



Merit[®] Turf Technical Information



**Insecticide for the control of Chafer Grubs and Leatherjackets.
Contains 5g/Kg imidacloprid.**

Directions for Use

MERIT[®] TURF contains 5g/Kg imidacloprid as a granular formulation.

MERIT[®] TURF can be used as an insecticide for control of chafer grubs and leatherjackets on golf courses, bowling greens, athletic fields, commercial and residential lawns and other managed amenity turf situations. The active ingredient in MERIT[®] TURF has sufficient residual activity so that applications should be made prior to the egg laying activities of the target pests.

DO NOT APPLY MERIT[®] TURF when it is raining or in windy conditions.

Use Areas

MERIT[®] TURF may be used on established turf including:

- Golf courses
- Cricket grounds
- Athletic fields
- Institutional, commercial and residential lawns
- Sports fields
- Bowling Greens
- Housing areas
- Parks & Sports Grounds
- Municipal grounds
- Cemeteries
- Parks

Method of Application

Apply MERIT[®] TURF uniformly over the area being treated with normally used granular application equipment. Hand held, drop type and rotary type spreaders may be used to apply MERIT[®] TURF. Avoid the use of spreaders that would apply the granule in narrow, concentrated bands. For large scale application, the ATV Merit Applicator is recommended.



ATV Merit applicator

Other recommended application equipment;
Various Horstine Farmery turf applicators
Stocks Micro-Meter
Amtec drop spreader
SS-2 drop spreader
Microband applicator
TMA applicator



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Rates of Use

Equipment	Area	Product Required
Vehicle mounted spreader	1 ha	30 Kg
Hand spreader	100m ² 500m ²	300 g 1.5 Kg

Operator Safety

MERIT[®] TURF is a NON-anticholinesterase/organophosphorous compound. It offers very low risk to operators and non-target organisms. MERIT[®] TURF has been registered in the US under the same name since 1994 as a low risk insecticide.

Mode of Action

MERIT[®] TURF works in the following ways:

- Insects that have ingested or absorbed the imidacloprid stop what they are doing or suspend normal behaviour.
- Insects stop feeding immediately and do not survive.
- The grubs will either be affected by eating the turf roots (where the product has been transported systemically) or by absorption through their outer body.

Application Timing

Applications should be made prior to anticipated pest infection to achieve optimum levels of control (prior to egg hatch), normally **from middle of May to middle of June**. Alternatively when identification of damage to turf is seen. This period can normally be anticipated when you see the beetle eggs in the soil. One application per year is needed for chafer grub and leatherjacket control with an application made in late spring/early summer.



Initial damage is caused by the grubs eating the roots of the turf. Birds and animals then pull on the loose turf to feed on the grub



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Merit® Turf Trials

In trials that have run in the UK over a two year period, MERIT® TURF on many sites achieved 100% control at 4.5 months (135 days) and continued this success at 11 months after treatment. These sites often had populations of chafer grubs of over 1,000 per m². Out of the many trials put down an average efficiency of over 80% was seen after 4.5 months.

Other Benefits

The active ingredient imidacloprid also produced a 50% increased greening effect and increased the grass vigour by up to 90% in treated areas.



Trials Results - Golf Courses

Since the removal of the main chemical treatment some five years ago, chafer grubs have become the golf course manager's nightmare.

The grub, the larval stage of the chafer beetle family, can have devastating effect on all types of turf. The initial damage is caused by the grubs eating the roots of the turf, resulting in a yellowing and a loosening of the turf. Birds and animals such as rooks and badgers then pull the loose turf up to feed on the grub, inflicting secondary damage.

Thetford Golf Club

For Paul Gould, Course Manager at Thetford Golf Club in Norfolk, official registration of the treatment cannot have come soon enough.

"We have a major problem with secondary predation damage, particularly from badgers foraging for the grubs. The problem has got worse over the last five years, to the extent that this year we have had to have players teeing off the fairways on four of the holes."



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Thetford have tried mechanical treatment but with limited success, and trying to keep up with repair of the damage is not only disruptive to play but is also costing a great deal of time and money.

"We have had to white-line whole areas, and there are other aspects of the course maintenance that are suffering through the constant need to attend to the chafer problem," comments Paul.

Since June 2003 varying rates of the new treatment have been applied to trial plots on the practice area, with dramatic results as Paul is keen to point out:-

"You can easily see the physical difference between the treated and untreated plots, purely from the colour of the turf. The treated areas are so much healthier, with strong regrowth and no sign of grub reoccurrence."

Avid Gardener's Lawns Restored

Residential lawns can be hit as badly as commercial sportsturf by the dreaded chafer grub, as Robin Dack of Emerald Lawn care in Winsford, Cheshire can testify.

The area has a lot of light sandy soil, ideal breeding ground for the infamous chafer grub. Early in 2004 Robin took on two new clients who had experienced chafer damage to their lawns in previous years. One, an avid gardener, was devastated when, in May 2004, extensive chafer damage to the lawn reoccurred.

Robin treated both lawns, one around 600m², the other 400m², with MERIT[®] TURF. To date the treatment has been 100% effective, with no visible signs of the grubs or any loose grass to indicate their reappearance.

The product's ease of use impressed Robin who has used most control products over the years:

"I've been in the business over 10 years and this is the most effective treatment I've ever used. It is easy to measure out and the granule size is perfect for application via a hand spreader."



Garden pre-treatment



Lawn following treatment with Merit[®] Turf