

Soybean Seed Treatment Fungicides

(Revised January 2006)

Soybean seed treatment fungicides can be effective in preventing or reducing damage from pathogens that may be carried on the seed or pathogens present in the soil that cause seed decay, seedling blights and root rots of soybean. Soybean seed treatment fungicides are recommended if there is a concern about seed-borne diseases (ex. Phomopsis seed decay), if the field has a history of a specific early-season soybean disease (ex. field has a history of *Phytophthora* root rot) or conditions at planting are not favorable for rapid germination and emergence thus favoring early-season soybean diseases (ex. cold and wet soils might favor *Pythium* seed decay and seedling blight). Soybean seed treatment fungicides will not improve the germination of seed that has a poor germination rate because of physical cracks in the seed coat, weathering during the seed production year and other physiological factors.

A number of products are labeled for use on soybean seed. Basically these products can be divided into fungicides that are effective against the water mold fungi *Pythium* and *Phytophthora* or those effective against fungi other than *Pythium* and *Phytophthora*, i.e. *Rhizoctonia*, *Fusarium*, *Macrophomina* and other soil or seed-borne fungi. Metalaxyl and mefenoxam are labeled for use against *Pythium* and *Phytophthora*. These active ingredients are available alone or in combination with other soybean seed treatment fungicides. Azoxystrobin, captan, carboxin, fludioxonil, PCNB, TBZ (thiabendazole) and thiram are labeled for use against fungi other than *Pythium* and *Phytophthora*. These active ingredients are available alone, in combinations or in combination with products effective against *Pythium* and *Phytophthora*. The following tables lists soybean seed treatment fungicides by active ingredients and is divided into products effective against water mold fungi, products effective against fungi other than water molds and products that contain both types of soybean seed treatment fungicides.

As with many agricultural businesses, the fungicide seed treatment industries have gone through several mergers and acquisitions. I have tried to make this list as comprehensive and current as possible; however, label registrations and products can change at any time. Before using any agricultural pesticide, read and follow directions on the label accompanying that product. Product names have been used for clarity. Reference to specific trade names does not imply endorsement of these products by the University of Missouri; discrimination is not intended against similar products not listed. Federal Law requires that bags containing treated seeds shall be labeled with the following information: "This seed has been treated with (common chemical names of active ingredients) fungicide(s). Do not use treated seed for food,

feed or oil purposes.”

--Dr. Laura Sweets, MU Pathologist

Soybean Seed Treatment Fungicides Effective Against Pythium and Phytophthora

Active Ingredient	Examples of Product Trade Names (Company)
metalaxyl	Allegiance Dry (Trace Chemicals LLC) Allegiance-FL (Gustafson LLC) Allegiance-LS (Gustafson LLC)
mefenoxam	Apron XL LS (Syngenta)

Soybean Seed Treatment Fungicides Effective Against Fungi Other Than Pythium and Phytophthora

Active Ingredient	Examples of Product Trade Names (Company)
azoxystrobin	Protege FL (Gustafson LLC)
captan	Bean Guard (Trace Chemicals LLC.) Captan 30-DD (Gustafson LLC) Captan 400 (Gustafson LLC)

	<p>Captan 400 C (Gustafson LLC)</p> <p>Enhance (Trace Chemicals LLC)</p> <p>HiMoly/Captan-D (Trace Chemicals LLC)</p> <p>Rival Flowable (Gustafson LLC)</p> <p>Vitavax M DC (Helena)</p>
carboxin	<p>Bean Guard (Trace Chemicals LLC)</p> <p>Enhance (Trace Chemicals LLC)</p> <p>Kernel Guard Supreme (Trace Chemicals LLC)</p> <p>RTU-Vitavax-Thiram (Gustafson LLC)</p> <p>Vitaflo-280 (Gustafson LLC)</p> <p>Vitavax CT (Helena)</p> <p>Vitavax M DC (Helena)</p> <p>Vitavax M (Helena)</p> <p>Vitavax-PCNB (Gustafson LLC)</p> <p>Vitavax T-L (Trace Chemicals LLC)</p> <p>Vitavax-200 (Gustafson LLC)</p> <p>Vitavax-34 (Gustafson LLC)</p>
fludioxonil	<p>Maxim 4FS (Syngenta)</p>
PCNB	<p>Rival Flowable (Gustafson LLC)</p> <p>RTU-PCNB (Gustafson LLC)</p> <p>Vitavax-PCNB (Gustafson LLC)</p>

TBZ (thiabendazole)	LSP (Gustafson LLC) Rival Flowable (Gustafson LLC) RTU Flowable (Gustafson LLC)
thiram	Protector-D (Trace Chemicals LLC) Protector-L (Trace Chemicals LLC) RTU Flowable (Gustafson LLC) RTU-Vitavax-Thiram (Gustafson LLC) Triple Noctin L (Trace Chemicals LLC) 42-S Thiram (Gustafson LLC) VitaFlo-280 (Gustafson LLC) Vitavax CT (Helena) Vitavax M (Helena) Vitavax T-L (Trace Chemicals LLC) Vitavax-200 (Gustafson LLC)

Soybean Seed Treatment Fungicides Containing Products Effective Against Both Pythium and Phytophthora and Fungi Other Than Pythium and Phytophthora

Active Ingredient	Examples of Product Trade Names (Company)
azoxystrobin + metalaxyl	SoyGard (Gustafson LLC)

captan + carboxin + metalaxyl	Bean Guard Allegiance (Trace Chemicals LLC)
captan + PCNB + thiabendazole + metalaxyl	Rival Pak (Gustafson LLC)
carboxin + PCNB + metalaxyl	Prevail (Trace Chemicals LLC)
carboxin + thiram + metalaxyl	Stiletto (Trace Chemicals LLC) Stiletto Pak (Trace Chemicals LLC)
chloroneb + mefenoxam	Catapult XL (Agrilience, LLC) Delta Coat XL (Agrilience, LLC)
chloroneb + metalaxyl	Catapult (Agrilience, LLC) Delta-Coat AD (Agrilience)
fludioxonil	Maxim 4FS (Syngenta)
mefenoxam + fludioxonil	ApronMAXX RFC (Syngenta) ApronMAXX RTA (Syngenta) ApronMAXX RTA + moly (Syngenta) Maxim XL (Syngenta) Warden RTA (Agrilience)
thiram + metalaxyl	Protector-L-Allegiance (Trace Chemicals LLC)

