



Fungicide Efficacy for Control of Soybean Seedling Diseases

The members North Central Regional Committee on Soybean Diseases (NCERA-137) have developed the following ratings for how well fungicide seed treatments control seedling diseases of soybeans in the United States. Efficacy ratings for each fungicide active ingredient listed in the table were determined by field-testing the materials over multiple years and locations by the members of this group, and include ratings summarized from national fungicide trials published in Plant Disease Management Reports (and formerly Fungicide and Nematicide Tests) by the American Phytopathological Society at <http://www.apsnet.org>. Each rating is based on the fungicide's level of disease control, and does not necessarily reflect efficacy of fungicide active ingredient combinations and/or yield increases obtained from applying the active ingredient.

The list includes the most widely marketed products available. It is not intended to be a list of all labeled active ingredients and products. Additional active ingredients may be available, but have not been evaluated in a manner allowing a rating. Products listed are the most common products available as of the release date of the table; all available products may not be listed. Additional active ingredients may be included in some products for insect and nematode control, however; only active ingredients for pathogen control are listed and rated.

Many active ingredients and their products have specific use restrictions. Read and follow all use restrictions before applying any fungicide to seed, or before handling any fungicide-treated seed. This information is provided only as a guide. It is the applicator's and users legal responsibility to read and follow all current label directions. Reference in this publication to any specific commercial product, process, or service, or the use of any trade, firm, or corporation name is for general informational purposes only and does not constitute an endorsement, recommendation, or certification of any kind by members of the group, or by the North Central Soybean Research Program. Individuals using such products assume responsibility for their use in accordance with current directions of the manufacturer. Efficacy categories: E = Excellent; VG = Very Good; G = Good; F = Fair; P = Poor; NR = Not Recommended; NS = Not Specified on product label; U = Unknown efficacy or insufficient data to rank product. Ratings of NR may mean that the fungal group listed is not a target of the specific fungicide active ingredient.

Please note: Efficacy ratings may be dependent on the rate of the fungicide product on seed. A number of different species of Pythium and Fusarium impact seed and seedling health in soybean. Therefore, wide ranges in efficacy may be observed in fungicide active ingredients listed in the table. This is why several fungicide active ingredients are combined in seed treatments to provide protection to a broader spectrum of pathogens. Contact your local Extension plant pathologist for recommended fungicide product rate information for your area.



Seedling damping off from Pythium seedling blight and root rot
Image: Martin Chilvers

Find Out More

The Crop Protection Network (CPN) is a multi-state and international collaboration of university and provincial extension specialists, and public and private professionals who provide unbiased, research-based information to farmers and agricultural personnel. Our goal is to communicate relevant information that will help professionals identify and manage field crop diseases.

Find more crop disease resources at
CropProtectionNetwork.org

This publication was developed by members of NCERA-137. It was compiled by Kiersten Wise, University of Kentucky.

The information in this publication is only a guide, and the authors assume no liability for practices implemented based on this information. Reference to products in this publication is not intended to be an endorsement to the exclusion of others that may be similar. Individuals using such products assume responsibility for their use in accordance with current directions of the manufacturer.

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Efficacy categories:

P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent;

NL=Not Labeled for use against this disease; NR=Not Recommended;

U=Unknown efficacy or insufficient data to rank product

| Fungicide active ingredient | <i>Pythium</i> spp. ¹ | Phytophthora | <i>Rhizoctonia</i> spp. | <i>Fusarium</i> spp. ^{1,3} | Sudden death syndrome (SDS) <i>Fusarium virguliforme</i> | <i>Diaporthe</i> spp. |
|-----------------------------|----------------------------------|--------------|-------------------------|-------------------------------------|---|-----------------------|
| Azoxystrobin | P-G | NS | VG | F-G | NR | P |
| Carboxin | U | U | G | U | NR | U |
| Ethaboxam | E | E | NR | NR | NR | NR |
| Fludioxonil | NR | NR | G | F-VG | NR | G |
| Fluopyram | NR | NR | NR | NR | VG | NR |
| Fluxapyroxad | U | U | E | G | NR | G |
| Ipconazole | P | NR | F-G | F-E | NR | G |
| Mefenoxam | E ² | E | NR | NR | NR | NR |
| Metalaxyl | E ² | E | NR | NR | NR | NR |
| Oxathiapiprolin | P-G | E | NR | NR | NR | NR |
| PCNB | NR | NR | G | U | NR | G |
| Penflufen | NR | NR | G | G | NR | G |
| Prothioconazole | NR | NR | G | G | NR | G |
| Pydiflumetofen | NS | NS | NS | NS | VG | NS |
| Pyraclostrobin | P-G | NR | F-G | F | NR | G |
| Sedaxane | NR | NR | E | NS | NR | G |
| Thiabendazole | NR | NR | NS | NS | P | G |
| Trifloxystrobin | P | P | F-E | F-G | NR | P-F |

¹ Products may vary in efficacy against different *Fusarium* and *Pythium* species.

² Areas with mefenoxam or metalaxyl insensitive populations may see less efficacy with these products.

³ Listed seed treatments do not have efficacy against *Fusarium virguliforme*, causal agent of sudden death syndrome.

Common Fungicide Trade Names and Active Ingredients

(02/2023)

| Product trade name | Active ingredient(s) |
|---|--|
| Acceleron | DX-612 Fluxapyroxad, DX-309 Metalaxyl, DX-109 Pyraclostrobin |
| Allegiance FL | Metalaxyl |
| Allegiance LS | Metalaxyl |
| Apron XL LS | Mefenoxam |
| ApronMaxx RFC | Fludioxonil, Mefenoxam |
| ApronMaxx RTA | |
| CruiserMaxx | |
| CruiserMaxx Advanced or Cruiser Maxx Plus | |
| CruiserMaxx Vibrance or Vibrance Trio | Fludioxonil, Mefenoxam, Sedaxane |
| Dynasty | Azoxystrobin |
| EverGol Energy SB | Metalaxyl, Penflufen, Prothioconazole |
| ILEVO | Fluopyram |
| Inovate Pro | Ipconazole, Metalaxyl |
| Intego | Ethaboxam |
| Lumisena | Oxathiapiprolin, Metalaxyl |
| Maxim 4FS | Fludioxonil |
| Mertect 340 F | Thiabendazole |
| Prevail | Carboxin, Metalaxyl, PCNB |
| Saltro | Pydiflumetofen |
| Trilex 2000 | Metalaxyl, Trifloxystrobin |
| Vibrance | Sedaxane |
| Warden CX | Fludioxonil, Mefenoxam, Sedaxane |
| Warden RTA | Fludioxonil, Mefenoxam |



This article is published by the Crop Protection Network with funding provided by U.S. soybean farmers through the United Soybean Board, the United States Department of Agriculture – National Institute of Food and Agriculture, and the Grain Farmers of Ontario through the Canadian Agricultural Partnership (CAP), a federal-provincial territorial initiative.”