Next-generation seed treatment for downy mildew protection

Plenaris® fungicide is the latest addition to CruiserMaxx® Sunflower, the most comprehensive seed treatment on the market. CruiserMaxx Sunflower with Plenaris, a combination of separately registered products, provides multiple modes of action, delivering the most sustainable, best-performing downy mildew management program in the industry. It also provides the broadest disease and insect protection available to maximize the genetic potential of sunflowers.

**Plenaris Benefits**

- Provides excellent protection against all downy mildew races
- Outstanding activity on susceptible and resistant sunflower varieties
- Used in combination with Bion® or Dynasty® seed treatments for resistance management and additional control

**Enhances Downy Mildew Protection**

Downy Mildew Disease Profile

- Oomycete (*Plasmopara halstedii*)
- Infects sunflowers with primary infection in seedling roots
- Water-saturated soils soon after planting favor systemic infection
  - Low-lying areas in fields are most susceptible to infection
  - Infection can lead to large bare spots and/or areas with little to no yield

Source: Plant Health Progress article: Prevalence and Incidence of Sunflower Downy Mildew in North Dakota Between 2001 and 2011
**Protects Susceptible and Resistant Varieties**

<table>
<thead>
<tr>
<th>Variety</th>
<th>Percent Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downy Mildew-susceptible</td>
<td>6</td>
</tr>
<tr>
<td>Downy Mildew-resistant</td>
<td>15</td>
</tr>
</tbody>
</table>

North Dakota State University Trial, 2016

**Bion Boosts Level of Control**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Percent Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plenaris + Bion</td>
<td>2</td>
</tr>
<tr>
<td>Plenaris</td>
<td>12</td>
</tr>
<tr>
<td>Control</td>
<td>39</td>
</tr>
</tbody>
</table>

All Plenaris treatments included a base treatment of Maxim 4FS mg ai/seed + Cruiser SFS 0.25 mg ai/seed

**Controls Key Downy Mildew Races**


North Dakota State University Trial, 2015. Reported as a percentage; systemically infected plants divided by total plants in 25' of plot

Plenaris treatments included a base treatment of Maxim 4FS 0.0025 mg ai/seed + Cruiser 5FS 0.25 mg ai/seed

**Technical Attributes**

- **Chemical Group:** Piperidinyl thiazole isoxazoline
- **Active Ingredient:** Oxathiapiprolin
- **Mode of Action:** Lipid homeostasis and transfer/storage inhibition; FRAC Group F9. New, no cross resistance.

**Registered Crop:** Sunflower

**Seed Treatment Use Rate:** 0.0094 mg ai/seed

For more information, visit [www.syngenta-us.com/seed-treatment/cruisermaxx-sunflower](http://www.syngenta-us.com/seed-treatment/cruisermaxx-sunflower).