

## Sunflower Seed Treatment

Chemical	Application	Dosage <sup>1</sup>	Disease Control <sup>2</sup>		Remarks
			Seedling Blights <sup>3</sup>	Downy Mildew	
<b>Azoxystrobin (11)</b> Dynasty, 9.6%	Slurry	3.75-15 fl oz/cwt 0.025-0.1 mg/seed		X	Provides suppression against downy mildew.
<b>Captan (M4)</b> Captan 400, 37.4%	Slurry	2-4 fl oz/cwt	X		
<b>Fludioxonil (12)</b> Maxim 4FS, 40.3%	Slurry	0.08-0.16 fl oz/cwt	X		For seed-borne and soil-borne fungi.
Spirato 480 FS, 40.3%	Slurry	0.08-0.16 fl oz/cwt	X		
Dyna-Shield Fludioxonil, 40.3 %	Slurry	0.08-0.16 fl oz/cwt	X		
<b>Fludioxonil (12) + Mefenoxam (4)</b> Maxim XL, 21% : 8.4%	Slurry	0.167-0.334 fl oz/cwt	X		
<b>Mefenoxam (4)</b> Apron XL, 33.3%	Slurry	1.28 fl oz/cwt			
<b>Metalaxyl (4)</b> Allegiance FL, 28.35% Sebring 318 FS, 28.35%	Mist or slurry	1.5-3.0 fl oz/cwt			In North Dakota, the pathogen causing downy mildew has been resistant to metalaxyl for over a decade. The resistance is thought to be widespread and stable.
Dyna-Shield, 28.35%	Slurry	1.5-3 fl oz/cwt			
Belmont 2.7 FS, 28.98%	Slurry or mist	1.5-3.0 fl oz/cwt			
<b>Pyraclostrobin (11)</b> Stamina, 18.4%	Slurry	0.8-2.3 fl oz/cwt	X		For seed-borne and soil-borne fungi.
<b>Thiram (M3)</b> 42-S Thiram, 42% Signet 480 FS, 42%	Liquid or slurry	2 fl oz/bu	X		

<sup>1</sup>Dosage = amount of formulated product to apply.

<sup>2</sup>X = product labeled for crop and disease; Blank = product not labeled for specific disease.

<sup>3</sup>An increase in stand has been noted only once in moderately severe tests to date; under very severe conditions, some increase in stand might be expected.

## Sunflower Foliar Sprays

Chemical (Fungicide Group)	Application <sup>1</sup>	Dosage <sup>2</sup>	Rust Control <sup>3</sup>	Remarks
<b>Azoxystrobin (11)</b> Quadris, 22.9% Satori, 22.9% Equation, 22.9%	Spray or fungigation	6-15.5 fl oz/A	X	Resistance statement 5 <sup>4</sup> . Apply prior to disease development. Also labeled for control of <i>Alternaria</i> leaf spot.
<b>Boscalid (7)</b> Endura 70%	Spray or fungigation	8-11 oz/A		For suppression of sclerotinia head rot.
<b>Penthiopyrad (7)</b> Vertisan, 20.6%	Spray or fungigation	10-30 fl oz/A	X	For suppression of sclerotinia head rot. Apply prior to disease development. Do not apply more than 61 fl oz/A per season. PHI = 14 days.
<b>Fluxapyroxad (7) + Pyraclostrobin (11)</b> Priaxor 14.33% : 28.58%	Spray or fungigation	4-8 fl oz	X	Resistant statements 5 & 6 <sup>4</sup> . For control of several fungal diseases including <i>Alternaria</i> , <i>Septoria</i> , rust and powdery mildew. For suppression of sclerotinia head rot.
<b>Pyraclostrobin (11)</b> Headline EC, 23.6% Headline SC, 23.3%	Spray or fungigation	6-12 fl oz/A	X	Resistance statement 5 <sup>4</sup> . Apply prior to disease development. Also labeled for control of <i>Alternaria</i> leaf spot, powdery mildew, septoria leaf spot and white rust. Maximum of 2 applications per season. PHI = 21 days.
<b>Tebuconazole (3) 38.7%</b> Orius 3.6F Tebuzol 3.6F Monsoon Onset 3.6L	Spray	4-6 fl oz/A	X	For maximum disease control, labels recommend using lowest rate of nonionic surfactant. Apply at earliest sign of infection. Do not apply more than 16 fl oz per season or within 50 days of harvest. See labels for further information or spray scheduling.

<sup>1</sup>Spray = ground or aerial; Fungigation = application through sprinkler irrigation system.

<sup>2</sup>Dosage = amount of formulated product to apply.

<sup>3</sup>X = product labeled for crop and disease; Blank = product not labeled for specific disease.

<sup>4</sup>See fungicide resistance management statements on Pages 7-8.

## Soil-Applied Biological Fungicides

Organism	Application	Dosage <sup>1</sup>	Sclerotinia Sclerotiorum (white mold) Control <sup>2</sup>	Remarks
<b><i>Coniothyrium minitans</i></b> Contans WG, 5.3%	Soil incorporation	1-2 lb/A depending on crop	X	Fungus attacks sclerotia of the fungus.

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<sup>2</sup>X = product labeled for crop and disease; Blank = product not labeled for specific disease.