

BARLEY - DISEASES CONTROLLED

General Information

PRODUCT INFORMATION

CruiserMaxx Cereals is a seed treatment product containing the active ingredients: thiamethoxam (insecticide) and difenoconazole and mefenoxam (fungicides).

CruiserMaxx Cereals protects against damage from certain early season insects and also protects against certain seed- and soil-borne diseases of cereal crops.

Thiamethoxam is a systemic seed treatment insecticide belonging to the neonicotinoid class of chemistry. Thiamethoxam protects against certain chewing and sucking insects through contact and ingestion.

Mefenoxam fungicide is active against Pythium.

Difenoconazole fungicide is active against several seed, soil and foliar diseases, as listed in the table in the Crop Use Directions section.

SEED BAG LABEL REQUIREMENTS

The Federal Seed Act requires that bags containing treated seeds shall be labeled with the following statements:

- This seed has been treated with thiamethoxam insecticide and difenoconazole and mefenoxam fungicides.
- Do not use treated seed for feed, food, or oil purposes.
- User is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

In addition, the U.S. Environmental Protection Agency requires the following statements on bags containing seeds treated with CruiserMaxx Cereals:

- Pollinator Precaution: Thiamethoxam is highly toxic to bees, and effects are possible as a result of exposure to translocated residues in blooming crops.

- Ground Water Advisory:

- Thiamethoxam has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into the ground water if used in areas where soils are permeable, particularly where the water table is shallow.
- Mefenoxam is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.
- Store treated seed away from food and feedstuffs.
- Do not allow children, pets or livestock to have access to treated seeds.
- Wear long pants, long-sleeved shirt and protective gloves when handling treated seed.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading and planting.
- Dispose of all excess treated seed. Leftover treated seed may be doublesown around the headland or buried away from water sources in accordance with local requirements.
- Do not contaminate bodies of water when disposing of planting equipment wash water.
- Dispose of seed packaging or containers in accordance with local requirements.
- For seed treated with CruiserMaxx Cereals, do not graze or feed livestock on treated areas for 45 days after planting.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in the ethanol by-products that are used in agronomic practice.
- Alfalfa, Brassica (cole) leafy vegetables, buckwheat, corn, pearl millet, proso millet, popcorn, rice (dry-seeded), sorghum, teosinte, wild rice, cotton, cucurbit vegetables, dry bulb onions, fruiting vegetables, leafy vegetables, legume

vegetables, mint (peppermint and spearmint), oil seed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, peanuts, rapeseed seed, and safflower seed), root vegetables, strawberry, sunflowers, tobacco, and tuberous and corm vegetables may be planted 30 days from the date the CruiserMaxx Cereals treated seed was planted.

- For any other crop, the minimum plant back interval is 120 days from the date the CruiserMaxx Cereals treated seed was planted. A cover crop other than the crops listed above that is planted for erosion control or soil improvement may be planted sooner than the 120 day interval; however, the crop may not be grazed or harvested for food or feed.

Resistance Management

CruiserMaxx Cereals contains thiamethoxam, a Group 4A insecticide; mefenoxam, a Group 4 fungicide; and difenoconazole, a Group 3 fungicide.

Some insect pests are known to develop resistance to products after repeated use.

Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area. Syngenta encourages responsible product stewardship to ensure effective longterm control of the insects on the label.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

CruiserMaxx Cereals contains a Group 4A insecticide (thiamethoxam, belonging to the neonicotinoid class of chemistry).

Insect biotypes with acquired or inherent resistance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species. This may

result in partial or total loss of control of those species by CruiserMaxx Cereals or other Group 4A insecticides.

In order to maintain susceptibility to this class of chemistry:

- Avoid using Group 4A insecticides exclusively for season long control of insect species with more than one generation per crop season.
- For insect species with successive or overlapping generations, apply CruiserMaxx Cereals or other Group 4A insecticides using a “treatment window” approach. A treatment window is a period of time as defined by the stage of crop development and/or the biology of the pests of concern. Within the treatment window, depending on the length of residual activity, there may either be single or consecutive applications (seed treatment, soil, foliar, unless otherwise stated) of the Group 4A insecticides. Do not exceed the maximum CruiserMaxx Cereals allowed per growing season.
- Following a treatment window of Group 4A insecticides, rotate to a treatment window of effective products with a different mode of action before making additional applications of Group 4A insecticides.
- A treatment window rotation, along with other IPM practices for the crop and use area, is considered an effective strategy for preventing or delaying a pest’s ability to develop resistance to this class of chemistry.
- If resistance is suspected, do not reapply CruiserMaxx Cereals or any other Group 4A insecticides.
- Other Insect Resistance Management (IRM) practices include:
 - Incorporating IPM techniques into your insect control program.
 - Monitoring treated insect populations for loss of field efficacy.
 - Using tank-mixtures or premixes with insecticides from a different target site of action group as long as the involved products are all registered for the same crop outlet and labeled rates are applied.
- For additional information on Insect Resistance Management:
 - Contact your local extension specialist, certified crop advisor and/or product

manufacturer for additional insect resistance management recommendations.

- Visit the Insecticide Resistance Action Committee (IRAC) on the web at:

<http://www.iraac-online.org/>.

Mefenoxam is in the Group 4 class fungicides. It is a systemic fungicide having a specific mode of action against fungal pathogens.

Note: The fungicide mefenoxam contained in this product could be subject to development of resistant strains of fungi or may be ineffective against naturally occurring strains of fungi. Development of resistance or natural tolerance cannot be predicted. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible insensitive or tolerant strains of fungi which may occur.

Difenoconazole is in the Group 3 class fungicides. The mode of action of difenoconazole is as a demethylation inhibitor of sterol biosynthesis (DMI) which disrupts membrane synthesis by blocking demethylation. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use of this product should conform to resistance management strategies established for the crop and use area.

Consult your local pest control advisor or extension office for additional methods for preventing resistance development.

Syngenta encourages responsible product stewardship to ensure effective long term control of the fungal and insect pests on the label.

Limitations, Restrictions, and Exceptions

General Seed Rots - Protection against general seed rots include those caused by saprophytic organisms such as Rhizoctonia, Fusarium, Pythium, Penicillium and Aspergillus.

Seedling Blight, Root Rot, and Damping-Off caused by seed- and soil-borne Fusarium and soil-borne Pythium - For additional Pythium protection, add 0.0425 fluid ounces of Apron XL per 100 pounds of seed.

Method

Seed Treatment

Rates

field rates 0

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Restricted Entry Interval

48 hours

Exception: If the seed is treated with the product and the treated seed is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Timings

N.A.