# CEREAL GRAINS: WHEAT, BARLEY, RYE, OATS, BUCKWHEAT AND TRITICALE

## General Information

### PRODUCT INFORMATION

Maxim XL, a prepack of the active ingredients of Maxim 4FS (fludioxonil) and Apron XLR (mefenoxam), is a seed treatment fungicide which controls certain soil-borne and seed-borne diseases of crop plants. Fludioxonil is active against Fusarium, Rhizoctonia, seed-borne Sclerotinia, Helminthosporium, Tilletia caries (which causes common bunt in wheat) and weakly pathogenic fungi, Aspergillus and Penicillium. Mefenoxam is active against Pythium, Phytophthora and systemic downy mildew. On some crops, additional Apron XL will be required to control Pythium, Phytophthora, and systemic downy mildew. The amount of additional Apron XL needed will depend on the level of disease pressure. Follow all directions on the Apron XL label if mixed with Maxim XL.

Maximum usage when applying both metalaxyl and mefenoxam containing products to the same crop within the same season: Do not apply more than the maximum seasonal total for the active ingredient as stated on the label of the product containing the lowest seasonal total on that crop.

### RESISTANCE MANAGEMENT

Maxim Quattro contains mefenoxam, a Group 4 fungicide, and fludioxonil, a Group 12 fungicide. Mefenoxam belongs to the phenylamide class of chemistry which interferes with fungal RNA synthesis. Fludioxonil belongs to the phenylpyrrole class of chemistry which interferes with osmotic signal transduction. Fungal populations may contain individuals naturally resistant to Group 4 or 12 fungicides and if used repeatedly in the same fields, then resistant members may eventually dominate the population. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies such as alternation with fungicides with a different mode of action and/or tank mixes established for the crop and use area.

Use should be based on an IPM program that includes field sanitation, scouting,
historical information related to pesticide use, and crop rotation. The IPM program should also consider cultural, biological, and other chemical control practices.

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

For additional information on Fungicide Resistance Management:

- Contact Syngenta representatives at 1-800-334-9481
- Contact your local extension specialist or certified crop advisor
- Visit the Fungicide Resistance Action Committee (FRAC) on the web at: http://www.frac.info

The following guidelines may be used to determine the required rate of each product:

Step 1 – Select the specified rate of Maxim XL required based on the expected level of Fusarium, Rhizoctonia, seedborne Sclerotinia, Helminthosporium, Tilletia caries, Aspergillus, or Penicillium. Use the higher specified rate (0.334 fl oz per 100 lb of seed) when high levels of disease are expected.

Step 2 – If necessary, select the rate of additional Apron XL required based on the expected level of Pythium, Phytophthora, or systemic downy mildew. See directions under each crop for specific rate.

SEED CONTAINER 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 fluoxxonil and mefenoxam fungicides.
- Do not use treated seed for feed, food or oil purposes.
- Use an EPA-approved dye or colorant that imparts an unnatural color to the seed.

In addition, the U.S. Environmental Protection Agency requires the following statements on bags containing seed treated with Maxim XL fungicide:

- Ground Water Advisory: Mefenoxam is known to leach through soil into
groundwater under certain conditions as a result of label use. Fludioxonil has properties and characteristics associated with chemicals detected in groundwater.

These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

- Treated seed must be planted into the soil at a depth greater than 1 inch.
- Forage may not be grazed until 30 days after planting.
- 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 chemical-resistant gloves when handling treated seed.
- Treated seed 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 by burying seed away from bodies of water.
- Do not contaminate bodies of water when disposing of planting equipment washwater or rinsate.
- Dispose of seed package or containers in accordance with local requirements. 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 ethanol by-products that are used for agronomic practice.

Limitations, Restrictions, and Exceptions

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For protection against damping-off caused by Fusarium spp., Rhizoctonia spp., and Pythium spp., and general seed rots caused by Aspergillus spp. and Penicillium spp. in wheat, barley, rye, and oats, apply 0.167-0.334 fl. oz. of Maxim XL.
Maxim XL may also be used in combination with Dividend XL for damping-off caused by Fusarium spp. in wheat. Maxim XL at 0.084 fl. oz. may be combined with labeled rates of Dividend XL for a broader spectrum of seedling disease protection. Follow all label directions described on the Dividend XL label.

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.*