

2022–2023 SEED TREATMENT AND SOIL HEALTH PRODUCT PORTFOLIO SHEET

STartUP™ brand seed treatments mean the best-in-class quality in terms of physical and chemical parameters. They bring exceptional custom blend compatibility with polymers and colorants for a longer period compared with competitor products. STartUP brand components are superior in treatment performance qualities such as:

- uniform coverage irrespective of seed type
- active ingredient absorption/penetration into the seed
- quick dryness
- color strength
- seed flow
- low dust level

Seed Treatment Component INSECTICIDES for Custom Blending

Brand Name	Active Ingredient	IRAC Group	AI in lbs/gal	AI in g/L	Packs in gal	Crops and Use Rates fl oz/cwt	Features
STartUP IMIDA	<i>Imidacloprid</i>	4A	5.0	600	250, 30, 2 x 2.5	Canola: 10.24–25.6 Cotton: 12.8 Field Corn: 0.72–6.0 (various) Popcorn: 6.4 Sweet Corn: 0.8–6.4 (various) Small Grains: 0.8–2.4 Sorghum: 6.4 Soybean: 1.6–3.2 Sugar Beet: 2.4–5.0 Sunflower: 12.8	STartUP IMIDA is a proven foundation insecticide seed treatment which can be applied across a diverse range of crops for very reliable insect control. It controls thrips, aphids and soil pests. The systemic activity and the relatively low rate of application make it user friendly for many complementary seed treatment blends.
STartUP ACE97	<i>Acephate</i>	1B	n/a	970 g/kg	34 lb drum	Cotton: 4.5–6.4 dry oz	STartUP ACE97 is a broad-spectrum, systemic insecticide for cotton seed treatment. STartUP ACE97 is a water-soluble insecticide that is rapidly absorbed by plant roots and provides systemic control of feeding insects even in marginal moisture at-plant scenarios. Excellent addition to STartUP IMIDA to control thiamethoxam-resistant western flower thrips.
STartUP BIFEN	<i>Bifenthrin</i>	3A	1.5	180	2 x 2.5	Beans: 2.1–3.6 Canola: 2.1–3.6 Cucumber: 2.1–3.6 Field Corn: 2.1–3.6 Peas: 2.1–3.6 Popcorn: 2.1–3.6 Sweet Corn: 2.1–3.6	STartUP BIFEN provides protectant activity for germinating seeds against a wide range of soil-borne insects such as seed corn maggots, wireworm, false wireworm and imported fire ant. Activity occurs when treated material is contacted or ingested by soil-borne insects. Bifenthrin can be applied in tank mixes with other registered seed treatment products.

Seed Treatment Component FUNGICIDES for Custom Blending

Brand Name	Active Ingredient	FRAC Group	AI in lbs/gal	AI in g/L	Packs in gal	Crops and Use Rates fl oz/cwt	Features
RANCONA® 3.8 FS	<i>Ipconazole</i>	3	3.77	452	30, 2 x 2.5	Beans: 0.085 Field Corn, Sweet Corn, Popcorn: 0.044–0.085 Cotton: 0.051–0.34 Peas: 0.085 Small Grains: 0.051–0.085 Sorghum: 0.051–0.17 Soybeans: 0.085 Sunflower: 0.051–0.085	RANCONA 3.8 FS is a systemic broad-spectrum fungicide seed treatment. RANCONA is recognized as a superior product for control of <i>Rhizoctonia solani</i> , <i>Fusarium</i> spp., and <i>Phomopsis (Diaporthe)</i> .
RANCONA CTS	<i>Ipconazole</i>	3	0.209	25	250, 30	Beans: 1.53 Peas: 1.53 Small Grains: 0.92–1.53 Sorghum: 1.53 Soybeans: 1.53	RANCONA CTS is a combination of two systemic broad-spectrum fungicide seed treatments that protects against a wide variety of seed- and soil-borne diseases.
	<i>Metalaxyl</i>	4	0.167	20			

Seed Treatment Component FUNGICIDES for Custom Blending (continued)

Brand Name	Active Ingredient	FRAC Group	AI in lbs/gal	AI in g/L	Packs in gal	Crops and Use Rates fl oz/cwt	Features
RANCONA V 100 PRO FS	<i>Ipconazole</i>	3	0.208	25	30, 2 x 2.5	Field Corn, Sweet Corn, Popcorn: 1.5 Cotton: 1.5-6.0 Beans: 1.5 Peanut: 0.9-1.5 Small Grains: 0.9-1.5 Soybeans: 1.5	RANCONA V 100 PRO is a pre-blend containing ipconazole and carboxin. This combination provides industry-leading control of <i>Rhizoctonia solani</i> , <i>Fusarium</i> spp., and other seed- and soil-borne damping-off diseases. Two modes of action provide excellent resistance management.
	<i>Carboxin</i>	7	3.34	400			
STartUP METXL 317	<i>Metalaxyl</i>	4	2.65	317	250, 2 x 2.5	Canola: 0.25-0.5 Corn: 0.75-1.5 Cotton: 0.75-1.5 Peanut: 0.75 Rice: 0.75-1.5 Small Grains: 0.75-1.5 Sorghum: 0.375-1.5 Soybeans: 0.75-1.5 Sunflower: 1.5-3.0	STartUP METXL is a time-tested, systemic fungicide seed treatment for control of water molds such as <i>Pythium</i> spp. and early season <i>Phytophthora</i> spp. STartUP METXL provides proven protection against these damping-off diseases that are not controlled by other seed treatment fungicides.
STartUP METXL 480	<i>Metalaxyl</i>	4	4.0	480	250, 2 x 2.5	Canola: 0.2-0.3 Corn: 0.5-1.0 Cotton: 0.5-1.0 Peanut: 0.5 Small Grains: 0.5-1.0 Fruiting Vegetable: 0.5 Legume Vegetable: 0.5-1.0 Rice: 0.5-1.0 Sorghum: 0.25-2.0 Soybeans: 0.5-1.0 Sunflower: 1.5-2.0	STartUP METXL is a high load AI systemic fungicide seed treatment used at low rate specifically for control of systemic downy mildew, <i>Pythium</i> spp. and early season <i>Phytophthora</i> spp. STartUP METXL provides proven protection against these damping-off diseases that are not controlled by other seed treatment fungicides.
STartUP FLUDI	<i>Fludioxonil</i>	12	4.0	480	30, 4 x 1	Canola: 0.08-0.16 Field Corn and Popcorn: 0.08-0.16 Sweet Corn: 0.08 Cotton: 0.08-0.16 Peanut: 0.08-0.16 Potato: 0.08 Rice: 0.02-0.08 Small Grains: 0.08-0.16 Sorghum: 0.08-0.16 Soybeans: 0.08-0.16 Sunflower: 0.08-0.16	STartUP FLUDI is a contact fungicide used for controlling seed- and soil-borne pathogens that affect emergence and stand. STartUP FLUDI provides excellent control of <i>Rhizoctonia solani</i> , <i>Fusarium</i> spp. and other damping-off diseases.
STartUP T-MTYL	<i>Thiophanate-methyl</i>	1	4.5	540	30, 2 x 2.5	Dry Beans, Snap Beans: 0.14-0.28 Peanut: 0.14-1.12 Potato: 0.50-0.70 Soybeans: 0.14-0.28 Wheat: 0.14-0.28	STartUP T-MTYL is an effective systemic fungicide for seed treatment that provides early season protection of seedlings against <i>Rhizoctonia</i> spp., seedling blight and seed-borne <i>Sclerotinia</i> spp. in soybean and wheat.
STartUP TEBUZ	<i>Tebuconazole</i>	3	3.6	430	30, 4 x 1	Field Corn, Sweet Corn, Popcorn: 0.071-0.54 Small Grains: 0.073	STartUP TEBUZ provides excellent control of many seed- and soil-borne diseases in corn and small grains in a more concentrated formulation enabling lower use rates and increased space on seed. It protects against diseases such as smuts and root rots. It has outstanding defense against soil-borne diseases with excellent crop safety.
STartUP THIBN	<i>Thiabendazole</i>	1	4.0	480	30, 2 x 2.5	Chickpea: 2.04 Lentils: 1.05 Peas/Pigeon Peas/Dry Peas: 1.02 Small Grains: 0.17-3.9 Field Corn, Sweet Corn, Popcorn: 0.30-0.41 Soybeans: 0.08-0.64 Peanut: 0.32	STartUP THIBN is an effective systemic fungicide for seed treatment that provides early season protection of seedlings against seed- and soil-borne diseases such as Ascochyta blight, <i>Fusarium</i> spp., <i>Rhizoctonia</i> spp. and other damping-off diseases. In soybean it provides additional suppression of dry bubble (<i>Verticillium fungicola</i>), wet bubble (<i>Mycogone perniciosa</i>), cobweb (<i>Dactylium dendroides</i>) and green mold (<i>Trichoderma</i> spp.).
STartUP MANZB	<i>Mancozeb</i>	M03	4.0	480	2 x 2.5	Corn: 4.3-8.6 Cotton: 4.8 Peanut: 12.8-25.6 Potato: 1.6-2.5 Rice: 3.2-6.4 Sorghum: 4.3-7.2 Wheat: 3.5-5.2	STartUP MANZB is a multiple site of action, broad-spectrum seed treatment with contact activity. Due to multiple sites of action, there is currently no known resistance, and it can be incorporated as a resistance management tool. It provides excellent bio-stimulation due to manganese and zinc in the formulation. It is very complementary to current systemic standards.
STartUP AZOXY	<i>Azoxystrobin</i>	11	2.1	250	30, 4 x 1	Canola: 1.5 Corn: 0.04-0.19 Cotton: 0.4-1.5 Peanut: 0.25-0.3 Potato: 0.31-1.5 Rice: 0.25-1.5 Soybeans: 0.06-0.3 Sunflower: 0.25-1.8 Tomato: 0.25-1.5 Wheat: 0.25-1.5	STartUP AZOXY is a seed treatment with broad-spectrum and systemic activity in a more concentrated formulation enabling lower use rates and increased space on seed. It provides improved disease protection and control against a range of fungal pathogens including <i>Rhizoctonia solani</i> and <i>Pythium</i> spp. that cause decay, damping-off and seedling blight.

Seed Treatment Component FUNGICIDES for Custom Blending (continued)

Brand Name	Active Ingredient	FRAC Group	AI in lbs/gal	AI in g/L	Packs in gal	Crops and Use Rates fl oz/cwt	Features
VITAVAX®-34	Carboxin	7	3.34	400	30, 2 x 2.5	Barley: 2-3 Beans: 3-4 Corn: 2-4 Cotton: 4-8 Oats: 2-3 Soybeans: 3-4 Triticale: 2-3 Wheat: 2-3	VITAVAX-34 is a systemic broad-spectrum fungicide that protects against a wide variety of seed- and soil-borne diseases. VITAVAX-34 has long been a standard for control of <i>Rhizoctonia solani</i> while also being effective against loose smuts, covered smut, common bunt and other damping-off diseases.
THIRAM 480 DP	Thiram	M03	4.0	480	2 x 2.5	Beans: 3 Canola: 6.4 Field Corn: 2.7 Cotton: 3 Grasses: 8 Small Grains: 3.3 Sorghum: 3.3 Soybeans: 2 Rice: 3 Peanuts: 3 Rice: 3.3	THIRAM 480 DP helps to increase stands and yields by reducing losses from seed decay, damping-off and seedling blights caused by many seed- and soil-borne diseases.
VITAFLO®-280	Carboxin	7	1.45	174	2 x 2.5	Barley: 3-5 Beans: 4 Corn: 4.5-11 Oats: 5 Rice: 3.4-4.5 Soybeans: 4 Triticale: 3 Wheat: 3.5-5	VITAFLO-280 seed treatment combines systemic and contact fungicides to provide plant protection against seed- and soil-borne seedling diseases, resulting in optimum germination of the seed and reliable stand establishment.
	Thiram	M03	1.23	147			

Ready-to-Use Seed Treatment Products

Brand Name	Active Ingredient	FRAC Group	AI in lbs/gal	AI in g/L	Packs in gal	Crops and Use Rates fl oz/cwt	Features
RANCONA SUMMIT	Ipconazole	3	0.080	9.6	250, 30, 2 x 2.5	Beans: 4.0 Peas: 4.0 Small Grains: 2.5-4.0 Soybeans: 4.0	RANCONA SUMMIT seed treatment protects crops by combining two powerful fungicides that control both seed- and soil-borne diseases, including seed-borne <i>Ascochyta</i> , with the superior coverage and adhesion of RANCONA micro-dispersion (MD) technology. You have a ready-to-use seed treatment that provides more vigorous and uniform crop emergence for healthy stands.
	Metalaxyl	4	0.128	15.4			
RANCONA V RTU FS	Ipconazole	3	0.042	5.0	250, 30, 2 x 2.5	Dry Beans: 4.6 Small Grains: 4.6 Soybeans: 4.6	RANCONA V RTU seed treatment is three powerful fungicides that provide both contact and systemic activity against a broad spectrum of yield-robbing wheat diseases. With the superior coverage and adhesion of RANCONA flowable application technology, you have a safe seed treatment for cereals that delivers more consistent protection under a wider range of conditions.
	Metalaxyl	4	0.111	13.3			
	Carboxin	7	1.11	133.0			
RANCONA V PD	Ipconazole	3	n/a	1.0%	50 lb	Peanut: 4 oz/cwt	RANCONA V PD is a dust seed treatment that provides both contact and systemic activity, which leads to broad-spectrum control of key peanut diseases including seed rots, damping-off and seedling blights caused by <i>Rhizoctonia</i> , <i>Fusarium</i> and <i>Pythium</i> , as well as seedling-stage crown rot caused by <i>Aspergillus niger</i> . With its three different active ingredients, it is a great way to battle early stand loss from strobilurin-resistant seedling diseases that are becoming increasingly prevalent in peanut-producing areas.
	Carboxin	7	n/a	16.0%			
	Metalaxyl	4	n/a	0.8%			

Planter Box/Specialty Use Products

Brand Name	Active Ingredient	FRAC Group	AI in lbs/gal	AI in g/L	Packs	Crops and Use Rates	Features
BEAN GUARD®/ Allegiance®	Carboxin	7	n/a	12.5%	4 x 5 lb	Soybeans: 2 oz/60 lbs	BEAN GUARD/Allegiance is a planter-box treatment that combines systemic and contact activity to control certain seed and seedling diseases in soybeans. It is effective against <i>Pythium</i> and <i>Rhizoctonia</i> and shows good activity against <i>Fusarium</i> and <i>Helminthosporium</i> . BEAN GUARD/Allegiance also provides 0.2 ounce of molybdenum per acre for plant nutrition and nitrogen fixation.
	Captan	M04	n/a	24.45%			
	Metalaxyl	4	n/a	3.75%			
	Molybdenum		n/a	11.9%			
ENHANCE®	Carboxin	7	n/a	20.00%	4 x 5 lb	Small Grains: 4 oz/cwt Soybeans: 5 oz/cwt	ENHANCE is a planter-box seed treatment that controls covered and loose smut on wheat, barley and oats. It reduces seed rot and seedling blight caused by soil-borne diseases. ENHANCE also protects soybean seed from seed- and soil-borne fungi that cause seed decay, damping-off and seedling blights.
	Captan	M04	n/a	19.55%			
PRO-GRO®	Carboxin	7	n/a	30.0%	25 lb	Onion: 2.5 lbs/cwt	PRO-GRO is a dust-applied seed treatment for control of onion smut (<i>Urocystis</i> spp.) on onion seed.
	Thiram	M03	n/a	50.0%			

Seed Treatment Herbicide Safeners

Brand Name	Active Ingredient	AI in lbs/gal	AI in g/L	Packs in gal	Crops and Use Rates fl oz/cwt	Features
MESH™ 2FS	Flurazole	2.0	240	30, 2 x 2.5	Sorghum: 3.25–4.5	MESH 2FS is a liquid formulation that safens grain sorghum germination and emergence by specifically reducing seed and seedling injury caused by chloroacetamides. When herbicides containing the active ingredients metolachlor, S-metolachlor, acetochlor and dimethenamid are applied at high rates, it provides superior safety when compared to other sorghum safening products. MESH 2FS is compatible with most STartUP and RANCONA branded fungicide and insecticide seed treatment products labeled for use on sorghum.
MESH-40WP	Flurazole	n/a	400 g/kg	55 lb	Sorghum: 2.4–2.8 oz/cwt	MESH 40WP provides industry-leading safety for germinating grain sorghum by reducing seedling injury and stand loss caused by chloroacetamides. When herbicides containing the active ingredients metolachlor, S-metolachlor, acetochlor and dimethenamid are applied at high rates, it provides superior safety when compared to other sorghum safening products.

In-Furrow Spray, Starter Fertilizer Compatible Products

Brand Name	Active Ingredient	FRAC/IRAC Group	AI in lbs/gal	AI in g/L	Packs in gal	Crops and Use Rates fl oz/A	Features
TEPERA® PLUS HD	Fluoxastrobin	11	1.42	170	2 x 2.5	Canola: 2.3–4.5 Corn: 3.3–10.0 Dry Beans: 3.3–5.3 Dry Peas: 3.3–5.3 Leaf Petiole Veg: 5.7 Potato: 5.7–6.8 Soybean: 3.3–5.7 Tomato: 4.5–5.7 Pepper: 4.5–5.7	TEPERA PLUS HD fungicide + insecticide is a concentrate product developed with advanced formulation technology that contains fluoxastrobin and bifenthrin together for protection against both below-ground insects and soil-borne diseases. TEPERA PLUS HD is designed for at-plant, banded and foliar spray applications to be applied with liquid fertilizer or water. It can be applied in-furrow with the seed, as a T-band (band over the open furrow), as a broadcast application by ground or air, or as a band over the row.
	Bifenthrin	3A	2.26	271			
BIFENTURE® LFC	Bifenthrin	3A	1.5	180.0	2 x 2.5, 4 x 1	Brassicas: 3.4–8.5 Citrus: 8.5–42.5 Corn: 3.4–17.0 Dry Beans: 3.4–8.5 Dry Peas: 3.4–8.5 Fruiting Vegetables: 3.4–8.5 Leaf Petiole Veg: 3.4–8.5 Sod: 2.8–17.42 Succulent Beans/Peas: 3.4–8.5 Soybeans: 3.4–8.5	BIFENTURE LFC is an excellent addition to any starter liquid fertilizer program for below-ground pests. BIFENTURE LFC is formulated to work with your preferred starter fertilizer program and is easier to handle than granular insecticide. Bifenthrin has a long-lasting soil residual profile that creates a zone of inhibition from white grubs, wireworms and seed corn maggots. As failures of corn traits continue or hybrids that have a single trait are used, BIFENTURE LFC is an excellent addition for managing the early season feeding that causes late season water stress and lodging from root pruning.
ZEBA® XL	Starch-g-poly potassium salt	n/a		88%	44 lb	Agricultural Crops: 3–10 lbs/A	ZEBA XL is a starch-based super-absorbent polymer that breaks down naturally over time in soil. It is designed to rapidly absorb and maintain moisture in the root zone, releasing moisture back to plants as needed. <i>See label for additional uses.</i>
ZEBA® SP	Starch-g-poly potassium salt	n/a		88%	4 x 11 lb	Agricultural Crops: 3–10 lbs/A	ZEBA SP is a starch-based super-absorbent polymer that breaks down naturally over time in soil. It is designed to rapidly absorb and maintain moisture in the root zone, releasing moisture back to plants as needed. Use high rates of 7–10 lbs in soil with low moisture-holding capacity for optimal moisture retention. <i>See label for additional uses.</i>

To learn more, talk to your consultant, local UPL representative or retailer, or visit upl-ltd.com/us.

