Application Technology

Getting Meridian to the target effectively

Greens – Optimal Method
Total application volume ~ 950 L/ha
Turbo FloodJet TF5 or TurfJet TTJ10
5 km/h @ 3 bar pressure
Wash in with at least 6 mm of irrigation

Fairways – Optimal Method
Total application volume ~ 590 L/ha
Turbo FloodJet TF5 or TurfJet TTJ10
8 km/h @ 3 bar pressure
Wash in with at least 6 mm of irrigation

Meridian®

syngenta®

www.greencast.com.au

For further information contact
Syngenta Technical Product Advice Line
on Freecall 1800 067 108 Freefax 1800 805 871

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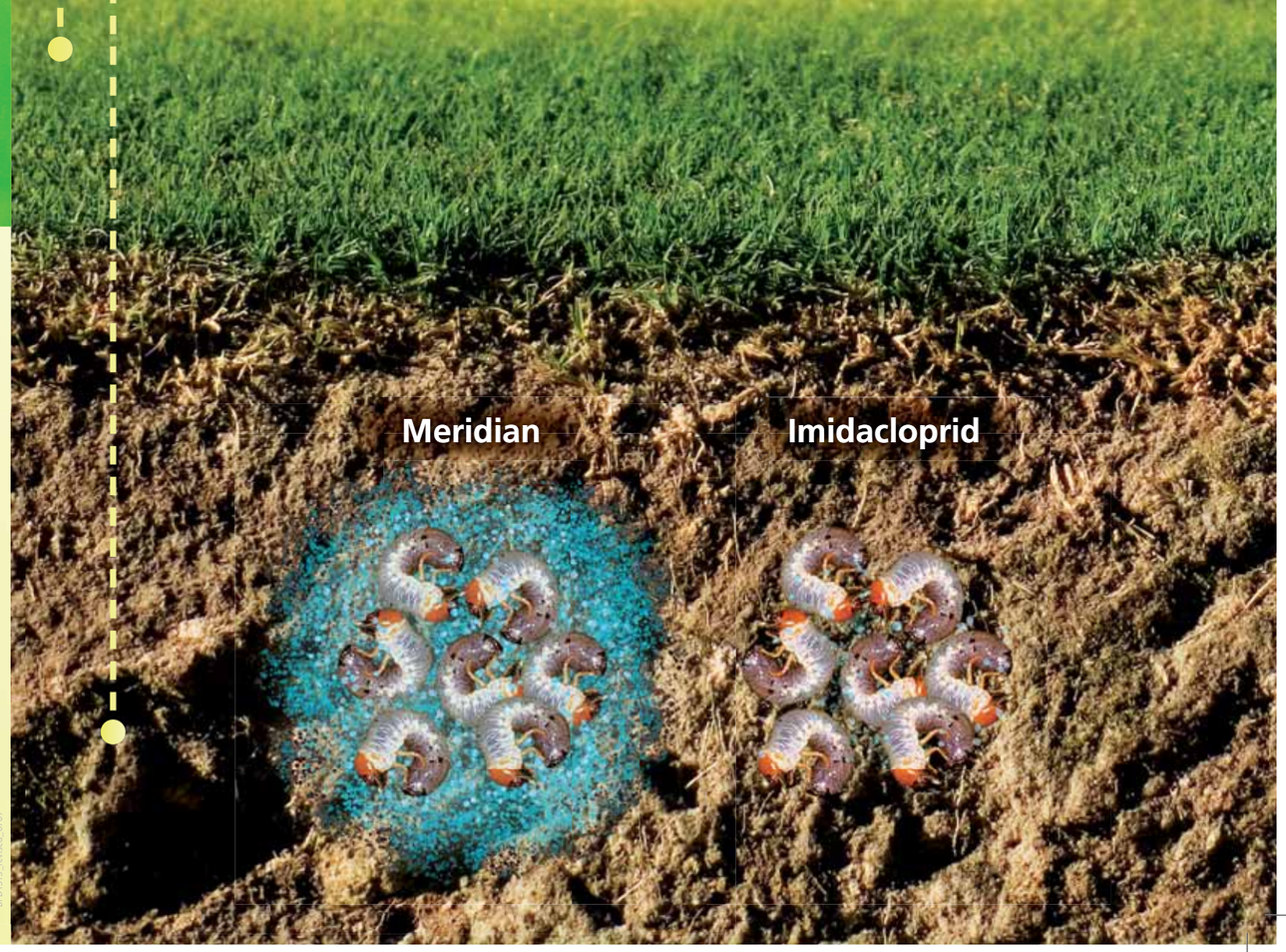
Meridian®
Turf Insecticide

Save up to 60,000 litres of water per hectare

Irrigation savings

Greater availability in dry conditions

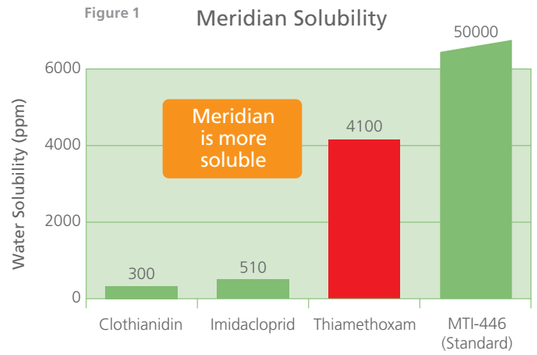
Season long control of grubs



Irrigation savings "washing in" after application

Meridian® can help to save up to 60,000 litres of water per hectare during post grub-insecticide application "wash in". The superior solubility of the active ingredient – thiamethoxam (neonicotinoid) – is the main reason for this benefit. Thiamethoxam is approximately 8 times more soluble than imidacloprid (Fig. 1), thus increasing robustness and water savings during incorporation.

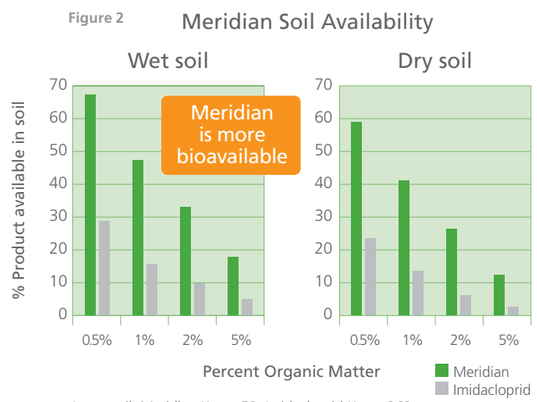
Figure 1



Effective in wet and dry soil conditions

Neonicotinoids age in soil, with the majority of the active ingredient available during the first 30 days dissolved in soil moisture. Increased solubility of thiamethoxam during this time will ensure elevated levels of availability and thus efficacy in drier soil conditions. In the longer term (20-100 days), thiamethoxam will bind to soil, to be released more readily back (desorbed) into solution than imidacloprid. This is called bio-availability, meaning the active ingredient is available to the biological system – plants for uptake and/or contact with burrowing grubs. Higher bio-availability contributes to higher levels of efficacy. Meridian will ensure high level performance in most soil conditions (Fig. 2). Meridian may therefore perform better than imidacloprid in drier soils such as fairways, semi-roughs, ovals and parks lacking regular irrigation (Fig. 3)

Figure 2



Loam soil. Meridian K_{OC} = 58, Imidacloprid K_{OC} = 262
Syngenta internal trial

Figure 3

Performance in dry soil

	0-30 days	20-100 days
	Dissolved (majority of active)	Soil bound (majority of active)
Meridian ↑	Higher solubility	Easier desorption
	Increased bio-availability and efficacy	Increased bio-availability and efficacy
imidacloprid ↓	Lower solubility	Difficult desorption
	Decreased bio-availability and efficacy	Decreased bio-availability and efficacy

Season-long control of grubs

Scarabs
(African Black Beetle)

The African Black Beetle (*Heteronychus arator*) (Fig. 4) occurs in all states and completes a single life cycle per year. Mating occurs in early spring with egg laying activities peaking during October in the northern states (QLD, NSW and WA) and a little later during early November in the southern states (ACT, VIC, TAS and SA) (Fig. 6). First and second instar grubs feed on roots in the upper soil layers. The excellent contact and systemic action of Meridian controls grubs and protects roots.

Figure 4

Turfgrass Weevils
(Billbug or La Plata Weevil)

The Billbug Weevil (*Sphenophorus brunnipennis*) (Fig. 5) occurs in all states and completes multiple lifecycles – commonly 2 and exceptionally 3 per year. The first generation overlaps largely with the scarabs during spring and early summer. The second generation normally peaks with egg laying during mid summer (January)(Fig. 6). This generation is normally at lower infestation levels, but still has a high enough impact to warrant treatment. On the rare occasion that a third generation occurs, it peaks with egg laying during early autumn (March-April) (Fig. 6). First instar larvae initially feeds in the stems, before dropping to the soil, continuing feeding on roots in the upper soil layers. The excellent systemic action of Meridian within plants ensure early control of this pest, even prior to dropping to the soil.

Figure 5

Meridian has excellent efficacy on African Black Beetle and Billbug larvae (1st and 2nd instar only). The best timing for application is thus during or shortly after peak egg laying. The illustration below suggests the optimum time of application to ensure optimal results. Meridian has varied dose rates to accommodate the need for a follow up application when the second and/or third generations of Billbug is to be controlled.

Figure 6

Season long grub control program