ARENA® 50 WDG

A SINGLE APPLICATION WORKS PREVENTIVELY AND CURATIVELY FOR LONG-LASTING RESIDUAL CONTROL OF WHITE GRUBS AND A BROAD SPECTRUM OF OTHER PESTS.

CHALLENGE
Grubs always get in the way. Maintaining golf courses and sod farms free from grub damage has always been a challenge. Golf course superintendents and sod farmers need an effective option for controlling the damage done by the toughest turf insects like annual bluegrass weevil, white grubs and European crane fly.

NUFARM SOLUTION
Arena® 50 WDG insecticide is a valuable tool for broad-spectrum insect control in turf. Arena delivers superior, consistent, season-long control of a broad range of insect pests. With preventive and curative activity, Arena provides long residual grub control to save time, money and labour required with multiple application products.

REGISTERED USES
Turfgrass including golf courses, sod farms, and municipal, industrial, and residential turf (where not prohibited by provincial laws)

<table>
<thead>
<tr>
<th>INSECTS CONTROLLED</th>
<th>APPLICATION RATES g / 100 m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual bluegrass weevil</td>
<td>5.5-7.0</td>
</tr>
<tr>
<td>Bluegrass billbug</td>
<td>4.5</td>
</tr>
<tr>
<td>European crane fly (Leather jacket)</td>
<td>5.5</td>
</tr>
<tr>
<td>Hairy chinch bug</td>
<td>3.5-5.0</td>
</tr>
<tr>
<td>White grubs (Asiatic garden beetle, European chafer, Japanese beetle, Masked chafers, Oriental beetle)</td>
<td>2.5-5.0</td>
</tr>
</tbody>
</table>

Duration of control depends on environmental factors, plant growth, dosage rate and degree of insect infestation.

PCP NO. 29383 IRAC NO. 4A
ACTIVE INGR. clothianidin (50.0%)
FORMULATION water-dispersible granule
CHEM. FAMILY neonicotinoid
PACKAGE SIZE 4 x 1.13 kg jug
one jug treats 5 acres (at 5.5 g/100 m²)
RAINFAST avoid application when heavy rain is forecast
APPLICATION / SEASON one
SURFACTANT NEEDED no

BENEFITS
• Superior, long-lasting residual control of a broad spectrum of tough soil- and surface-feeding insects
• Preventive and curative grub control
• Consistent results for control of turfgrass insects
• Season-long insect control with one application – saves time, money and labour
• Superior grub control, including curative activity, helps keep foraging animals away
• No immediate post-application watering required

PERFORMANCE TIPS
• Rate is dependent on target species and stage of target pest
• No surfactant required
• When targeting multiple pests, make application to earliest egg lay or adult flight
• Correct water volumes are essential for control (4-8 L / 100 m²)
• Use a calibrated spreader to uniformly broadcast over the treatment area
• Do not mow turf grass until after irrigation or rainfall has occurred

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Registered for use in the following countries:

Golf courses, sod farms, and municipal, industrial and residential turf (where not prohibited by provincial laws)
Crane fly larvae cause significant damage to turf by feeding on the roots of grass plants. European crane fly overwinter as 3rd instar larva and will feed and cause damage in the spring, with peak damage occurring in May and early June from the 4th instar larva. Adults emerge and lay eggs in July to September. Arena works curatively and preventively to deliver the best and the longest-lasting residual crane fly larvae control.

**APPLICATION TIMING**
- **PREVENTIVE:** In fall prior to egg hatch
- **CURATIVE:** In spring to mature larvae, prior to pupation

### CRANE FLY LARVAE CONTROL

<table>
<thead>
<tr>
<th>Insect</th>
<th>Preventive</th>
<th>Curative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese beetle</td>
<td>Blue</td>
<td>Blue</td>
</tr>
<tr>
<td>Northern masked chafer</td>
<td>Blue</td>
<td>Blue</td>
</tr>
<tr>
<td>European chafer</td>
<td>Red</td>
<td>Blue</td>
</tr>
<tr>
<td>Asiatic garden beetle</td>
<td>Red</td>
<td>Red</td>
</tr>
</tbody>
</table>

### GRUB CONTROL

Apply Arena from June 1 to July 15 for maximum flexibility and longest residual for preventive/early instar grub control. For superior curative control, apply in August and September. Unlike shorter residual insecticides that require retreatment, Arena lasts – controlling grubs that surface from below the treatment zone for weeks before coming up to damage turf roots.

**APPLICATION TIMING**
- **PREVENTIVE:** Apply spring through peak egg hatch, beginning as early as the first adults appear
- **CURATIVE:** After egg hatch or when turf damage is first observed Use upper end of rate range in post hatch applications Late season applications may provide suppression only

### JAPANESE BEETLE / MASKED CHAFER

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<th>Curative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese beetle</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Northern masked chafer</td>
<td>Green</td>
<td>Green</td>
</tr>
</tbody>
</table>

### EUROPEAN CHAFER

<table>
<thead>
<tr>
<th>Insect</th>
<th>Preventive</th>
<th>Curative</th>
</tr>
</thead>
<tbody>
<tr>
<td>European chafer</td>
<td>Black</td>
<td>Blue</td>
</tr>
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</table>

### EXCELLENT CURATIVE CONTROL >> % CONTROL

- **MERIT® 89.7 kg/ha VS ARENA® 550 g/ha**
  - Maximum spring (curative) control was achieved in seven days with Arena – outperforming the standard for curative crane fly larvae control, helping to ensure healthy, better looking turf.
  - Products applied 5/30 and sampled 1, 3 and 7 days later.
  - Data is pooled result of all sample timings. Source: Curative control of European Crane Fly Larvae on Golf Course Roughs, Spring, 2006 (G51) D. C. Peck. Arthropod Management Tests, 2007.

### EUROPEAN CHAFER >> % CONTROL

- **ACELEPRYN® 455 g/ha VS ARENA® 300 g/ha**
  - Applied 8/28/06 to bluegrass/fescue mix. 0.254 cm of rain 24 hrs after application, counts taken on 10/11/06. Source: Arthropod Management Test, 2007, G25, Stanley R. Swier, University of New Hampshire.