



HERBICIDE TRIAL 2019/20

Cottesloe Coastcare Association (CCA) conducted a herbicide trial from July to September 2019 to assess the effectiveness of various treatments on the notorious weeds of Cottesloe's coastal sand dunes, to prepare for subsequent planting.

Two representative coastal sites, Figures 1 & 2 below, were tested with plots of each of the eight treatments outlined in Table 1 below. To clarify the findings, 4 treatments (1, 2, 4 & 7) highlighted in blue, from Site B are shown pictorially in Table 2 on the reverse page.

Table 1: Comparison of pre-plant weed treatments for use on coastal sand dunes

	Treatment	Product	Rate (L/ha or g/ha)	Weed Count # weeds/m2 in Spring (excl. couch)	Comment
1	Control	Untreated	Nil	782	Weeds allowed to emerge untreated
2	Glyphosate + pulse	Glyphosate 360 + pulse*	3 L/ha	384	Treatment gives knockdown at time of spraying but has no residual activity
3	Acetic acid and hydrochloric acid	Local Safe	100 L/ha	933	Described as a rapid action knockdown treatment but no residual activity anticipated
4	525 g/L nonanoic acid also known as pelargonic acid	Slasher	70 L/ha	329	Described as a rapid action knockdown treatment but no residual activity anticipated
5	Glyphosate + metsulfuron-methyl + pulse	Glyphosate 360+ Ally 600 + pulse	3 L/ha + 20 g/ha	384	Delivers knockdown at the time of application and some residual effect on subsequent germination.
6	Glyphosate + Oxyfluorfen (low rate) + pulse	Glyphosate 360 + Cavalier 240 + pulse	3 L/ha + 1 L/ha	261	Delivers knockdown at the time of application and some residual effect on subsequent germination.
7	Glyphosate + Oxyfluorfen (high rate) + pulse	Glyphosate 360 + Cavalier 240 + pulse	3 L/ha + 2 L/ha	192	Delivers knockdown at the time of application and some residual effect on subsequent germination.
8	Glyphosate + Oxyfluorfen (high rate) + pulse + weed matting	Glyphosate 360 + Cavalier 240 + pulse	3 L/ha + 2 L/ha	14	Delivers knockdown at the time of application and some residual effect on subsequent germination as well as the smothering effect of the matting.

* Pulse is a surfactant that aids herbicide uptake by the plant



Figure 1: Trial Site A - South



Figure 2: Trial Site B - North



Trial Workshop – 19th March 2019



Site preparations – 17th April 2019



Preparing herbicide for application – 21st June 2019



Plot layout & herbicide application – 21st June 2019















Review – southern section, September 2019



Counting weeds – 7th October 2019

Table 2: Pictorial comparison of four pre-plant weed treatments for use on coastal sand dunes (Site B – North)

Treatment	1 – Control (no treatment)	2 – Glyphosate	4 – Slasher	7 - Glyphosate + Cavalier (high rate – 2L/ha)
July 16/07/2019	 <p>No 1: July 16 2019</p>	 <p>No 2: July 16 2019</p>	 <p>No 4: 16 July 2019</p>	 <p>No7: July 16 2019</p>
August 31/08/2019	 <p>No1: 31-8-19</p>	 <p>No2: 31-8-19</p>	 <p>No 4: 31-8-19</p>	 <p>No 7: 31-8-19</p>
September 23/09/2019	 <p>No1: 23-9-19</p>	 <p>No 2: 23-9-19</p>	 <p>No 4: 23-9-19</p>	 <p>No 7: 23-9-19</p>