GROSORB™

A premium grade wetting agent with proven performance and superior longevity

Baileys Grosorb is a premium grade soil wetter, designed to correct water repellent (hydrophobic) soil conditions. Grosorb facilitates water absorption, even penetration and rewetting to eliminate run-off, surface pooling and water and nutrient loss. This in turn enables healthy plant growth and root development as water and applied nutrients are channelled into the root zone.

The combination of two high quality block polymer surfactants in the formulation produce superior performance and longevity. Baileys Grosorb is available in both a granulated and liquid form to complement your preferred application method.

PROVEN RESULTS

Independent trialling of Baileys Grosorb was conducted by Sports Turf Technology to compare the performance of granular and liquid formulations against two widely used competitive products; **Wetting Agent A** - a premium commercial wetting agent, and **Wetting Agent B -** a well known retail wetting agent.

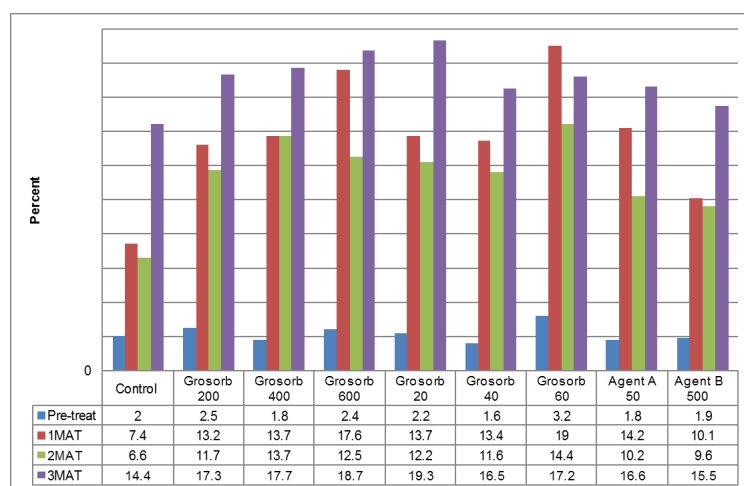February   May

Trialing was conducted at Prendwick Reserve in the City of Canning, Western Australia between February and May. The soil was extremely water repellent and dry as shown above.

Wetting Agent A and Wetting Agent B were applied at their maximum recommended label rates. Baileys Grosorb
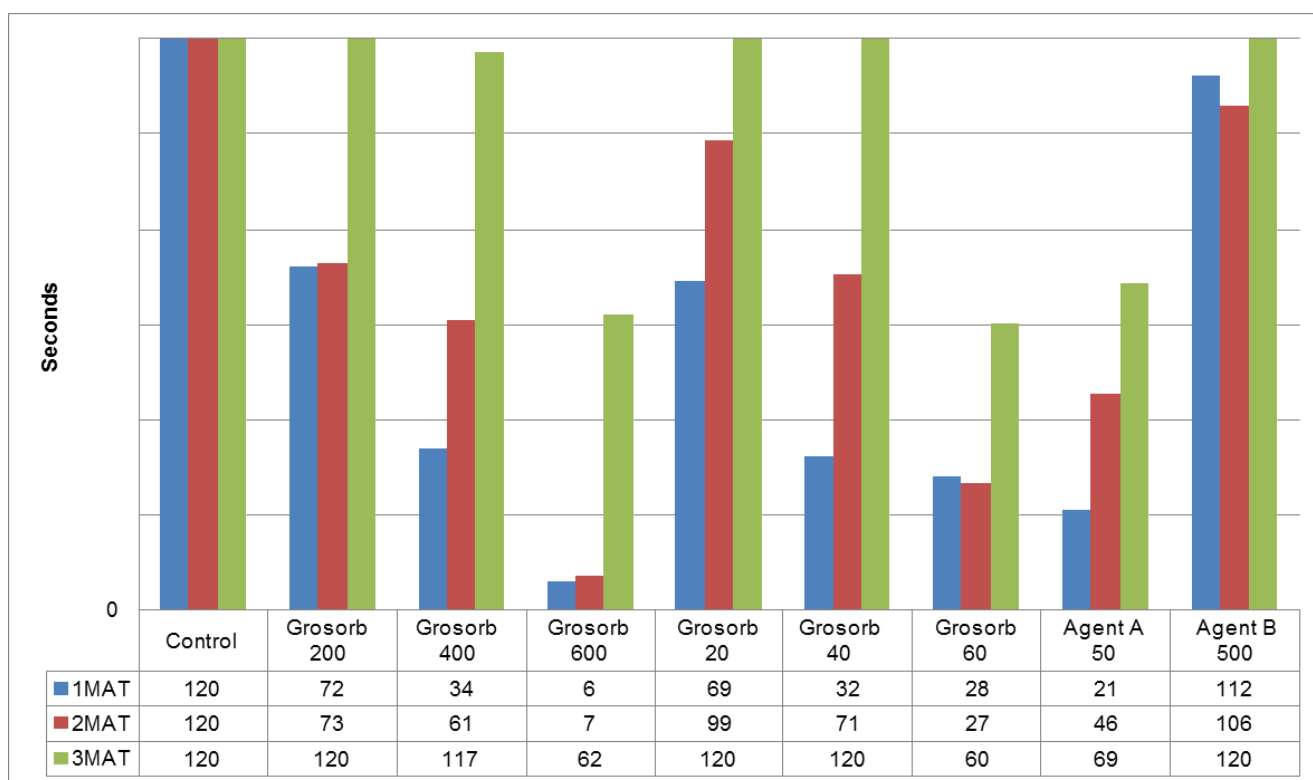
Granulated and Grosorb Liquid were applied at a variety of rates. Soil moisture content, water repellency and droplet penetration time were used to determine performance.

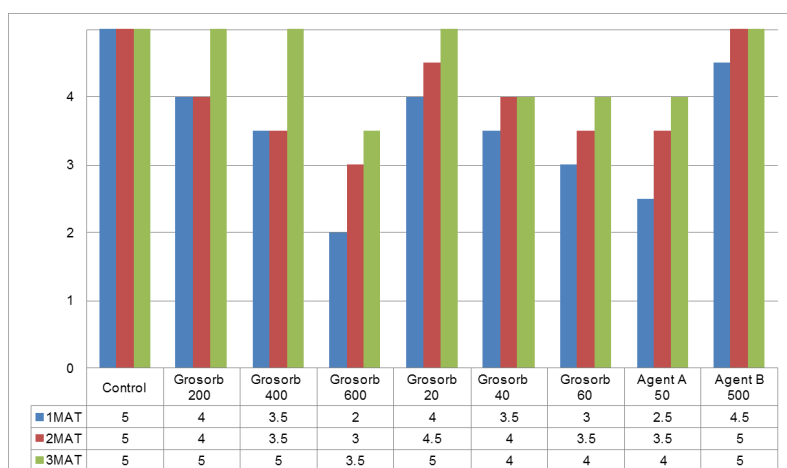|	Control	Grosorb 200	Grosorb 400	Grosorb 600	Grosorb 20	Grosorb 40	Grosorb 60	Agent A 50	Agent B 500
Pre-treat	2	2.5	1.8	2.4	2.2	1.6	3.2	1.8	1.9
1MAT	7.4	13.2	13.7	17.6	13.7	13.4	19	14.2	10.1
2MAT	6.6	11.7	13.7	12.5	12.2	11.6	14.4	10.2	9.6
3MAT	14.4	17.3	17.7	18.7	19.3	16.5	17.2	16.6	15.5

Soil Moisture Content

A hand-held moisture probe was used to measure the percentage volumetric soil moisture content in the top 5cm of soil. Grosorb at 600 kg/ha and 60 litres/ha gave the highest soil moisture levels by a considerable margin at one month after treatment as shown above.

	Control	Grosorb 200	Grosorb 400	Grosorb 600	Grosorb 20	Grosorb 40	Grosorb 60	Agent A 50	Agent B 500
1MAT	120	72	34	6	69	32	28	21	112
2MAT	120	73	61	7	99	71	27	46	106
3MAT	120	120	117	62	120	120	60	69	120

Droplet Penetration Time

Soil samples were tested with 2M ethanol droplets to measure droplet penetration time in seconds. Grosorb at 600 kg/ha gave the fastest droplet penetration in the first two months after treatment, and was equivalent to Grosorb at 60 litres/ha and Wetting Agent A at 50 litres/ha after three months. At three months after application, Grosorb at 600 kg/ha and 60 litres/ha, and Wetting Agent A at 50 litres/ha were the only treatments giving meaningful reductions in the droplet penetration times. Wetting Agent B at 500 kg/ha gave only a slight reduction in the droplet penetration times in the first two months, and was equivalent to the untreated control after three months.

	Control	Grosorb 200	Grosorb 400	Grosorb 600	Grosorb 20	Grosorb 40	Grosorb 60	Agent A 50	Agent B 500
1MAT	5	4	3.5	2	4	3.5	3	2.5	4.5
2MAT	5	4	3.5	3	4.5	4	3.5	3.5	5
3MAT	5	5	5	3.5	5	4	4	4	5

Water Repellency Rating

Different concentrations of ethanol droplets were used to classify the severity of water repellency on 20mm soil core samples on a rating scale of (0) non repellent, (1) slight, (2) moderate, (3) severe, (4) very severe, and (5) extreme. Grosorb at 600 kg/ha gave the greatest reduction in the water repellency rating, from (5) to (2) at one month after treatment, followed by Wetting Agent A and Grosorb at 60 litres/ha (3). At three months after treatment, Grosorb at 600 kg/ha, 40 litres/ha and 60 litres/ha was still giving a reduction in water repellency rating.

How does soil become water repellent?
Soils, particularly sandy soils, can become water repellent when weak organic acids form during the breakdown of organic matter. These organic acids coat the soil particles and form a barrier of water repellent material. Coastal Australia has very sandy soils and this condition occurs frequently.

Final overall results clearly demonstrated that the liquid and granulated formulations of Grosorb were equally effective and equal to or better than the commercial competitive product. Grosorb was far superior to the popular retail product. For best result apply Grosorb at a rate of 60 litres or 600kg/ha or 60 grams/m².