreated Plot 3			
Untreated Plot 4			
Untreated Plot 5			
Treated Plot 1			
Treated Plot 2			
Treated Plot 3			
Treated Plot 4			
Treated Plot 5			

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