

Efficacy of Seed Treatment Fungicides for Agronomic Crops in Ohio

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Seed treatment fungicides are useful tools to manage seed and soil borne pathogens. Seed treatments are highly recommended in Ohio on seeds of alfalfa, corn, soybeans and small grains. However, a specific fungicide will not control all of the pathogens that may be present. It is important that agronomic crop producers know what the pathogens are in specific fields in order to choose the best fungicide or combination of fungicides for that field. In addition, the correct choice of fungicide will also limit losses due to seed-borne pathogens. The same rule applies in that specific fungicides will not effectively control all seed-borne pathogens. Refer to Extension Bulletin 639 *Seed Treatment for Agronomic Crops* for more detailed information concerning seed and seedling diseases affecting field crops in Ohio.

The following tables list the effectiveness or efficacy of fungicide seed treatments for alfalfa, corn, soybeans and small grains. These tables are based on field trials where these fungicides have been evaluated under very high disease conditions. The listed products may be applied in various combinations within limits of the label. Using combinations of fungicides will broaden the effectiveness against several different diseases.



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Table 1. Relative efficacy of seed treatments for control of certain diseases of ALFALFA in Ohio.

Trade name	Active Ingredient	Phytophthora
Allegiance	Metalaxyl	E
Apron XL	Mefenoxam	E
Captan	Captan	N
Thiram	Thiram	N

a Efficacy based on labeled rates of active ingredient for each material.

b Efficacy rating scale: E=excellent, G=good, F=fair, P=poor, N=no activity.

Table 2. Relative efficacy of seed treatments for control of certain diseases of CORN in Ohio.

Trade name	Active Ingredient	Soil-borne			Seed borne
		Fusarium	Rhizoctonia	Pythium damping off	Fusarium
Allegiance	Metalaxyl	N	N	E	N
Apron XL	Mefenoxam	N	N	E	N
Captan	Captan	G	P	F	G
Maxim	Fludioxonil	G	G	N	G

a Efficacy based on labeled rates of active ingredient for each material.

b Efficacy rating scale: E=excellent, G=good, F=fair, P=poor, N=no activity.

Table 3. Relative efficacy of fungicide seed treatments for control of certain diseases of SOYBEANS in Ohio.

Trade name	Active Ingredient	Phomopsis seed rot	Phytophthora damping off	Pythium damping off	Rhizoctonia seedling blight	Fusarium seedling blight
Agrosol FL	Captan, TBZ	G	N	P	F	F
Agrosol T	Thiram, TBZ	G	N	N	F	F
Allegiance	Metalaxyl	N	E*	E	N	N
Apron XL	Mefenoxam	N	E*	E	N	N
Captan	Captan	G	N	P	P	F
Captan T	Captan, TBZ	G	N	P	F	F
Maxim	Fludioxonil	G	N	N	G	ND
Rival	Captan, PCNB, TBZ	G	N	P	G	F
Thiram	Thiram	G	N	P	F	P

a Efficacy based on labeled rates of active ingredient for each material.

b Efficacy rating scale: E=excellent, G=good, F=fair, P=poor, N=no activity, ND=no data.

** Control of Phytophthora damping off only at the higher labeled rates. Low rates of Metalaxyl and Mefenoxam do not control Phytophthora but they do control Pythium.*

Table 4. Relative efficacy of fungicide seed treatments for management of certain diseases of WHEAT and BARLEY in Ohio.^a

Trade name	Active Ingredient	Seedborne				Soil-borne	Early Season		
		Loose smut	Common bunt	Stagonospora nodorum	Fusarium Head scab		Pythium	Powdery mildew	Leaf rust
Agrosol T	Thiram, TBZ	N	G	F	G	F	N	N	P
Allegiance	Metalaxyl	N	N	N	N	E	N	N	N
Apron XL	Mefenoxam	N	N	N	N	E	N	N	N
Dividend XL	Difenoconazol + Mefanoxam	E	E	E	G	E	F	G	G
LSP Flowable Fungicide	TBZ	N	G	P	G	N	N	N	N
Maxim 4FS	Fludioxonil	N	N	N	G	N	N	N	N
Raxil-Thiram	Tebuconazole, Thiram	E	E	E	G	F	F	G	F
Raxil MD	Tebuconazole, Metalaxyl	E	E	E	G	E	F	G	G
Raxil XT	Tebuconazole, Metalaxyl	E	E	E	G	E	F	G	G
RTU-Vitavax-Thiram	Carboxin, Thiram	G	G	F	G	F	N	N	F
Vitavax-200	Carboxin, Thiram	G	G	F	G	F	N	N	F

^aEfficacy based on labeled rates of active ingredient for each product.

^bEfficacy rating scale: E=Excellent, G=good, F=fair, P=poor and N=no activity.

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