

Chemical Group and Group No., <i>Common name - Trade Name</i>	Formulation, Application means	Dosage & REI (hrs.)	Disease control for:			Comments
			Fungi	Oomycete	Bacteria	
Strobilurins – Grp 11 (Qol)						
Resistance known in various fungal species; cross resistance between all members of this Qol group.						
<i>azoxystrobin</i> - ¹¹ Dynasty ⁰ (9.6%)	Liquid, for seed	0.10-3.75 fl oz/cwt; 4	XX	No	No	Suppression of Rhizoctonia, seedborne black dot, protection from silver scurf
<i>azoxystrobin</i> – ¹¹ Quadris F ⁰ (22.9%)	In-Furrow trt.	0.40-0.80 fl oz/1000 ft; 4	XX	No	No	Rhizoctonia, Silver scurf and Black dot
<i>pyraclostrobin</i> – Headline SC (23.3%)	In-Furrow trt.	0.4-0.8 fl oz/1000 ft; 12	XX	No	No	Rate depends on row spacing; For Rhizoctonia control
Phenylpyrroles – Grp 12						
Resistance management is required due to fungicide resistance occurring sporadically for this group.						
<i>fludioxonil</i> – ¹² Maxim 4FS ⁰ (40.3%)	Liquid, specific coverage	0.08 fl. oz./cwt; 12	XX	No	No	Fusarium, Rhizoctonia and Helminthosporium control. <u>If seed grower</u> , then also use mancozeb dust or IF strobby after Maxim (see label).
<i>fludioxonil</i> – ¹² Maxim Potato seed protectant ⁰ or ¹² Maxim PSP ⁰ (both 0.5%)	Dust, provide uniform coverage	0.50 lbs./cwt; 12	XX	No	No	<u>Not for use on crops planted for seed production</u> ; see above for fungi on label.
<i>fludioxonil</i> – ¹² Spirato ⁰ 480FS (40.3%)	Liquid, specific coverage	0.08 fl. oz./cwt; 12 hrs.	XX	No	No	For Fusarium, Rhizoctonia and Helminthosporium control. <u>If seed grower</u> , also use mz dust or IF strobby after Spirato.
<i>fludioxonil</i> + <i>mancozeb</i> – ^{12+M3} Maxim MZ (0.50% + 5.7%)	Dust, uniform coverage	0.5 lb/cwt; 24	XX	x	No	Use for Fusarium, Rhizoctonia and Helminthosporium control. MZ portion reduces seed to seed transmission of Late blight.
<i>fludioxonil</i> + <i>thiamethoxam</i> – ^{12 + Insect} CruiserMaxx Potato ⁰ (7%) (Not for use on L. I.)	Liquid, fine spray	Varies by seeding rate; 12	XX	No	No	Includes systemic insect control; For Fusarium dry rot, Rhizoctonia and seedborne Silver scurf
Dithio-carbamates – Grp M3						
<i>Mancozeb</i> s are a low risk for fungicide resistance occurrence because of multisite activity						
<i>mancozeb</i> only – ex of formulations ^{M3} Dithane DF, Manzate Pro-Stick, Penncozeb 75DF, Roper DF, Koverall (% varies)	Liquid for creating slurry	1.25 lb/50 gal water; all 24	XX	x	x	Mostly for Fusarium dry rot, Rhizoctonia stem canker and Silver scurf (Helminthosporium). Also available are Potato Seed Treater PS and 6% products.
<i>mancozeb</i> + <i>Insecticide</i> – ^{M3+ Insect} Gaucho MZ Pot. S-P Trt. ⁰	Dust	0.5-0.75lb/cwt; 24	XX	No	No	Aids in the control of insects and Fusarium dry rot.
Phenyl-benzamides – Grp 7						
Resistance management required for flutolanil fungicides						

<i>flutolanil</i> – ⁷ Moncut 70DF ⁰ (70%) (Not for use on L.I.)	IF as 4-8" band over seed & soil	0.74-1.11oz/k ft; 12	XX	No	No	Rate for 1,000 ft @ 34" row spacing; For Rhizoctonia black scurf and suppression of Powdery Scab.
<i>flutolanil</i> + <i>mancozeb</i> – ⁷⁺ ^{M3} Moncoat MZ ⁰ (1.5% + 6%)	Dust, seed trt.	0.75-1 lb/cwt; 24	XX	No	No	For suppression of seedborne Fusarium dry rot, Black scurf and canker, and Silver scurf.
Thiophanates – Grp 1	Resistance is common in many fungal species					
<i>thiophanate-methyl</i> + <i>mancozeb</i> – ^{1+M3} Tops MZ (2.5 + 6.0%)	Dust, seed trt.	0.75-1 lb/cwt; 24	XX	x	No	For suppression of Fusarium dry rot, Rhizoctonia (black scurf and stem canker), Silver scurf, and helps to reduce the spread of LB.
<i>thiophanate-methyl</i> + <i>mancozeb</i> + <i>imidacloprid</i> – ¹⁺ ^{M3 + Insect} Tops-MZ-Gaucho ⁰ (2.5 + 6 + 1.25%)	Dust, seed trt.	0.75 lb/cwt; 24	XX	x	No	For aid in the control of insects and Fusarium dry rot and Rhizoctonia black scurf and stem canker, Silver Scurf, and reduces the spread of Late blight during cutting process.
<i>thiophanate-methyl</i> + <i>mancozeb</i> + <i>cymoxanil</i> – ^{1+M3} ⁺²⁷ Evolve ⁰ (2.5 + 6 + 1%)	Dust, seed trt.	0.75 lb/cwt; 24	XX	XX	No	Aids in preventing the spread of Late blight during cutting and planting that appear to be free of LB; also for Fusarium dry rot, Rhizoctonia, Silver scurf.
Cyanoacetamide-oxime – Grp 27	Low to medium risk of fungicide resistance					
<i>cymoxanil</i> – ²⁷ Curzate 60DF ⁰	Liquid, cut seed	0.25-1.0 oz/cwt; 12	No	XX	No	Selected for Late blight control carried on seed.
Biologicals – Some as Grp 44	Resistance is not known to exist; OMRI listed for organic use					
<i>Bacillus amyloliquefaciens</i> ⁴⁴ Double Nickel 55 Strain D747 ⁰ (25%) OMRI	IF	0.3-1.0 oz/1000 row ft; 4	XX	No	No	For Rhizoctonia and potential other soilborne pathogens; use for 34" row spacing
<i>Bacillus subtilis</i> ⁴⁴ Serenade Soil ⁰ (1.34%) OMRI	Soil drench; IF	2-6 qt/A; 2.2-13.2 fl oz/k row ft; 4	XX	No	X	Primarily for Rhizoctonia, but others are listed; suppression of Common Scab.
<i>Streptomyces lydicus</i> ^{Bio} Actinovate AG ⁰ (0.0371%) OMRI	IF as a soil drench	3-12 oz/A; 1	XX	?	No	For Fusarium and Rhizoctonia and potentially for Pythium and Phytophthora
<i>Trichoderma asperellum</i> + <i>T. gamsii</i> – ^{Bio} Bio-Tam ⁰ (2% each) OMRI	IF	1.5-3 oz/1,000 row feet; 1	XX	No	No	See In-Furrow Application Rate table on label; Potentially best for Fusarium and Rhizoctonia
<i>Trichoderma harzianum</i> ^{Bio} T-22 ⁰ (1.15%) OMRI	Dust or aqueous	0.5-2 oz/cwt; 0	XX	No	No	Rhizoctonia black scurf and stem canker
<i>Trichoderma harzianum</i> + <i>T. virens</i> ^{Bio} Root Shield Plus WP ⁰ (1.15 + 0.61%) OMRI	Dust or IF trt.	0.03-3lb/cwt; 16.0-32oz/A; 4	XX	No	No	For whole or cut seed as Dip or Dust or IF spray; Fusarium and Rhizoctonia control. Consider 34" row spacing. See label
Other OMRI products to consider: <u>MeloCon WG</u> (nematodes), <u>Mycostop</u> , <u>Prestop</u> , <u>Taegro</u>						