



syngenta®



Leading the industry
in seed treatment technology.

A PROVEN PORTFOLIO BUILT ON INNOVATION.

VALUE OF SEED TREATMENTS

A healthy start sets the foundation for strong performance as plants grow. Seed treatments provide protection during the critical germination and stand establishment stages when seeds and emerging seedlings have difficulties protecting themselves against invasive pathogens and pests.

Serving as the first line of defense, seed treatments can improve seed germination, seedling emergence, stand establishment and plant vigor. As a result of this early-season performance, plants treated with seed treatments have an edge over untreated plants when it comes to realizing yield, quality and profit potential.

STEWARDSHIP/PROPER TRAINING

Seed Treatment Application Training

Proper application of seed treatments can only be achieved if the equipment being used is functioning properly and the person operating the equipment is properly trained on the operation, calibration, slurry preparation and maintenance of the equipment. It is the responsibility of the treater operator and the location management to ensure all personnel are fully trained to operate the specified equipment.

IMPORTANT: Always read and follow the product label instructions for each product being used or tested and follow the required personal protective equipment (PPE).

Slurry Preparation

Correct slurry preparation is the basis for accurate seed treatments. All products must be mixed in the proper ratio based on an average seed count (per lb) to ensure the active ingredients (AIs) are applied to the seed at the proper loading rate. Syngenta provides tools that calculate the appropriate amount of each individual product that must be mixed into the slurry to achieve accurate AI loading.

Seed treatments offer:

- » Improved seedling health
- » Targeted and accurate application
- » Protection of high-value seed
- » A complement to more traditional crop protection methods
- » Grower convenience
- » Improved seed germination and seedling emergence
- » Optimum stand establishment and plant vigor

Note: The calculators provided by Syngenta are for Syngenta products, recommended polymers and colorant. The calculators are not designed to give rates for non-Syngenta products. If you are using a product that is not in the base calculator, it is necessary to perform a compatibility test prior to mixing large quantities to ensure there are no adverse effects of mixing the components together.

Calibration

Seed treater calibration is the process of measuring the amount of product or slurry that would be applied to the seed in a given time frame and comparing it to the required target. This process will vary depending on the equipment being used, but is an integral part of the seed treatment process.

Treating Seed

The seed treatment process is a combination of two processes, primary and secondary application. Primary application is the initial contact of the chemical product to the seed, while secondary application is the redistribution of the product across the entire volume of seed. The timing of the primary and secondary application has significant effects on the handling characteristics and appearance of treated seed. While the seed treater is running, the treater operator should constantly monitor the process. Additionally, samples must be taken periodically for Quality Assurance testing.

Cleaning

Treater equipment cleaning and maintenance are an essential part of the treatment process. Some treater manufacturers may void the treater warranty if the cleaning and maintenance are found to be unacceptable.

TABLE OF CONTENTS

Alfalfa	5
Canola	9
Corn	13
Cotton	25
Peanuts	34
Potatoes	40
Rice	56
Sorghum	63
Soybeans	68
Sugarbeets	85
Sunflowers	93
Vegetables Small-Seeded	101
Vegetables Large-Seeded	117
Wheat	132
Legumes	140



ALFALFA

ALFALFA

Alfalfa is one of the most important crops grown for forage in the United States. Syngenta is committed to better serving the alfalfa grower by helping growers achieve strong stands through proven products and an unmatched level of service.

Seed treatments are vital to protecting alfalfa seed and contribute to delivering a stronger stand. CruiserMaxx® Alfalfa seed treatment insecticide/fungicide, which combines the fungicides Apron XL® and Maxim® 4FS with Cruiser® Alfalfa insecticide, helps protect young alfalfa seedlings against early-season diseases and insects.



ALFALFA
CruiserMaxx Alfalfa

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® ALFALFA insecticide/fungicide seed treatment, an on-seed application of separately registered products, protects alfalfa against early-season insects, and seedborne and soilborne diseases leading to increased plant stand, uniformity, vigor and yield.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser® 5FS seed treatment insecticide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)

Advantages

- » Proven performance that helps increase plant stand establishment, uniformity and vigor, leading to improved yield and quality
- » Systemic disease and early-season insect protection in one convenient application of separate products maximizes seed germination and seedling emergence
- » Complementary to high-value seed to help ensure every seed counts
- » Component products are specially formulated to deliver optimal seed safety without interfering with inoculants
- » Excellent performance in variable weather conditions to ensure germination and emergence regardless of weather
- » Via the Cruiser Vigor Effect, CruiserMaxx Alfalfa helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Aphids
- » Leaf hoppers (first cut only)

Disease Protection

- » *Pythium* damping-off
- » Early-season *Phytophthora*
- » Early-season downy mildew (suppression)
- » Seedborne and soilborne fungi that cause decay, damping-off and seedling blight

Application Rate

- » Cruiser 5FS Alfalfa: 0.001 mg a.i./seed*
- » Apron XL: 0.64 fl oz/ 100 lbs seed
- » Maxim 4FS: 0.08 – 0.16 fl oz/ 100 lbs seed

*Based on an average of 210,000 alfalfa seeds per pound.

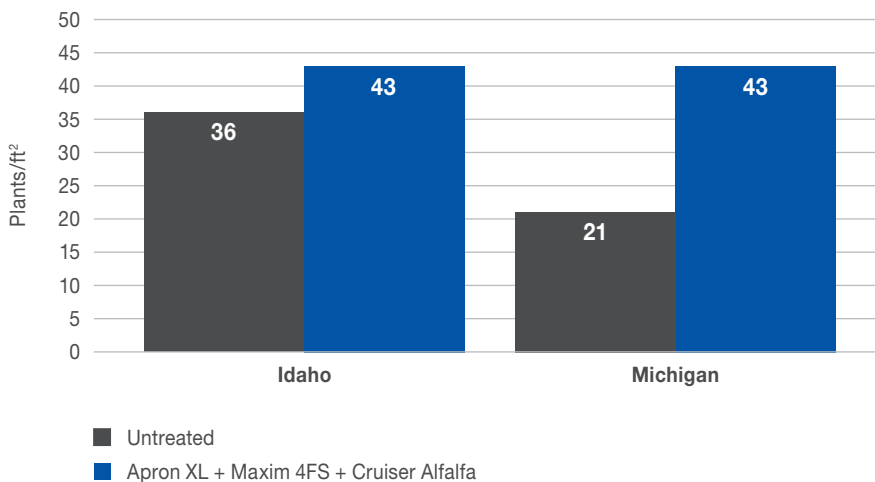
Container Sizing Information

- » **Cruiser 5FS Alfalfa:** 1 gallon
- » **Apron XL:** 1 gallon
- » **Maxim 4FS:** 1 quart

Restrictions

Do not use a Cruiser rate that will result in more than 0.022 lb thiamethoxam per acre (10 grams a.i./A) per season.

Alfalfa Emergence: Untreated vs. CruiserMaxx Alfalfa



Rates: Apron XL 0.311 fl oz/cwt + Maxim 4FS 0.08 fl oz/cwt + Cruiser Alfalfa 0.001 mg a.i./seed. 2010 results. University of Idaho trial rating taken 11 days after planting. Michigan trial rating taken 8 days after planting.

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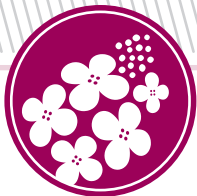


CANOLA

CANOLA

The demand for canola for cooking and fuel has steadily increased over the past few decades, making it important for growers to maximize their canola acres by producing a high-quality, high-yielding crop.

For canola growers, Syngenta offers Helix Xtra[®] with Vibrance[®] seed treatment insecticide/fungicide, to protect vulnerable canola plants longer than other seed treatments. The combined offer provides improved crop emergence, better stand establishment, improved RootingPower and enhanced crop vigor to deliver maximum genetic potential throughout the growing season.



CANOLA
Helix Vibrance

See more at
[syngenta-us.com](https://www.syngenta-us.com)

HELIX® VIBRANCE® insecticide/fungicide seed treatment, an on-seed treatment of separately registered products, provides broad-spectrum protection against seedborne, soilborne and airborne diseases leading to a stronger, more uniform stand to help canola crops reach maximum yield potential.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser® seed treatment insecticide)
- // DIFENOCONAZOLE
(Dividend® seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // SEDAXANE
(Vibrance seed-applied fungicide)

Advantages

- » Four fungicides and one insecticide combine for strong performance against canola diseases and insects, including superior *Rhizoctonia* activity
- » Stronger, more uniform stand to help crops reach maximum yield potential
- » Fast, even emergence for more even crop canopy
- » Quick-acting, long-lasting flea beetle protection
- » Powerful roots ensure better use of soil nutrients and improve stress tolerance
- » Outstanding systemicity and soil mobility provide long-lasting crop protection for consistent yields
- » Multiple modes of action fit well with resistance management programs
- » Broad-spectrum protection from seedborne, soilborne and airborne diseases to keep canola plants healthy in a wide range of environmental conditions



Insect Protection

- » Aphids
- » Flea beetles
- » Seedcorn maggot
- » White grubs
- » Wireworms

Disease Protection

- » *Alternaria*
- » *Pythium*
- » *Fusarium*
- » *Rhizoctonia*
- » *Leptosphaeria maculans*
(Seedborne blackleg)

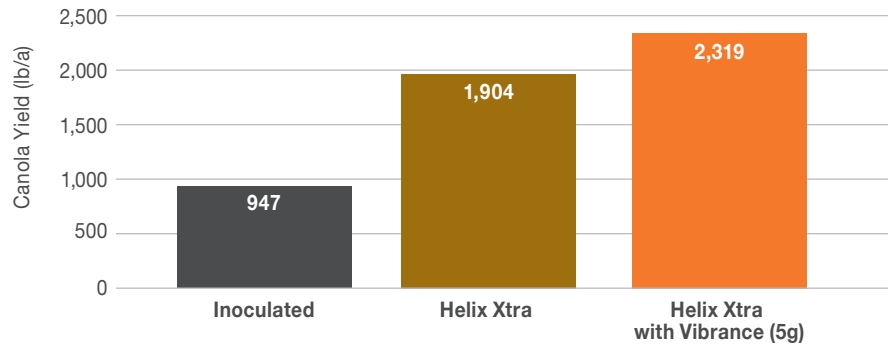
Application Rate

- » 23 fl oz/100 lbs of seed

Container Sizing Information

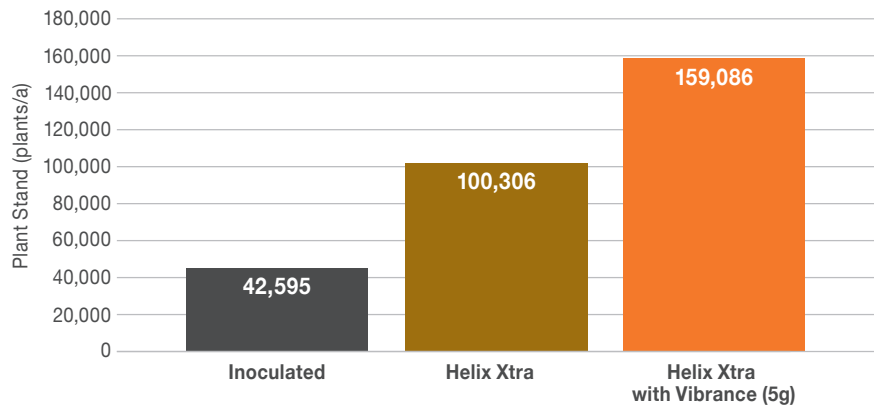
- » 30 gallons

Helix Xtra with Vibrance Improves Yield in *Rhizoctonia*-infected Plants



Helix Xtra with Vibrance improves yield in *Rhizoctonia*-infected plants by 415 pounds per acre over Helix Xtra alone.

Vibrance Increases Plant Stand in *Rhizoctonia*-infected Crops



Vibrance increases plant stand in *Rhizoctonia*-infected crops by nearly 59,000 plants per acre over Helix Xtra alone.

Average of 5 trials conducted in North Dakota in 2010. ($\alpha = .05$).
All trials inoculated at planting with *Rhizoctonia solani* AG 2-1 isolate mixtures.

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CORN

CORN

Since the mid-1990s when the first modern corn seed treatment fungicides hit the market, followed by the first corn seed treatment insecticides in the early 2000s, the corn seed treatment market has evolved very quickly. Syngenta has been at the forefront of that evolution. Following the launch of Maxim® XL and Apron XL® seed-applied fungicides in the 1990s, Syngenta entered the insecticide market with the launch of Cruiser® seed treatment insecticide in 2003. Cruiser was sold in combination with Maxim XL and Apron XL fungicides and later with Dynasty®, an advanced strobilurin fungicide, as Cruiser Extreme 250 insecticide/fungicide, an on-seed application of separately registered products.

In 2010 Syngenta received registration for Maxim Quattro, a four-way fungicide containing the active ingredients found in Maxim 4FS (fludioxonil), Apron XL (mefenoxam) and Dynasty (azoxystrobin), plus an active ingredient never before registered as a seed treatment for corn: thiabendazole. Simultaneously, the brand name for the insecticide/fungicide combination of separate products changed to CruiserMaxx® Corn 250.

In 2010 Syngenta also introduced Avicta®, the first seed treatment nematicide for corn, as a component product within Avicta Complete Corn nematicide/insecticide/fungicide seed treatment, to protect against increasing corn nematode populations.

In 2013 Syngenta received registration for Vibrance® fungicide seed treatment. Vibrance is the first active ingredient developed specifically for use as a seed treatment. Vibrance is available in combination with Avicta Complete Corn or CruiserMaxx Corn, for superior protection against *Rhizoctonia* and RootingPower™ benefits.

Today nearly 100 percent of corn planted in the United States is commercially treated with an insecticide and fungicide seed treatment.

In 2014, 40 percent of corn was treated with a nematicide seed treatment, and that number is expected to continue to rise.

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CORN

Avicta Complete Corn with Vibrance

See more at
[syngenta-us.com](https://www.syngenta-us.com)

AVICTA® COMPLETE CORN WITH VIBRANCE® nematicide/insecticide/fungicide seed treatment offers triple protection against nematodes, insects and diseases.

Avicta Complete Corn with Vibrance is available in three different options that contain varying levels of the insecticide component: Avicta Complete Corn 250 (0.25 mg a.i./seed of thiamethoxam), Avicta Complete Corn 500 (0.50 mg a.i./seed of thiamethoxam) and Avicta Complete Corn 1250 (1.25 mg a.i./seed of thiamethoxam). Avicta Complete Corn 1250 is an application of Avicta Complete Corn 250 or Avicta Complete Corn 500 with sufficient Cruiser 5FS to deliver 1.25 mg a.i./seed of thiamethoxam.

Advantages

- » Market-leading seed treatment with triple protection against nematodes, insects and diseases for superior early-season pest protection
- » Vibrance brings superior systemic performance against *Rhizoctonia* and enhanced root health
- » Avicta kills nematodes and works instantly, offering growers a true nematicide
- » Protects the critical developing root system, which improves the plant's ability to uptake moisture and nutrients, leading to improved stress management
- » Protects seed investment and the value of the traits and genetics by shielding the plant when it is most vulnerable
- » Increases plant stand, uniformity and vigor, and improves yield potential
- » Most complete fungicide option on the market, with five unique modes of action and increased activity and systemic performance against *Pythium*, *Rhizoctonia* and *Fusarium*
- » Proven to be consistent across all environmental conditions, including various temperatures, moisture levels and soil pH levels

Avicta Complete Corn 250 and Avicta Complete Corn 500 are Restricted Use Pesticides.





ACTIVE INGREDIENTS

- // ABAMECTIN
(Avicta seed treatment nematicide)
- // THIAMETHOXAM
(Cruiser® seed treatment insecticide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // THIABENDAZOLE
- // SEDAXANE (Vibrance seed-applied fungicide)

Nematode Protection

- » Dagger
- » Lance
- » Lesion
- » Needle
- » Ring
- » Root-knot
- » Spiral
- » Sting
- » Stubby-root
- » Stunt

Insect Protection

- » Billbug**
- » Black cutworm
- » Chinch bug
- » Corn flea beetle
- » Corn leaf aphid
- » Corn rootworm**
- » Grape colaspis
- » Seedcorn beetle
- » Seedcorn maggot
- » Southern corn leaf beetle
- » Southern green stinkbug
- » Sugarcane beetle
- » Thrips
- » White grub*
- » Wireworm

*Including Japanese beetle larvae, European Chafer larvae, true white grub, annual white grub and May/June beetle larvae.

**Requires the higher application rate of Cruiser (1.25 mg a.i./seed). Corn rootworm protection includes Mexican, Northern, Southern and Western species.

Seedborne Disease Protection

- » *Fusarium*
- » *Cladosporium*
- » *Helminthosporium*
- » *Diplodia (Stenocarpella)*
- » *Aspergillus*
- » *Penicillium*
- » *Sporisorium (Sphacelotheca)*
- » *Mucor*
- » *Rhizopus*

Soilborne Disease Protection

- » *Pythium*
- » *Fusarium*
 - *Fusarium graminearum*
 - *Fusarium verticillioides*
- » *Rhizoctonia*
- » *Colletotrichum*
- » *Diplodia (Stenocarpella)*
- » *Macrophomina*
- » *Penicillium*
- » *Sporisorium (Sphacelotheca)*



Application Rate*

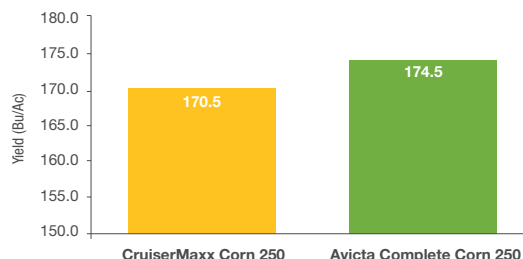
- » Avicta Complete Corn 250:
Apply at a rate to achieve:
 - 0.534 mg a.i./seed (0.25 mg a.i./seed of thiamethoxam)
 - Vibrance: 0.0125 mg a.i./seed
- » Avicta Complete Corn 500:
Apply Avicta Complete Corn 250 in combination with sufficient Cruiser 5FS to deliver 0.50 mg a.i./seed of insecticide (0.50 mg a.i./seed of thiamethoxam for enhanced insect protection)
 - Vibrance: 0.0125 mg a.i./seed
- » Avicta Complete Corn 1250:
Apply Avicta Complete Corn 250 or Avicta Complete Corn 500 in combination with sufficient Cruiser 5FS to deliver 1.25 mg a.i./seed of insecticide (1.25 mg a.i./seed of thiamethoxam for added insect protection against corn rootworm and billbug, and is a key component in an effective integrated corn rootworm management program)
 - Vibrance: 0.0125 mg a.i./seed

**For use by commercial seed companies only – not available for retail treatment.*

Container Sizing Information

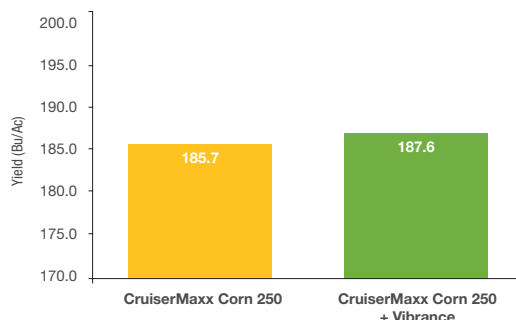
- » Avicta Complete Corn 250: 15 gallon, 265 gallon
- » Cruiser 5FS: 15 gallon, 110 gallon, 265 gallon
- » Vibrance: 4 x 1 quart, 15 gallon

CruiserMaxx Corn 250 vs. Avicta Complete Corn with Vibrance
42 Trials Across 3 Years



In 42 trials across three years, Avicta Complete Corn 250 demonstrated a 4.0 bu/acre advantage over CruiserMaxx® Corn 250.

CruiserMaxx Corn 250 vs. CruiserMaxx Corn 250 with Vibrance
84 Trials Across 4 Years
(low disease pressure)



*In 84 non-inoculated comparisons (**lower disease pressure**), the addition of Vibrance showed on average nearly 2 bu/acre improvement in yield.*

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CORN CruiserMaxx Vibrance Corn

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® VIBRANCE® CORN insecticide/fungicide seed treatment protects against early-season insects and diseases and offers enhanced root health.

CruiserMaxx Vibrance Corn is a combination of Cruiser® 5FS seed treatment insecticide, Maxim® Quattro seed-applied fungicide and Vibrance® seed-applied fungicide. It is available in three different versions that contain varying levels of the insecticide component: CruiserMaxx Corn 250 (0.25 mg a.i./seed of thiamethoxam), CruiserMaxx Corn 500 (0.50 mg a.i./seed of thiamethoxam) and CruiserMaxx Corn 1250 (1.25 mg a.i./seed of thiamethoxam).

Advantages

- » Offers broad-spectrum protection against corn seedborne and soilborne diseases
- » Provides superior *Rhizoctonia* protection
- » Improves the plant's ability to uptake water and nutrients and manage stress, for enhanced root health
- » Protects seedlings from a variety of early-season insects, such as wireworm, seedcorn maggot and chinch bug
- » Helps increase plant stand, uniformity and vigor, and protects yield potential
- » Produces stronger, healthier plants
- » CruiserMaxx Corn 500 provides an increased rate of insecticide (0.50 mg a.i./seed of thiamethoxam) compared to CruiserMaxx Corn 250 (0.25 mg a.i./seed of thiamethoxam) for enhanced insect protection
- » CruiserMaxx Corn 1250 offers the highest available rate of insecticide (1.25 mg a.i./seed of thiamethoxam) for added insect protection against corn rootworm and billbug, and is a key component in an effective integrated corn rootworm management program



ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser 5FS seed treatment insecticide)
- // FLUDIOXONIL
(Maxim 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // THIABENDAZOLE
- // SEDAXANE (Vibrance seed-applied fungicide)

Container Sizing Information

- » Cruiser 5FS: 15 gallon, 110 gallon and 265 gallon
- » Maxim Quattro: 15 gallon, 30 gallon, 110 gallon, 265 gallon
- » Vibrance: 4 x 1 quart, 15 gallon

Insect Protection

- » Billbug**
- » Black cutworm
- » Chinch bug
- » Corn flea beetle
- » Corn leaf aphid
- » Corn rootworm**
- » Grape colaspis
- » Seedcorn beetle
- » Seedcorn maggot
- » Southern corn leaf beetle
- » Southern green stinkbug
- » Sugarcane beetle
- » Thrips
- » White grub*
- » Wireworm

**Including Japanese beetle larvae, European Chafer larvae, true white grub, annual white grub and May/June beetle larvae.*

***Requires the higher application rate of Cruiser (1.25 mg a.i./seed). Corn rootworm protection includes Mexican, Northern, Southern and Western species.*

Seedborne Disease Protection

- » *Fusarium*
- » *Cladosporium*
- » *Helminthosporium*
- » *Diplodia (Stenocarpella)*
- » *Aspergillus*
- » *Penicillium*
- » *Sporisorium (Sphacelotheca)*
- » *Mucor*
- » *Rhizopus*

Soilborne Disease Protection

- » *Pythium*
- » *Fusarium*
 - *Fusarium graminearum*
 - *Fusarium verticillioides*
- » *Rhizoctonia*
- » *Colletotrichum*
- » *Diplodia (Stenocarpella)*
- » *Macrophomina*
- » *Penicillium*
- » *Sporisorium (Sphacelotheca)*

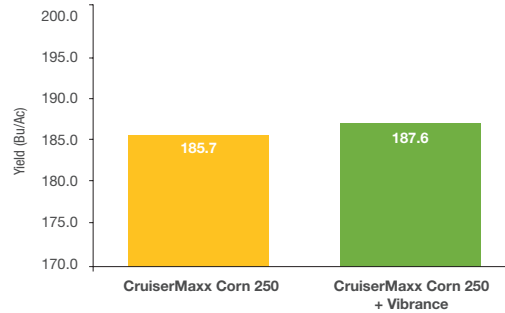


Application Rate*

- » CruiserMaxx Corn 250:
 - Cruiser 5FS: 0.25 mg a.i./seed
 - Maxim Quattro: 0.064 mg a.i./seed
 - Vibrance: 0.0125 mg a.i./seed
- » CruiserMaxx Corn 500:
 - Cruiser 5FS: 0.50 mg a.i./seed
 - Maxim Quattro: 0.064 mg a.i./seed
 - Vibrance: 0.0125 mg a.i./seed
- » CruiserMaxx Corn 1250:
 - Cruiser 5FS: 1.25 mg a.i./seed
 - Maxim Quattro: 0.064 mg a.i./seed
 - Vibrance: 0.0125 mg a.i./seed

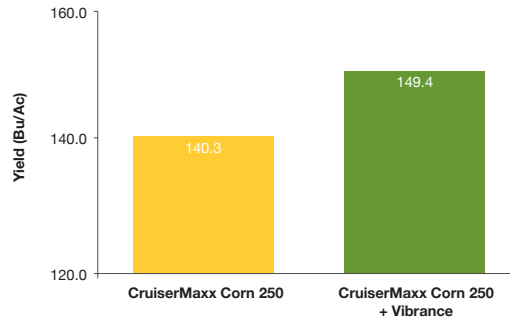
*For use by commercial seed companies only – not available for retail treatment.

CruiserMaxx Corn 250 vs. CruiserMaxx Corn 250 with Vibrance
84 Trials Across 4 Years
(low disease pressure)



*In 84 non-inoculated comparisons (**low disease pressure**), the addition of Vibrance showed on average nearly 2 bu/acre improvement in yield.*

CruiserMaxx Corn 250 vs. CruiserMaxx Corn 250 with Vibrance
7 Trials Across 3 Years
(high disease pressure)



*In seven *Rhizoctonia* inoculated locations (**high disease pressure**), the addition of Vibrance showed more than a 9 bu/acre increase.*

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CORN Fortenza

See more at
[syngenta-us.com](https://www.syngenta-us.com)

FORTENZA[®] insecticide seed treatment serves at the front line to guard corn plants against insect damage and delivers long-lasting protection. Fortenza will protect emerging corn plants against insect damage from day one, leading to vigorous crop establishment and increased stand, which will help maximize the return and genetic potential on a grower's seed investment.

ACTIVE INGREDIENTS

// CYANTRANILIPROLE

Advantages

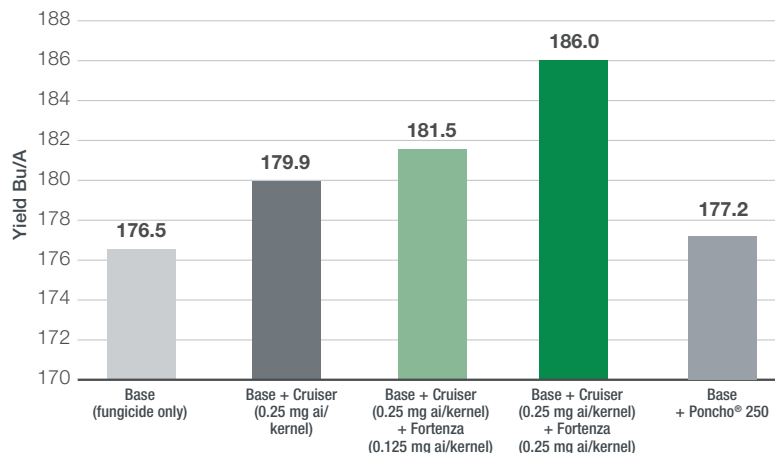
- » Protection against above- and below-ground insects including black cutworm, fall armyworm, white grub, seedcorn maggot and wireworm
- » Compatible with Cruiser[®]-containing brands for protection against early-season insects and disease
- » Promotes vigorous crop establishment and increased stand thus maximizing return on seed investment
- » Stimulates insect protection through strong root uptake and efficient movement within the plant from day one



Insect Protection

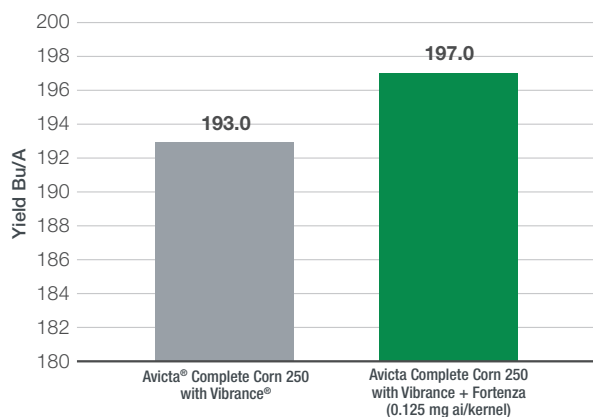
- » Black cutworm
- » Fall armyworm
- » Seedcorn maggot
- » White grub
- » Wireworm

Yield performance of Fortenza applied in combination with Cruiser 2014-2015 Corn/Corn Rotation



Source: Syngenta and third party trials in 31 locations across Nebraska, Illinois and Iowa, 2014-2015. Base fungicide package: Maxim Quattro® (2014); Maxim Quattro + Vibrance (2015).

Yield performance of Fortenza applied in combination with Avicta Complete Corn 2015 Corn/Corn Rotation



Source: Syngenta and 3rd party trials. n=22

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CORN Vibrance

See more at
[syngenta-us.com](https://www.syngenta-us.com)

VIBRANCE[®] fungicide seed treatment protects corn seeds and seedlings against *Rhizoctonia* for stronger, healthier roots and improved crop performance. Vibrance is available with Avicta[®] Complete Corn nematicide/insecticide/fungicide and CruiserMaxx[®] Corn insecticide/fungicide seed treatments.

ACTIVE INGREDIENTS

// SEDAXANE

Advantages

- » Brings *Rhizoctonia* protection to prevent damping off and reduced emergence
- » Enhances root health by creating a stronger root system and improving the plant's ability to absorb water, intake nutrients and better manage stress
- » Protects against early-season *Rhizoctonia* root damage that often leads to reduced early root mass growth potential. Once potential is lost, it may never be recovered.
- » Helps increase plant stand and vigor
- » Contains active ingredient sedaxane, the first active ingredient from Syngenta developed specifically as a seed treatment
- » Protects seed investment by defending the plant when it is most vulnerable
- » Conveniently delivered on the seed; the crop is already protected at planting
- » Proven to increase yield in both high and low disease pressure environments

Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status. Avicta Complete Corn 250 and Avicta Complete Corn 500 are Restricted Use Pesticides.



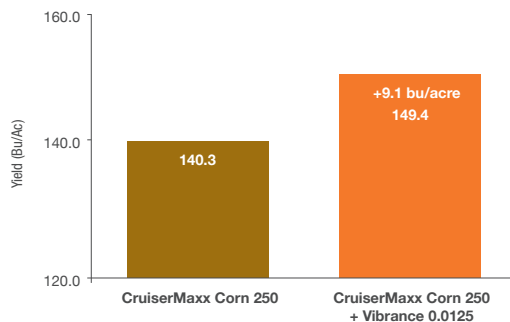
syngenta[®]



Soilborne Disease Protection

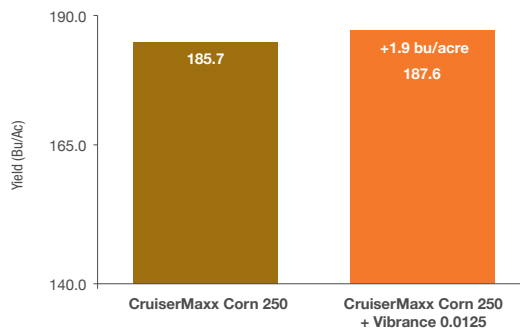
» *Rhizoctonia*

CruiserMaxx Corn 250 vs. CruiserMaxx Corn 250 with Vibrance
7 Trials Across 3 Years
(high disease pressure)



*In seven **Rhizoctonia inoculated** locations (**high disease pressure**), the addition of Vibrance showed more than a 9 bu/acre increase.*

CruiserMaxx Corn 250 vs. CruiserMaxx Corn 250 with Vibrance
84 Trials Across 4 Years
(low disease pressure)



*In 84 comparisons in **lower disease pressure**, the addition of Vibrance showed on average nearly 2 bu/acre improvement in yield.*

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COTTON

COTTON

Syngenta is deeply rooted in the cotton seed treatment industry. With a lineup that includes a powerful nematicide and insecticide, as well as an impressive selection of fungicides, Syngenta has one of the broadest portfolios of cotton seed treatments in the industry.

Avicta® Elite Cotton Plus with Vibrance® nematicide/insecticide/fungicide seed treatment is the latest addition to the portfolio and combines seven active ingredients that will deliver extended protection against a broad spectrum of seedborne and soilborne diseases, plus dual-action control of early-season cotton insects and nematodes.



COTTON

Avicta Elite Cotton Plus with Vibrance

See more at
[syngenta-us.com](https://www.syngenta-us.com)

AVICTA® ELITE COTTON PLUS WITH VIBRANCE® nematicide/insecticide/fungicide seed treatment is a combination of separate registered products that will supply cotton growers with top-of-the-line defense against early-season diseases, in addition to stellar protection against insects and nematodes, to help achieve optimized root and plant health and consistent yield stability from year to year.

ACTIVE INGREDIENTS

- // ABAMECTIN/
THIAMETHOXAM
(Avicta Duo seed-applied
nematicide/insecticide)
- // IMIDACLOPRID
(Gaucho® Grande seed-
applied insecticide)
- // AZOXYSTROBIN /
MEFENOXAM/
FLUDIOXONIL
(Dynasty® CST seed-
applied fungicide)
- // SEDAXANE
(Vibrance seed-
applied fungicide)

Advantages

- » Superior *Rhizoctonia* protection
- » Broad-spectrum control of seed, soil and foliar chewing and sucking insects including tobacco thrips (limited control), Western flower thrips, cotton aphid and cotton fleahoppers (suppression)
- » New mode of action with ideal systemic and soil mobility
- » Long-lasting protection of entire root system under wide range of environmental conditions
- » Low use rate and excellent seed safety

Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status. Avicta Duo Cotton and Avicta DuoCOT 202 are Restricted Use Pesticides.



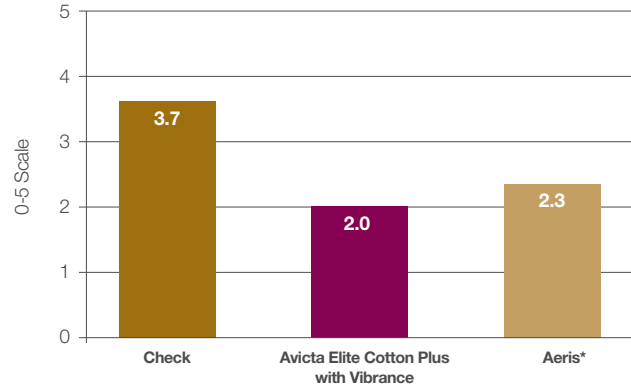
Insect Protection

- » Cotton aphids
- » Cotton fleahoppers (suppression)
- » Western flower thrips
- » Tobacco thrips (limited control)

Disease Protection

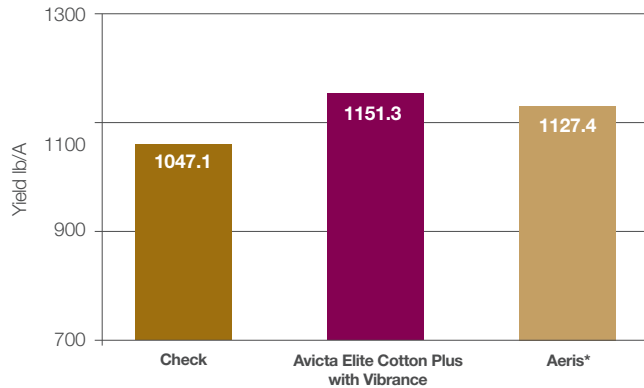
- » Seedborne and soilborne fungi causing decay, damping-off, and seedling blight
- » Seedling damping-off
- » *Rhizoctonia solani*
- » *Pythium* spp.
- » *Fusarium* spp.

Thrips Reduction Using Avicta Elite Cotton Plus with Vibrance across 17 Locations



* Includes metalaxyl, ipconazole, myclobutanil and Trilex Advanced

Significant Yield Increase (+104.2 lbs/acre) with Avicta Elite Cotton Plus with Vibrance across 22 Locations



* Includes metalaxyl, ipconazole, myclobutanil and Trilex Advanced

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COTTON
Bion

See more at
[syngenta-us.com](https://www.syngenta-us.com)

BION® fungicide seed treatment protects cotton against certain early-season seedborne and soilborne diseases and early-season nematodes.

ACTIVE INGREDIENT

// ACIBENZOLAR-S-METHYL

Advantages

- » Provides disease protection against early-season seedborne and soilborne diseases including black root rot and pre- and post-emergence damping-off
- » Provides suppression of early-season nematodes
- » Compatible with Avicta® Duo Cotton nematicide/insecticide and Dynasty CST® fungicide for additional protection against *T. basicola* and *Meloidogyne incognita* interactions

Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status. Avicta Duo Cotton and Avicta DuoCOT 202 are Restricted Use Pesticides.



syngenta®



Nematode Protection

- » Suppression of early-season nematodes

Disease Protection

- » *Thielaviopsis basicola*
- » *Fusarium* (suppression)
- » *Fusarium wilt*
- » Early-season damping-off symptoms

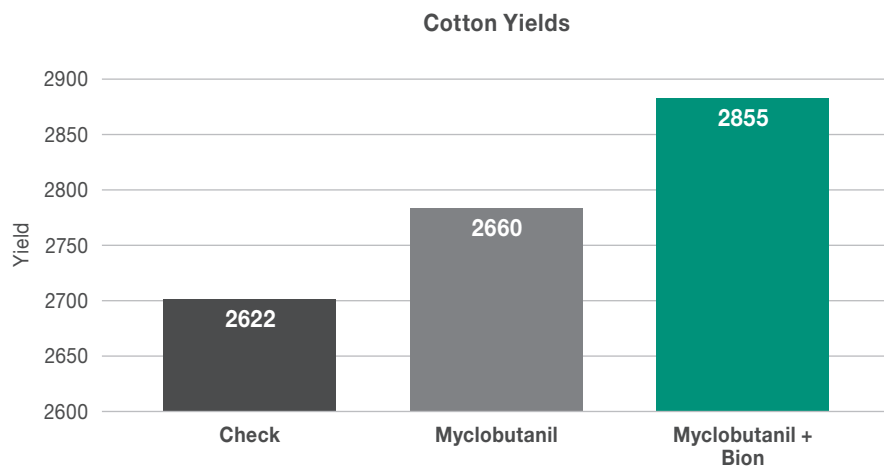
Application Rate

- » 0.0003 to 0.0009 mg* a.i./seed

* mg per seed rate based on 5,000 seeds per pound

Container Sizing Information

- » 1 quart



Fusarium oxysporum – Natural Conditions
Kathy Lawrence – AL 2010



COTTON Cruiser

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® seed treatment insecticide provides broad-spectrum protection against some of the most destructive early-season insect pests in cotton.

ACTIVE INGREDIENT

// THIAMETHOXAM

Insect Protection

- » Tobacco thrips
(limited protection)
- » Western flower thrips
- » Cotton aphid
- » Cotton fleahoppers
(suppression)

Application Rate

- » 0.375 mg a.i./seed

Container Sizing Information

- » 15 gallon

Advantages

- » Early-season suppression against early-season insects, through limited protection of tobacco thrips, helps establish vigorous stands which can ultimately lead to higher yield potential. If in a tobacco thrips environment, it is recommended to use Avicta® Complete Cotton plus Vibrance® instead of applying Cruiser alone
- » Easy to use and convenient
- » Effective at low rates, reducing stress on young seedlings
- » Works in variable weather conditions and requires less moisture to activate than other products, allowing the active ingredient to move quickly into roots and emerging seedlings to provide protection
- » Compatible with Dynasty CST® seed-delivered fungicide and available as a component of Avicta® Complete Cotton nematocide/insecticide/fungicide seed treatment, a combination of separately registered products
- » Excellent seed safety margin
- » Via the Cruiser Vigor Effect, Cruiser helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields
- » For tobacco thrips resistance management, a foliar insecticide application with a different mode of action is highly recommended

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COTTON

Dynasty CST

See more at
[syngenta-us.com](https://www.syngenta-us.com)

DYNASTY CST® seed-applied fungicide provides cotton growers with protection against damaging seedborne and soilborne diseases such as pre- and post-emergent *Rhizoctonia*, *Fusarium* and *Pythium* from day one.

ACTIVE INGREDIENTS

- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)

Advantages

- » Three proven active ingredients to provide both contact and systemic protection against harmful diseases
- » Helps promote fast-emerging plants, vigorous early-season plant growth and consistent stand establishment
- » Provides long-lasting, consistent activity against a broad spectrum of seedborne and soilborne diseases
- » Offers convenient on-the-seed protection against all primary early-season cotton diseases
- » The most effective seed treatment against post-emergent *Rhizoctonia*
- » Excellent crop safety
- » Compatible with Cruiser® seed treatment insecticide for effective insect and disease protection
- » Offered as the fungicide component in Avicta® Complete Cotton nematocide/insecticide/fungicide seed treatment for protection against nematodes, insects and diseases



Disease Protection

- » Pre- and post-emergent
Rhizoctonia
- » *Fusarium*
- » *Pythium*
- » *Phytophthora*
- » *Helminthosporium*
- » *Aspergillus*
- » *Penicillium*

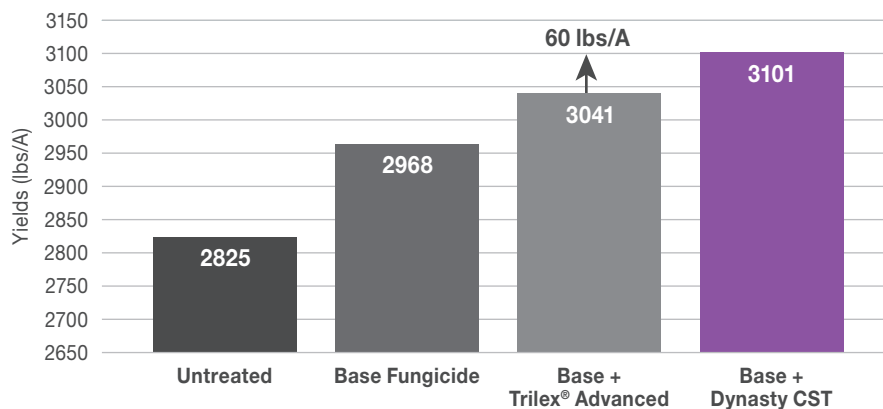
Application Rate

- » 3.1 to 3.95 fl oz/100 lbs seed

Container Sizing Information

- » 15 gallon

Effect of Selected Seed Treatments on Cotton
Seedling Disease in North Alabama, 2006



North Alabama – Belle Mina
Decatur silt loam
Hatchett, Lawrence and Burmester – F&N Report – 2006

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PEANUTS

The foundation of the Syngenta peanut seed treatment portfolio is Dynasty® PD seed treatment fungicide. Introduced in 2004, Dynasty PD was the first seed-delivered fungicide for peanuts and is currently the only seed-delivered fungicide available to peanut growers. Today every peanut in the United States is required to be treated with a seed treatment fungicide and currently 100 percent of the market is treated with Dynasty PD.

With the registration of Cruiser® PD seed treatment insecticide in 2011, the Syngenta portfolio expanded to include CruiserMaxx® Peanuts, the first insecticide/fungicide seed treatment combination for peanuts. Dynasty PD and Cruiser PD, CruiserMaxx Peanuts brings another option for growers in their fight against peanut pests.



PEANUTS

CruiserMaxx Peanuts

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® PEANUTS insecticide/fungicide seed treatment provides protection against a variety of insects and a broad spectrum of seedborne and soilborne diseases. The seed is protected from the moment it is planted – increasing plant stand, uniformity, vigor and health for improved yield potential.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser® 5FS seed treatment insecticide)
- // AZOXYSTROBIN,
FLUDIOXONIL,
MEFENOXAM
(Dynasty® PD seed-applied fungicide)

Advantages

- » Systemic insecticide moves throughout the plant to provide protection against chewing and sucking insects
- » Protects peanuts against a broad spectrum of seedborne and soilborne diseases
- » Increases yield potential even under low insect pressure
- » Via the Cruiser Vigor Effect, CruiserMaxx Peanuts helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Tobacco thrips (limited protection)
- » Aphids
- » Wireworm
- » White grubs
- » Threecornered alfalfa hopper (suppression)

Disease Protection

- » *Pythium spp.*
- » *Rhizoctonia solani*
- » Seedborne *Cylindrocladium* black rot (CBR)
- » *Aspergillus* crown rot (suppression)
- » White mold (suppression)

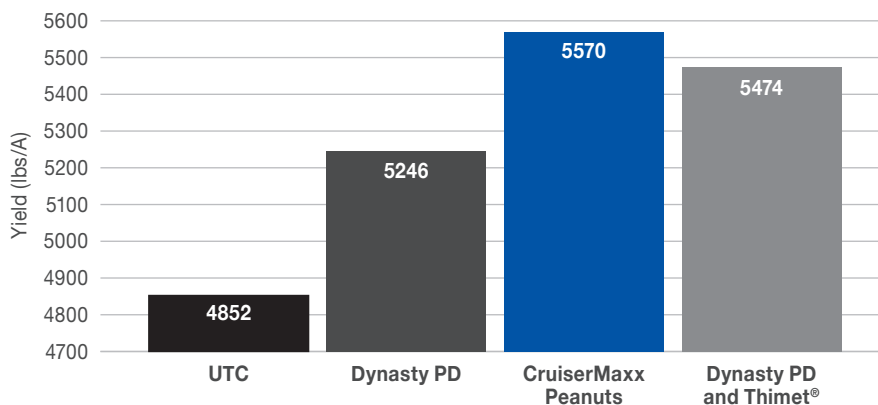
Application Rate

- » 0.236 – 0.315 mg a.i./seed

Container Sizing Information

- » 50 pounds

Efficacy of CruiserMaxx Peanuts (2010-2012)



n=15 trials



PEANUTS

Dynasty PD

See more at
[syngenta-us.com](https://www.syngenta-us.com)

DYNASTY® PD seed-applied fungicide combines three proven fungicides in one convenient product to protect against a broad spectrum of seedborne and soilborne diseases in peanuts.

ACTIVE INGREDIENTS

- // AZOXYSTROBIN
(Dynasty seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)

Advantages

- » Improves plant vigor and early stand establishment and increases yield potential
- » Combination of contact and systemic protection against a broad spectrum of seedborne and soilborne diseases
- » Convenient in-the-bag protection
- » Excellent seed plantability
- » Works in variable weather conditions
- » Minimal dust-off
- » All three active ingredients in this formulation are registered by the EPA under its “Reduced Risk”¹ program*
- » Excellent crop safety
- » Offers an excellent seed safety profile

¹ A reduced-risk pesticide use is defined as one which “may reasonably be expected to accomplish one or more of the following:” (1) reduces pesticide risks to human health; (2) reduces pesticide risks to non-target organisms; (3) reduces the potential for contamination of valued, environmental resources, or (4) broadens adoption of IPM or makes it more effective.

*Azoxystrobin, fludioxonil and mefenoxam qualify under one or more of these criteria.



Seedborne Disease Protection

- » *Fusarium*
- » *Rhizopus*
- » *Aspergillus niger*
- » *Penicillium*
- » *Cylindrocladium* black rot

Soilborne Disease Protection

- » *Fusarium*
- » *Rhizoctonia*
- » *Pythium*
- » *Phytophthora*
- » *Sclerotium rolfsii*
(white mold suppression)

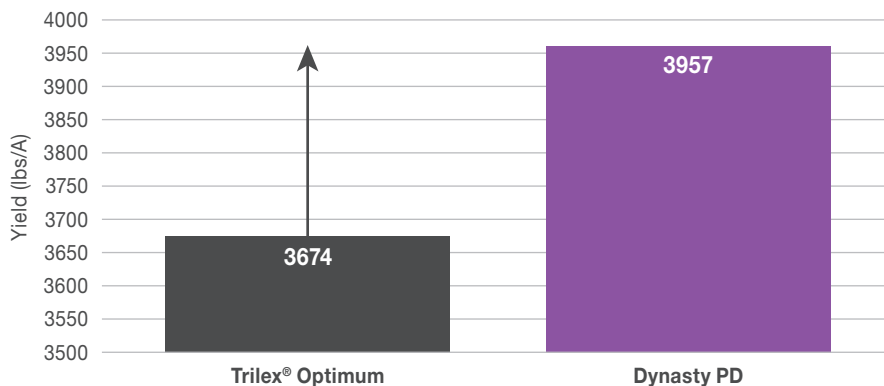
Application Rate

- » 3.0 – 4.0 fl oz/ 100 lbs seed

Container Sizing Information

- » 50 pound
- » 1400 pound

Efficacy of Dynasty PD vs. Trilex Optimum



Dr. Tim Brenneman – University of Georgia; Peanut Variety: Georgia Green
Data presented at the 2007 Southern Division Meeting

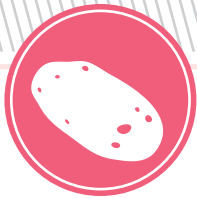


POTATOES

POTATOES

Syngenta is the market leader in potato seed treatments. In 2004 Syngenta introduced Cruiser® 5FS, a liquid seed treatment insecticide for long-lasting, broad-spectrum protection of potato insect pests. The seed treatment insecticide is compatible with Maxim® 4FS, the only liquid seed-applied fungicide registered for use on potatoes, creating a valuable combination of insect and disease protection.

In 2006 Syngenta launched the only all-liquid seed treatment combination for potatoes, CruiserMaxx® Potato insecticide/fungicide seed treatment. CruiserMaxx Potato remains the only all-liquid seed treatment for potatoes and offers thorough coverage of the seed piece resulting in consistent uptake and redistribution of the active ingredient for effective protection against insects and diseases. CruiserMaxx Potato also contains an exclusive drying agent, which helps prevent the spread of disease.



POTATOES

CruiserMaxx Vibrance Potato

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® VIBRANCE® POTATO combines the power of three industry-leading fungicides for *Rhizoctonia*, *Helminthosporium* and *Fusarium* protection. Additionally, Cruiser® seed treatment insecticide provides industry-leading insect protection against key insects and delivers the Cruiser Vigor Effect. This combination helps potato growers enhance germination, increase vigor and improve stand establishment, while improving size and tuber distribution to maximize quality yields.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser 5FS seed treatment insecticide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // DIFENOCONAZOLE
(Dividend® seed-applied fungicide)
- // SEDAXANE
(Vibrance seed-applied fungicide)

Advantages

- » Delivers comprehensive protection against *Helminthosporium*, *Fusarium* and *Rhizoctonia*
- » Protects against key insects, including Colorado potato beetle, aphids, potato leaf hopper and potato psyllid
- » Improves stand establishment and protects young roots and stolons
- » Optimized handling and application characteristics (in all temperatures and treating conditions)
- » Low dust-off without the need for additional polymers or additives

Insect Protection

- » Aphids
- » Colorado potato beetle
- » Flea beetles
- » Leafminers
- » Potato leafhopper
- » Psyllids

Disease Protection

- » *Rhizoctonia solani*
(Black scurf, and stem and stolon canker)
- » *Fusarium* spp. including *fludioxonil*-resistant strains
(Fusarium dry rot)
- » *Helminthosporium solani*
(Silver scurf)

Application Rates

- » 0.5 fl oz/100 lb of seed

Container Sizing Information

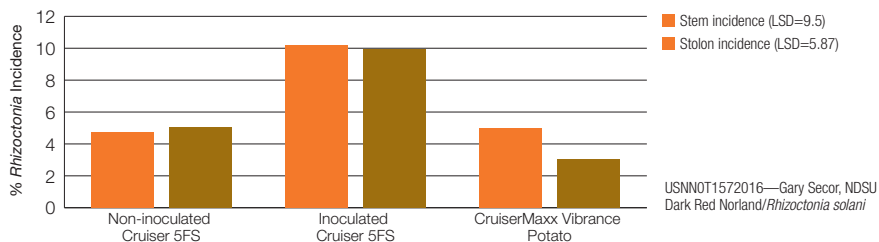
- » 30 gallons

Vibrance RootingPower is demonstrated by root mass and health.

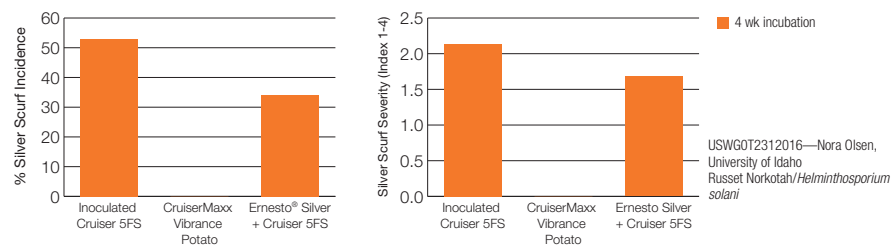


Inoculated with *Rhizoctonia*. Treatments occurred April 25, 2017. Photos taken July 21, 2017. 88 days after application. Variety – Russet Burbanks. Source: Qualls Agricultural Laboratory.

CruiserMaxx Vibrance Potato Reduces *Rhizoctonia* on Stems and Stolons



Silver Scurf Incidence and Severity is Reduced by CruiserMaxx Vibrance Potato



All photos are either the property of Syngenta or are used with permission.

Product performance assumes disease presence.

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POTATOES

CruiserMaxx Potato

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® POTATO insecticide/fungicide combination puts the power of a liquid seed treatment insecticide and fungicide, and the power of an exclusive drying agent into one convenient product.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser® 5FS seed treatment insecticide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)

Advantages

- » Excellent activity against a broad spectrum of insect pests and potato diseases
- » Ease of pumping and handling for cold regions
- » Low viscosity and freezing point
- » Formulation dries quickly
- » Improved suberization and wound healing of seed pieces
- » Provides long-lasting protection against various pests at low use rates



Insect Protection

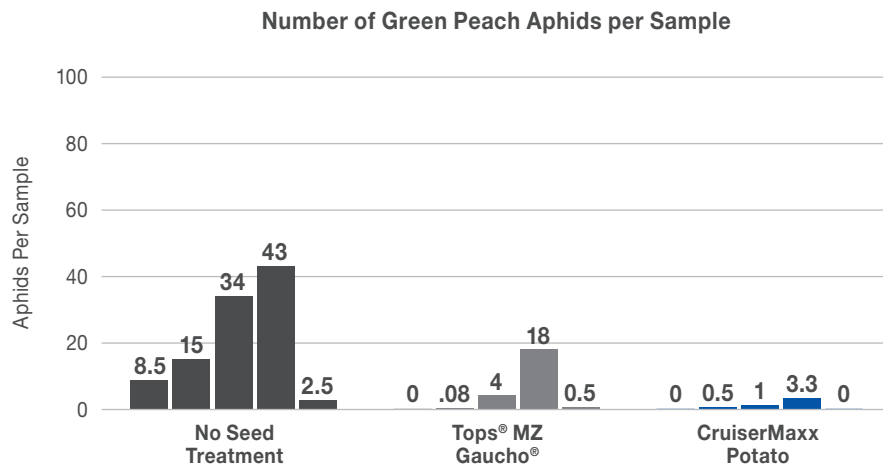
- » Green peach aphids
- » Colorado potato beetle
- » Flea beetle
- » Leafhopper
- » Psyllids

Disease Protection

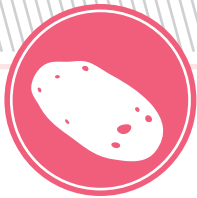
- » *Fusarium* seed decay
- » *Helminthosporium solani*
- » *Rhizoctonia solani*

Container Sizing Information

- » 1 gallon



Washington ST-2004
Data taken at 62, 68, 75 82 and 89 days after planting



POTATOES

CruiserMaxx Potato Extreme

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® POTATO EXTREME seed treatment insecticide/fungicide from Syngenta combines the convenience and uniformity of a liquid seed treatment with the power of an insecticide, two fungicides with different modes of action and an exclusive drying agent.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser® 5FS seed treatment insecticide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // DIFENOCONAZOLE

Advantages

- » Excellent activity against a broad spectrum of insect pests and diseases, including *Fusarium sp.*
- » Formulation dries quickly aiding in wound healing and suberization
- » Low viscosity and freezing point, meaning easier handling in cold weather
- » Protects the entire plant from a variety of early- to mid-season chewing and sucking insects including Colorado potato beetle, certain aphids, potato leafhopper and potato psyllid
- » Provides long-lasting activity against seedborne and soilborne fungal pathogens such as *Rhizoctonia sp.* and *Helminthosporium solani*, which can cause silver scurf, black scurf and cankers
- » Helps combat fungal pathogens like *Fusarium sp.*, the cause of *Fusarium* dry rot, and as a result prevents seed decay



Insect Protection

- » Colorado potato beetle
- » Flea beetles
- » Green peach aphid
- » Leafhoppers
- » Leafminers
- » Psyllids

Disease Protection

- » *Fusarium sp.*
- » *Rhizoctonia sp.*
- » *Helminthosporium solani*

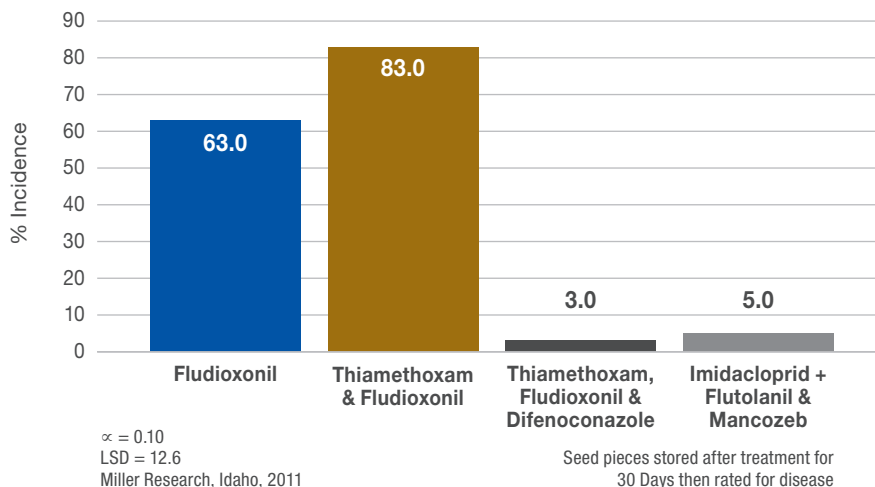
Application Rates

- » 0.31 fl oz/100 lb of seed
- »

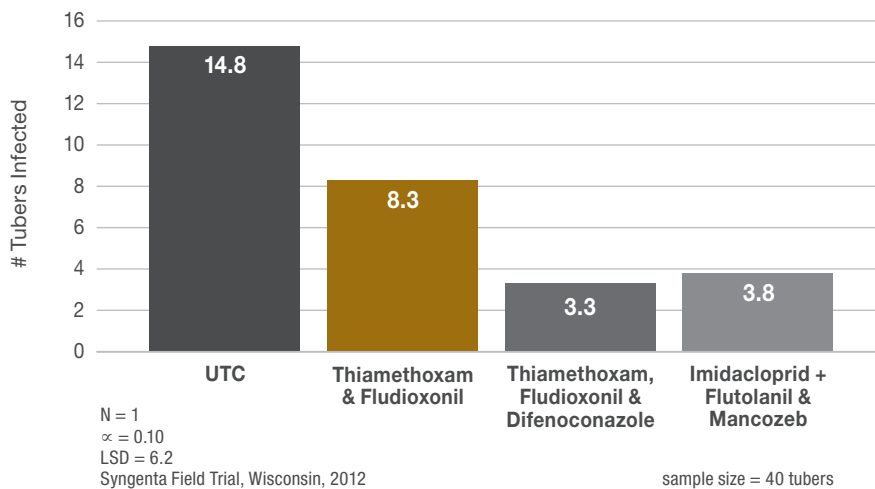
Container Sizing Information

- » 1 gallon

Fusarium Seed Piece Decay (% Incidence)



Fusarium Dry Rot (infected tubers at harvest)





POTATOES

Cruiser 5FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® 5FS seed treatment insecticide is a systemic insecticide that protects potato plants from a broad spectrum of seed, soil and foliar chewing and sucking insects to help get plants off to a healthy, vigorous start.

ACTIVE INGREDIENT

// THIAMETHOXAM

Advantages

- » Excellent activity against a broad spectrum of insect pests, with superior protection against leafhoppers and flea beetles
- » Effective at low rates, reducing stress on young seedlings
- » Protects against target pests with minimal risk to beneficial insects
- » Long residual control
- » Excellent crop safety
- » Works in variable weather conditions
- » Compatible with Maxim® 4FS liquid seed-applied fungicide

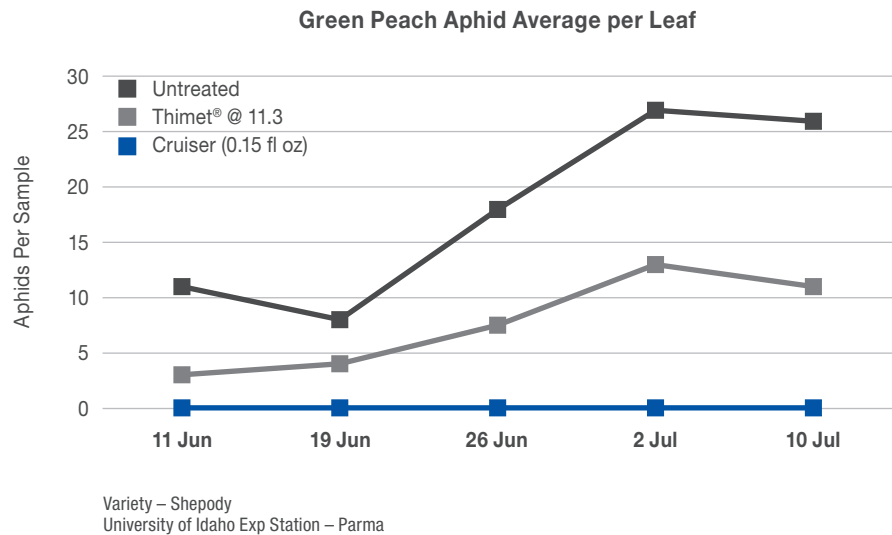


Insect Protection

- » Colorado potato beetle
- » Flea beetle
- » Green peach aphid
- » Leafhopper
- » Leafminers
- » Potato aphids
- » Psyllids
- » Whiteflies
- » Wireworm (seed piece only)

Container Sizing Information

- » 1 gallon





POTATOES
Maxim 4FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MAXIM® 4FS seed-applied fungicide gives potato growers the option of applying a liquid seed treatment for protection against troublesome diseases. Maxim 4FS provides the same proven benefits of Maxim MZ, but in a liquid formulation.

ACTIVE INGREDIENT

// FLUDIOXONIL

Advantages

- » Ensures accurate, uniform coverage of the seed piece
- » Provides long-lasting activity at very low use rates
- » Less material to handle than a dust seed treatment and less product waste
- » No drift during application significantly minimizes worker exposure
- » Compatible with Cruiser® seed treatment insecticide



Disease Protection

- » *Fusarium* seed decay
- » *Helminthosporium solani*
- » *Rhizoctonia solani*

Application Rate

- » 0.08 to 0.16 fl oz/ 100 lbs seed

Container Sizing Information

- » 1 quart

Potato – Cumulative Marketable Yield Summary CWT/A

Location	Variety	Maxim 4FS	Moncoat® MZ	Untreated
S. Central Idaho	Ranger Russets	467	419	423
S. Central Idaho	Russet Burbank	329	344	292
Colorado-SLV	Russet Norkotah	471	442	462
Colorado-SLV	Russet Norkotah	475	438	459
		Avg. = 435.5	Avg. = 410.8	Avg. = 409



POTATOES

Maxim MZ

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MAXIM® MZ seed-applied fungicide is a dust-formulated seed treatment fungicide that provides broad-spectrum disease protection for higher quality potatoes and higher marketable yield potential.

ACTIVE INGREDIENTS

- // FLUDIOXONIL
(Maxim seed-applied fungicide)
- // MANCOZEB

Advantages

- » Unique contact activity allows the product to remain in the rhizosphere, protecting stems, stolons and roots longer than competitive products
- » Provides long-lasting activity at low use rates – active ingredient use per acre is significantly lower than other seed dust treatments
- » Helps increase quality, marketable yield potential by improving emergence and crop stand
- » Reduces infection from seedborne late blight
- » Compatible with insecticides



Disease Protection

- » *Fusarium* dry rot seed decay
- » Seedborne *Helminthosporium solani*
- » Seedborne *Rhizoctonia solani*

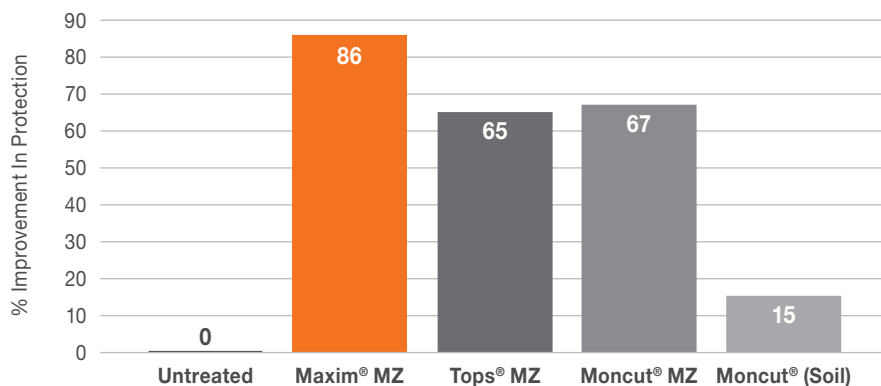
Application Rates

- » 0.5 lb/100 lbs cut seed

Container Sizing Information

- » 50 pound

Black Scurf (*Rhizoctonia*) Protection on Tubers



11 locations
Several varieties



POTATOES
Maxim PSP

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MAXIM® PSP seed-applied fungicide is a premium seed treatment fungicide that offers potato growers a disease protection option without mancozeb.

ACTIVE INGREDIENT

// FLUDIOXONIL

Advantages

- » Contact fungicide with some limited soil movement away from the seed piece
- » Broad-spectrum activity ensures ideal crop emergence
- » Protects against three major disease pathogens
- » Registered by the EPA under its “Reduced Risk”¹ program



Disease Protection

- » *Rhizoctonia solani*
- » *Fusarium dry rot*
- » *Helminthosporium solani*

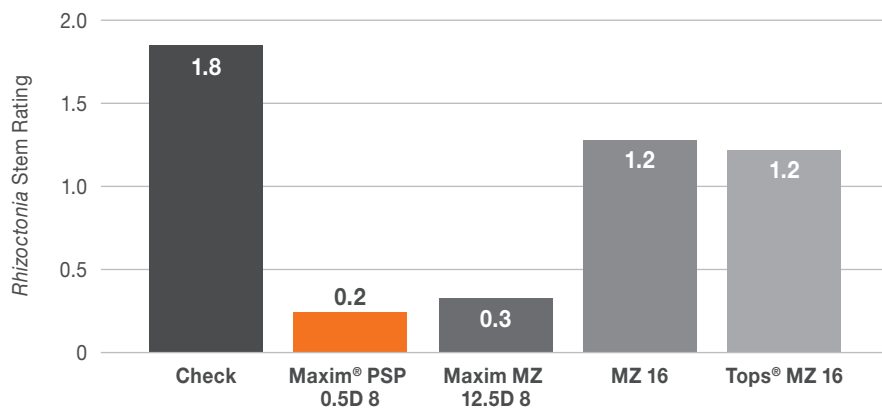
Application Rate

- » 0.5 lb/100 lbs cut seed

Container Sizing Information

- » 50 pound

Rhizoctonia Protection for Potato Seed



University of Maine
Rates: oz Prod./CWT
Rating Scale: 0-5 (0 = None) LSD 0.71

¹ A reduced-risk pesticide use is defined as one which "may reasonably be expected to accomplish one or more of the following:" (1) reduces pesticide risks to human health; (2) reduces pesticide risks to non-target organisms; (3) reduces the potential for contamination of valued, environmental resources, or (4) broadens adoption of IPM or makes it more effective. Maxim PSP qualifies under one or more of these criteria.



RICE

RICE

In 2010 Syngenta introduced CruiserMaxx® Rice, the first and only insecticide/fungicide seed treatment available for rice growers. The successful launch was a game-changer in the dry-seeded rice market, capturing the majority of the market share of seed-applied insecticides. Today, the Syngenta Seedcare fungicide portfolio (Apron XL®, Maxim® 4FS and Dynasty®) is the industry standard for protection against seedborne and soilborne diseases, including *Pythium*, *Phytophthora* and *Fusarium*. CruiserMaxx Rice continues to be a valuable tool for protecting high-value rice seed from damaging diseases and harmful insect pests, including grape colaspis, rice water weevil, chinch bugs and thrips, while increasing plant stands, uniformity and vigor.



RICE
Apron XL

See more at
[syngenta-us.com](https://www.syngenta-us.com)

APRON XL® seed-applied fungicide is a systemic fungicide that is extremely active against *Pythium* species.

ACTIVE INGREDIENT

// MEFENOXAM

Disease Protection

- » *Pythium*
- » *Phytophthora*

Application Rate

- » 0.16 – 0.32 fl oz/100 lbs seed

Container Sizing Information

- » 4 x 1 gallon

Advantages

- » Concentrated formulation
- » Global standard for *Pythium* control

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RICE Dynasty

See more at
[syngenta-us.com](https://www.syngenta-us.com)

DYNASTY[®] seed-applied fungicide is a highly systemic fungicide that offers proven activity against a broad range of seedborne and soilborne diseases in all four classes of fungal pathogens.

ACTIVE INGREDIENT

// AZOXYSTROBIN

Disease Protection

- » Seedborne and soilborne fungi
 - *Rhizoctonia*
 - *Alternaria spp.*
 - *Gaeumannomyces*
 - *Graminis var. graminis*
- » Brown spot
- » Rice blast

Application Rate

- » 0.153 – 1.53 fl oz/100 lbs seed

Container Sizing Information

- » 4 x 1 gallon

Advantages

- » Innovative active ingredient with a unique mode of action
- » Systemic protection
- » Offers an excellent seed safety profile

**Only available as part of Apron XL[®], Maxim[®] 4FS and Dynasty fungicide Rice Products.*

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syngenta[®]



RICE
Maxim 4FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MAXIM[®] 4FS seed-applied fungicide is a contact fungicide that provides long-lasting residual activity against *Fusarium* and *Rhizoctonia* at low use rates.

ACTIVE INGREDIENT

// FLUDIOXONIL

Disease Protection

- » *Fusarium*
- » *Rhizoctonia*
- » *Helminthosporium*
- » *Aspergillus*
- » *Penicillium*

Application rate

- » 0.02 – 0.16 fl oz/100 lbs seed

Container Sizing Information

- » 4 x 1 gallon

Advantages

- » Concentrated formulation
- » Registered by the EPA under its “Reduced Risk”¹ program
- » Offers broad spectrum disease protection

¹ A reduced-risk pesticide use is defined as one which “may reasonably be expected to accomplish one or more of the following:” (1) reduces pesticide risks to human health; (2) reduces pesticide risks to non-target organisms; (3) reduces the potential for contamination of valued, environmental resources, or (4) broadens adoption of IPM or makes it more effective. Maxim 4FS qualifies under one or more of these criteria.

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RICE

CruiserMaxx Rice

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® RICE, the first insecticide/fungicide seed treatment for rice, combines the proven protection of the active ingredient found in Cruiser® 5FS seed treatment insecticide with the active ingredients in Dynasty®, Maxim® 4FS and Apron XL® seed-applied fungicides.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser 5FS seed treatment insecticide)
- // FLUDIOXONIL
(Maxim 4FS seed-applied fungicide)
- // AZOXYSTROBIN
(Dynasty seed-applied fungicide)
- // MEFENOXAM
(Apron XL seed-applied fungicide)

Advantages

- » Offers protection against seedborne and soilborne diseases, including *Pythium*, *Phytophthora* and *Fusarium*
- » Protects against harmful insect pests, including grape colaspis, rice water weevil, chinch bugs and thrips
- » Proven to increase plant stands, uniformity and vigor, and improve yield potential
- » Optimizes seeding rates by protecting every seed to ensure plant establishment
- » Provides excellent activity against a broad spectrum of early-season insect pests
- » Protects against target pests with minimal impact to beneficial insects
- » Increases operational efficiency by reducing early-season foliar applications by protecting seedlings from early-season insects and diseases
- » Provides the widest spectrum of disease protection for rice
- » Via the Cruiser Vigor Effect, CruiserMaxx Rice helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields
- » Only seed treatment shown to reduce the incidence of early-season rice blast



Insect Protection

- » Grape colaspis
- » Rice water weevil
- » Chinch bug
- » Thrips

Disease Protection

- » *Pythium*
- » *Phytophthora*
- » *Fusarium*
- » *Helminthosporium*
- » *Aspergillus*
- » *Penicillium*
- » *Rhizoctonia*
- » *Alternaria spp.*
- » *Gaeumannomyces*
- » *Graminis var. graminis*
- » Seedborne brown spot
- » Seedborne rice blast
- » *Pyricularia grisea* (rice blast)

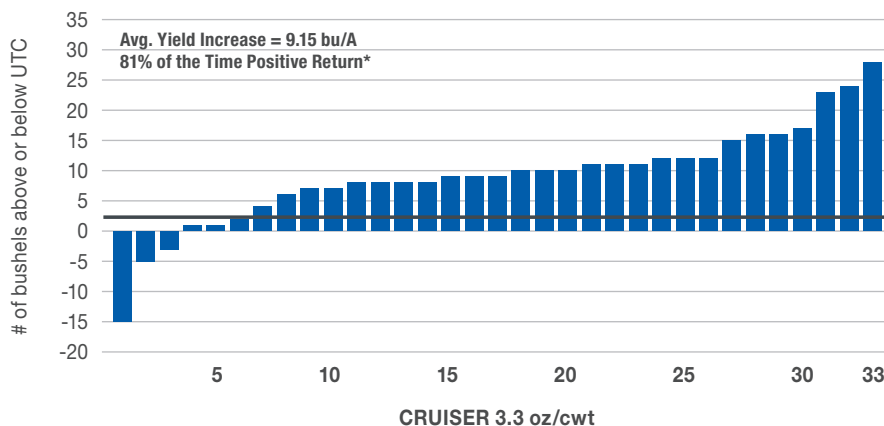
Application Rate

- » 7.0 fl oz/100 lbs seed or
0.0337 mg a.i./seed

Container Sizing Information

- » 15 gallon

2 Years Summary of Yield Increase Above or Below UTC
2008-2009



*Based on \$6.50 bu rice @ 60 lbs/A seeding rate.



SORGHUM

SORGHUM

For more than three decades, Syngenta has used the latest research and development to offer sorghum growers the most advanced technology through its seed treatment portfolio. The first-ever commercial seed treatment, Concep[®], a sorghum seed safener, was brought to market by a Syngenta legacy company in 1979. The third generation product, Concep III herbicide seed safener, continues to be the market leader today.

In 2001 Cruiser[®] seed treatment insecticide was registered for use on sorghum. Cruiser, part of a family of chemicals called neonicotinoids, provides convenient insect protection for sorghum growers.

CruiserMaxx[®] Sorghum insecticide/fungicide seed treatment combines the power of Cruiser[®] insecticide with Maxim[®] 4FS, Apron XL[®] and Dynasty[®] fungicides for early-season disease and insect protection. With CruiserMaxx Sorghum growers receive proven disease protection for a healthier crop with higher yield potential.



SORGHUM

Concep III

See more at
syngenta-us.com

CONCEP® III safener is a herbicide antidote that protects grain and forage sorghum from herbicidal injury. Concep III allows the use of Dual® and Bicep® brand herbicides for pre-emergent grass and broadleaf weed control.

ACTIVE INGREDIENT

// FLUXOFENIM

Application Rates

» 0.64 fl oz/100 lbs seed

Container Sizing Information

» 2 x 1 gallon, 30 gallon

Advantages

- » Unique seed safener for sorghum
- » Protects grain and forage sorghum from herbicide injury
- » Allows the use of Dual and Bicep brand herbicides for pre-emergent grass and broadleaf weed control

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syngenta®



SORGHUM

CruiserMaxx Sorghum

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® SORGHUM insecticide/fungicide seed treatment, an on-seed application of separately registered products, protects sorghum from early-season disease and insects for a healthy growing season and optimal harvest.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser® seed treatment insecticide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)

Advantages

- » Helps enhance plant stand and vigor, and protect yield potential
- » Convenient, in-the-bag, ready to plant protection
- » Via the Cruiser Vigor Effect, CruiserMaxx Sorghum helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields
- » Protects plants against a broad range of seedborne and soilborne seedling diseases



Insect Protection

- » Corn leaf aphid
- » Yellow sugarcane aphid
- » Greenbug
- » Chinch bug
- » Wireworm
- » Sugarcane aphid

Disease Protection

- » *Fusarium*
- » *Pythium*
- » *Peronosclerospora*
(downy mildew)
- » *Rhizoctonia*

Container Sizing Information

- » Cruiser: 15 gallons, 110 gallons and 265 gallons
- » Apron XL: 1 gallon, 30 gallons
- » Maxim 4FS: 1 quart, 1 gallon, 7.5 gallons
- » Dynasty: 1 gallon, 15 gallons

Application Rate

- » Cruiser: 5.1 – 7.6 fl oz/100 lbs seed or 0.062 – 0.093 mg a.i./seed*

*Based on an average of 14,500 sorghum seeds per pound.

- » Apron XL: 0.32 – 1.25 fl oz/100 lbs seed
For systemic downy mildew protection: Apply 0.32 – 0.64 fl oz of Apron XL per 100 lbs seed on cultivars which possess sorghum downy mildew resistance. If cultivars are not resistant to sorghum downy mildew and are grown in areas with a recent history of severe disease, apply 1.28 fl oz of Apron XL per 1000 lbs seed as seed treatment.
- » Maxim 4FS: 0.08 – 0.16 fl oz/100 lbs seed
- » Dynasty: 0.308 – 3.08 fl oz/100 lbs seed



SOYBEANS

SOYBEANS

Seed treatments deliver broad-spectrum pest protection for high-value seeds, especially in the critical early-growth stage, provide healthier root systems and optimize overall performance. Current estimates are that approximately 80 percent of U.S. soybeans planted are treated.

Through capital investment, innovation, invention and ingenuity, Syngenta continues to be a leader in the U.S. soybean seed treatment marketplace. The company strives to meet growers' needs and challenges by improving formulations, and by continuously introducing new seed treatment active ingredients.

Syngenta revolutionized the soybean seed treatment market after the registration of Cruiser® insecticide seed treatment in 2004. CruiserMaxx® Beans seed treatment, a combination of separately registered products, became the first of its kind on the market. With proven success across 80 million acres, CruiserMaxx Beans remains the market leader today.

In 2011, Syngenta broke new ground with the introduction of Avicta® Complete Beans seed treatment, a combination of separately registered products. Containing the first seed treatment nematicide registered for use on soybeans, Avicta Complete Beans helps to increase the health of the plant and yield potential by protecting against a broad range of nematodes during the critical early growth stage.

Then in 2012, Syngenta strengthened its contribution to improving root health by adding Vibrance® fungicide seed treatment across all of its treatments. Vibrance provides superior protection against *Rhizoctonia*, further promoting healthier, stronger and more powerful root systems.

We continued to broaden the Seedcare portfolio in 2015 with the expansion of the label for Mertect® 340-F fungicide seed treatment to include SDS, one of the leading soybean diseases.

In 2017, we announced the addition of Clariva® Elite Beans seed treatment, a premix formulation of Clariva pn nematicide and CruiserMaxx Vibrance. Clariva Elite Beans is the only seed-applied nematicide to provide lethal activity against soybean cyst nematode (SCN) for the entire season. In addition, it reduces damage from SCN-related diseases such as sudden death syndrome (SDS) and enhances the performance of SCN-resistant genetics for future years. Growers can now have their soybeans treated with Clariva Elite Beans and Mertect 340-F for optimal SCN and SDS protection.

Soybeans can be treated by seed companies, retailers or on the farm. About 30 percent of treated soybean seed is treated upstream, 65 percent downstream and 5 percent on the farm. Syngenta offers a comprehensive portfolio of seed treatments with a choice in the spectrum of protection suitable for any acre and the convenience of premixes. By choosing the best management practices and products, including a high-performance seed treatment, soybeans can start strong each season so growers are better equipped to grow more soybeans.



SOYBEANS

CruiserMaxx Vibrance Beans

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® VIBRANCE® BEANS seed treatment, a combination of separately registered products, delivers broad-spectrum protection against damaging early-season insects and diseases, and is the only seed treatment that offers unique RootingPower and the patented Cruiser® Vigor Effect.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser 5FS seed treatment insecticide)
- // MEFENOXAM
(Apron XL® seed treatment fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed treatment fungicide)
- // SEDAXANE
(Vibrance seed treatment fungicide)

Advantages

- » Optimizes root health, plant vigor for better emergence, stress tolerance, faster speed to canopy, helps increase nutrient uptake and overall performance
- » Helps reduce the risks that come with early-season insect and disease pressure, delivering best-in-class performance for establishing a high stand count vs. other options on the market
- » Available as a stable, engineered premix formulation, enhancing performance and treatment convenience
- » Helps reduce the risks of replants and the added costs of having to plant again
- » Delivers returns of \$16,200 more than Acceleron® Standard, \$7,420 more than Intego™ Suite and \$10,780 more than untreated¹

¹Syngenta trials. Calculations based on a commodity price of \$9.50/A and farm size of 1,000 soybean acres. Returns calculated based on the following cost per acre assumptions: CruiserMaxx Vibrance Beans - \$15.82, Acceleron Standard - \$14.92, Intego Suite - \$14.69.



Insect Protection

- » Soybean aphid
- » Bean leaf beetle
- » Grape colaspis
- » Leafhopper
- » Seedcorn maggot
- » Three-cornered alfalfa hopper
- » Thrips
- » White grub
- » Wireworm

Disease Protection

- » Early-season *Phytophthora*
- » *Pythium*
- » *Rhizoctonia*
- » *Fusarium*
- » Seedborne *Sclerotinia*
(white mold)
- » Seedborne *Phomopsis*

Application Rates

- » CruiserMaxx Vibrance: 3.22 fl oz/100 lbs seeds or 0.0945 mg a.i./seed
or
- » Cruiser 5FS: 1.28 fl oz/100 lbs seed or 0.0756 mg a.i./seed
- » Apron XL: 0.32 fl oz/100 lbs seed or 0.0113 mg a.i./seed
- » Maxim 4FS: 0.08 fl oz/100 lbs seeds or 0.0038 mg a.i./seed
- » Vibrance: 0.08 fl oz/100 lbs seed or 0.0038 mg a.i./seed
or
- » Cruiser 5FS: 1.28 fl oz/100 lbs seed or 0.0756 mg a.i./seed plus one of the following:
- » ApronMaxx® RFC: 1.5 fl oz/100 lbs seed or 0.0092 mg a.i./seed
- » ApronMaxx RTA + Moly: 5.0 fl oz/100 lbs seed
- » ApronMaxx RTA: 5.0 fl oz/100 lbs seed
- » Vibrance: 0.08 fl oz/100 lbs seed or 0.0038 mg a.i./seed

Mg a.i./seed application rates are based on 3,000 seeds per pound.

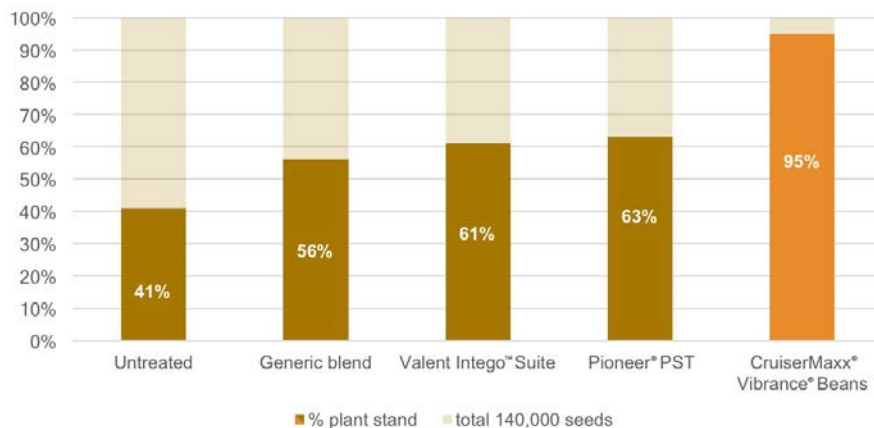
CruiserMaxx Vibrance Beans can be spiked with additional Apron XL: (0.16 – 0.48 fl oz/100 lbs seed or 0.0057 – 0.0170 mg a.i./seed up to maximum of 0.64 fl oz/100 lbs seed or 0.0227mg a.i./seed) for enhanced protection against Phytophthora.



Container Sizing Information

- » CruiserMaxx Vibrance: 15 gallon
- » CruiserMaxx Advanced: 15 gallon
- » CruiserMaxx: 15 gallon
- » Cruiser 5FS: 1 gallon, 15 gallon, 110 gallon, 265 gallon
- » Apron XL: 1 gallon, 30 gallon
- » Maxim 4FS: 1 quart, 1 gallon, 7.5 gallon
- » ApronMaxx RFC: 15 gallon
- » ApronMaxx RTA: 2.5 gallon
- » ApronMaxx RTA + Moly: 15 gallon
- » Vibrance: 1 quart, 15 gallon

Plant stand 28 days after planting under significant disease pressure



Syngenta Seedcare Inoculated Trials (n=3). Combined protection across uninoculated, *Pythium spp.* & *Rhizoctonia solani*. Bay, Arkansas.

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SOYBEANS

Clariva Elite Beans

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CLARIVA® ELITE BEANS seed treatment, a convenient premix of Clariva pn nematocid and CruiserMaxx® Vibrance®, is the **only** seed-applied nematocid on the market that provides lethal activity against SCN all season long.

ACTIVE INGREDIENTS

// PASTEURIA NISHIZAWAE
(Clariva pn seed
treatment nematocid)

// THIAMETHOXAM
(Cruiser® 5FS seed
treatment insecticide)

// MEFENOXAM
(Apron XL® seed
treatment fungicide)

// FLUDIOXONIL
(Maxim® 4FS seed
treatment fungicide)

// SEDAXANE
(Vibrance seed
treatment fungicide)

Advantages

- » Offers the only season-long activity against SCN with its potent active ingredient, *Pasteuria nishizawae*
 - » Competitor seed treatments only offer early-season protection against SCN
- » Available as a stable and easy-to-handle engineered premix formulation all in one jug, which makes treating seed more time- and cost-efficient
- » Provides little to no thickening compared to the old combination
- » Optimizes the RootingPower of Vibrance and the Cruiser Vigor Effect for better emergence, stand, stress tolerance and overall performance
- » Combines with Mertect® 340-F fungicide for increased activity against SCN-related diseases, such as SDS
- » Requires lower full-use rate in comparison to competitors, offering greater flexibility to customers who want to add inoculants and proprietary enhancements to their seed treatment packages without overloading the rates on the seed
- » Improves future yield potential through reduced SCN reproduction and selection pressure, enhancing SCN-resistant varieties where SCN have adapted to sources of genetic resistance, including PI88788



Nematode Protection

- » Season-long, lethal activity against soybean cyst nematode

Insect Protection

- » Soybean aphid
- » Bean leaf beetle
- » Grape colaspis
- » Leafhopper
- » Seedcorn maggot
- » Three-cornered alfalfa hopper
- » Thrips
- » White grub
- » Wireworm

Disease Protection

- » Early-season *Phytophthora*
- » *Pythium*
- » *Rhizoctonia*
- » *Fusarium*
- » Seedborne *Sclerotinia* (white mold)
- » Seedborne *Phomopsis*

Application Rates

- » 2.6 fl oz/140,000 seeds



Container Sizing Information

» 15 gallons and 2 x 2.5 gallons



SOYBEANS

Avicta Complete Beans 500 with Vibrance

See more at
[syngenta-us.com](https://www.syngenta-us.com)

AVICTA® COMPLETE BEANS 500 WITH VIBRANCE® seed treatment delivers unmatched protection against damaging nematodes, insects and diseases, while providing healthier roots and maximizing performance. Avicta Complete Beans 500 with Vibrance contains the first nematicide seed treatment for soybeans, providing broad spectrum nematode protection during the critical early growth stage.

ACTIVE INGREDIENTS

- // ABAMECTIN
(Avicta 500 seed treatment nematicide)
- // THIAMETHOXAM
(Cruiser® 5FS seed treatment insecticide)
- // MEFENOXAM
(Apron XL® seed treatment fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed treatment fungicide)
- // SEDAXANE
(Vibrance seed treatment fungicide)

Advantages

- » Uses a nematicide, insecticide and three fungicides to ensure immediate and effective protection from day one
- » Provides excellent protection against a wide variety of damaging nematode species
- » Offers unsurpassed protection against a broad spectrum of early-season insects and diseases during the critical early growth stage
- » Optimizes root health and plant vigor to deliver better emergence, stand, stress tolerance and overall performance
- » Delivers potential for improved return on investment

 **Avicta® Complete**
Beans 500

 **Vibrance®**

 **syngenta®**



Nematode Protection

- » Root-knot
- » Reniform
- » Lance
- » Stubby-root
- » Stunt
- » Sting
- » Soybean cyst

Insect Protection

- » Soybean aphid
- » Bean leaf beetle
- » Grape colaspis
- » Leafhopper
- » Seedcorn maggot
- » Three-cornered alfalfa hopper
- » Thrips
- » White grub
- » Wireworm

Disease Protection

- » Early-season *Phytophthora*
- » *Pythium*
- » *Rhizoctonia*
- » *Fusarium*
- » Seedborne *Sclerotinia* (white mold)
- » Seedborne *Phomopsis*

Application Rate

- » Avicta Complete Beans 500:
6.20 fl oz/100 lbs seed or
0.2419 mg a.i./seed
- » Vibrance: 0.08 fl oz/100 lbs
seed or 0.0038 mg a.i./seed

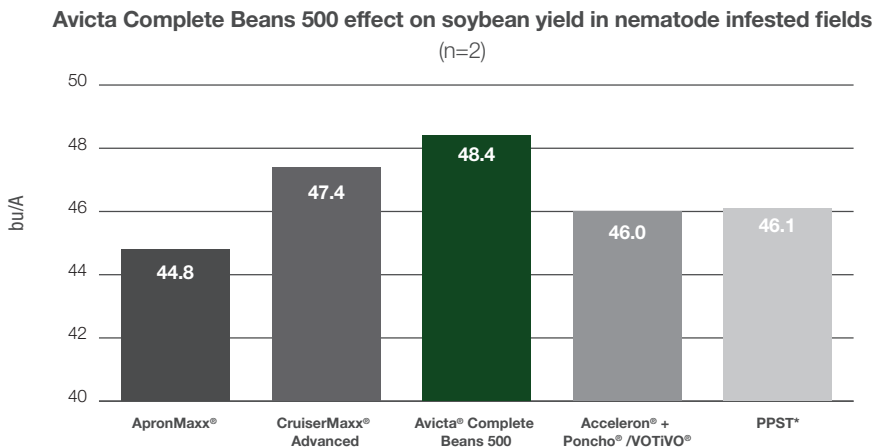
Mg a.i./seed application rates are based on 3,000 seeds per pound.

*Avicta Complete Beans 500 can be spiked with additional Apron XL (0.16 – 0.32 fl oz/100 lbs seed or 0.0057 – 0.0113 mg a.i./seed) for enhanced protection against *Phytophthora*.*



Container Sizing Information

- » Avicta Complete Beans 500: 15 gallon
- » Vibrance: 1 quart, 15 gallon



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SOYBEANS

ApronMaxx Beans with Vibrance

APRONMAXX® BEANS WITH VIBRANCE® seed treatment, a combination of separately registered products, provides proven broad-spectrum protection against seedborne and soilborne diseases. ApronMaxx Beans with Vibrance establishes healthier roots and increases yield potential.

ACTIVE INGREDIENTS

- // MEFENOXAM
(Apron XL® seed treatment fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed treatment fungicide)
- // SEDAXANE
(Vibrance seed treatment fungicide)

Advantages

- » Provides excellent broad-spectrum protection against all major seedborne and soilborne disease pathogens
- » Offers superior activity against *Rhizoctonia*
- » Improves root health to deliver better emergence, stand, vigor, stress tolerance and overall performance
- » Delivers enhanced yield potential
- » Compatible with Cruiser® seed treatment insecticide





Disease Protection

- » Early-season *Phytophthora*
- » *Pythium*
- » *Rhizoctonia*
- » *Fusarium*
- » Seedborne *Sclerotinia* (white mold)
- » Seedborne *Phomopsis*

Container Sizing Information

- » Apron XL: 1 gallon, 30 gallon
- » Maxim 4FS: 1 quart, 1 gallon, 7.5 gallon
- » ApronMaxx RFC: 15 gallon
- » ApronMaxx RTA®: 2.5 gallon
- » ApronMaxx RTA + Moly: 15 gallon
- » Vibrance: 1 quart, 15 gallon

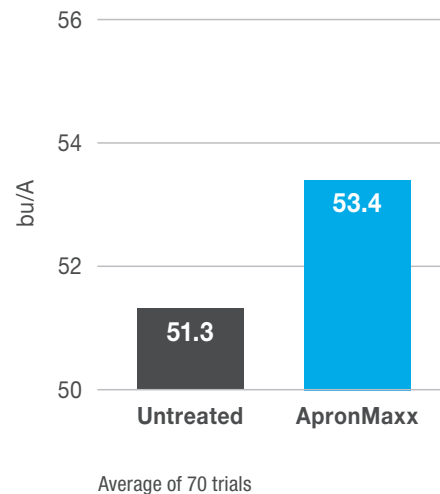
Application Rates

- » ApronMaxx RFC: 1.5 fl oz/100 lbs seed or 0.0092 mg a.i./seed
- » Vibrance: 0.08 fl oz/100 lbs seed or 0.0038 mg a.i./seed

Alternatively, ApronMaxx RFC can be substituted for:

- » ApronMaxx RTA + Moly: 5.0 fl oz/100 lbs seed
- or
- » ApronMaxx RTA: 5.0 fl oz/100 lbs seed
- or
- » Apron XL: 0.16 – 0.32 fl oz/100 lbs seed or 0.0057 – 0.0113 mg a.i./seed
- » Maxim 4FS: 0.08 fl oz/100 lbs seed or 0.0038 mg a.i./seed

Yield Advantage



Mg a.i./seed application rates are based on 3,000 seeds per pound.

*ApronMaxx Beans with Vibrance can be spiked with additional Apron XL (0.16 – 0.48 fl oz/100 lbs seed or 0.0057 – 0.0170 mg a.i./seed up to a maximum of 0.64 fl oz/100 lbs seed or 0.0227 mg a.i./seed) for enhanced protection against *Phytophthora*.*

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SOYBEANS

Cruiser 5FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® 5FS seed treatment brings soybean growers reliable, proven protection against some of the most destructive early-season insect pests, helping crops get off to a healthy, vigorous start and ensuring better stands and yield potential.

ACTIVE INGREDIENT

// THIAMETHOXAM

Advantages

- » Offers market-leading protection against damaging insects such as aphids and bean leaf beetles during the critical early-growth stage
- » Helps plants better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields via the Cruiser Vigor Effect
- » Works in variable weather conditions
- » Is effective at low rates, reducing stress on young seedlings
- » Boasts an excellent seed safety profile



Insect Protection

- » Soybean aphid
- » Bean leaf beetle
- » Grape colaspis
- » Leafhopper
- » Seedcorn maggot
- » Three-cornered alfalfa hopper
- » Thrips
- » White grub
- » Wireworm

Application Rate

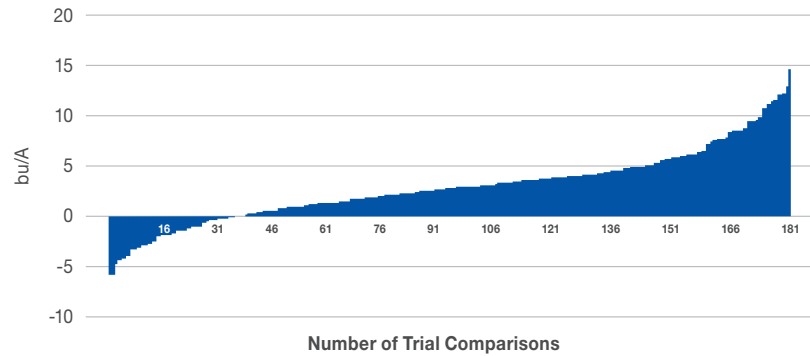
- » 1.28 fl oz/100 lbs seed or
0.0756 mg a.i./seed

Mg a.i./seed application rates are based on 3,000 seeds per pound.

Container Sizing Information

- » 1 gallon, 15 gallon, 110 gallon,
265 gallon

CruiserMaxx Beans Trial Summary Historical Data
81% CruiserMaxx Positive Yield Response



Note: Zero line is the yield of the control without Cruiser
Source: Syngenta seedcare data



SOYBEANS

Mertect 340-F

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MERTECT® 340-F fungicide seed treatment provides proven, effective protection from seedborne pod and stem blight as well as sudden death syndrome (SDS), a leading soybean disease. Mertect 340-F can be added to your preferred premium Syngenta seed treatment, such as Clariva® Elite Beans. For fields affected by SCN and SDS, Clariva Elite Beans with Mertect 340-F provides optimal protection against these two major soybean pests, in addition to broad-spectrum, early-season insect and disease protection.

ACTIVE INGREDIENT

// THIABENDAZOLE

Advantages

- » Offers effective protection against SDS, adding a mode of action on top of reduced SDS damage from Clariva Elite Beans
- » Complements SDS-resistant soybean varieties as an additional management option
- » Recommended for protection against seedborne pod and stem blight (*Phomopsis*) on soybean seed to improve germination and early-season seedling health
- » Provides an excellent seed safety profile, protecting germination and stand

 **Mertect[®]340-F**

syngenta[®]

 **Mertect[®]340-F****Disease Protection**

- » *Fusarium virguliforme* (Sudden death syndrome)
- » *Phomopsis* (Pod and stem blight)

Application Rate

- » 0.08-0.16 fl oz/100 lbs seed - seedborne pod and stem blight (*Phomopsis*)
- » 0.32-0.64 fl oz/100 lbs seed – SDS caused by *Fusarium virguliforme*

Container Sizing Information

- » 2 gallon



SUGARBEETS

SUGARBEETS

Grown by 11 co-ops in the United States and Canada, sugarbeets provide more than half of the sugar produced in the United States, according to the Sugar Industry Biotech Council. As growers seek new technologies to help improve production and maximize efficiencies, Syngenta strives to develop solutions that meet the most difficult on farm challenges.

Syngenta has developed seed treatment, fungicide and herbicide solutions to help growers achieve strong, healthy stands. CruiserMaxx® Sugarbeets delivers consistent, long-lasting protection against early-season insects and diseases. CruiserMaxx Sugarbeets is an on-seed application of Cruiser® seed treatment insecticide with Maxim® 4FS and Apron XL® seed-applied fungicides, offering a convenient solution for growers to enhance vigor, improve stand establishment and increase yield potential by protecting the plant before the seed even germinates.

Additionally, Syngenta offers sugarbeet growers Vibrance® seed treatment fungicide for *Rhizoctonia* protection and Clariva® pn seed treatment nematicide for season-long defense against sugarbeet cyst nematode.



SUGARBEETS

Clariva pn

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CLARIVA® PN seed treatment nematicide offers sugarbeet growers season-long protection against sugarbeet cyst nematode (BCN) to help ensure crops get off to a healthy start. A complement to existing BCN management practices, Clariva pn protects the seed from BCN damage and provides millions of *P. nishizawae* spores lethal to nematodes, which enables maximum seed germination and stand establishment.

ACTIVE INGREDIENT

// *PASTEURIA NISHIZAWAE*
(*P. NISHIZAWAE*) – PN1

Advantages

- » Delivers season-long nematode activity via a unique mode of action
- » Provides millions of *P. nishizawae* spores lethal to nematodes, which causes immediate infection upon contact and results in reduced reproduction and death
- » Complements and enhances variety tolerance against BCN
- » Offers an excellent safety profile, is highly stable and not susceptible to environmental degradation



Insect Protection

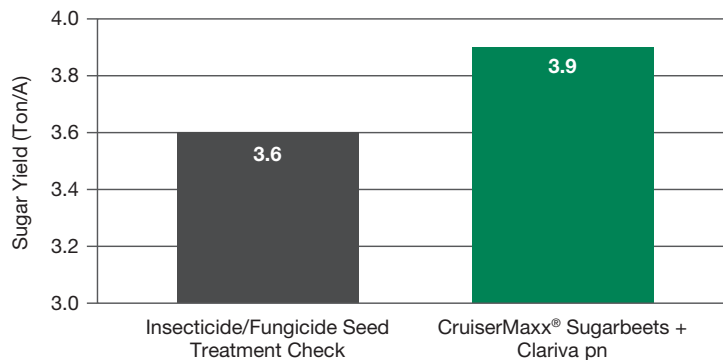
» Sugarbeet cyst nematode (*Heterodera schachtii*)

Application Rate

» 0.68 fl oz/100,000 seeds

Clariva pn Sugar Yield Advantage

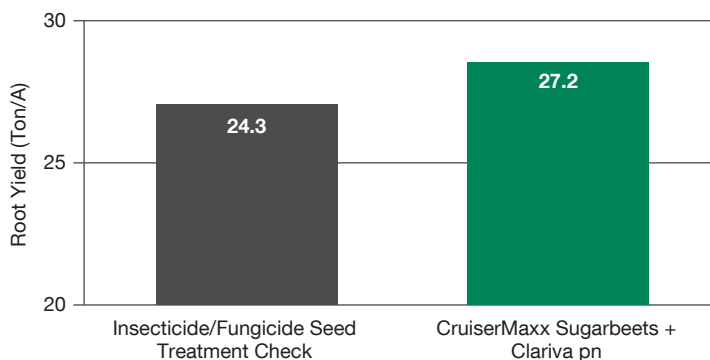
Plots with High Nematode Pressure



2014 Syngenta trials in CO, ID and NE.
Average of four trials.
Nematode tolerant varieties.

Clariva pn Root Yield Advantage

Plots with High Nematode Pressure



2014 Syngenta trials in CO, ID and NE.
Average of four trials.
Nematode tolerant varieties.

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SUGARBEETS

Vibrance

See more at
[syngenta-us.com](https://www.syngenta-us.com)

VIBRANCE® fungicide seed treatment optimizes root health and helps increase stands and yield by delivering excellent protection against *Rhizoctonia*.

ACTIVE INGREDIENTS

// SEDAXANE

Advantages

- » Delivers superior *Rhizoctonia* protection
- » Complements *Rhizoctonia*-tolerant genetics by providing protection during early growth stages
- » Increases sugar tons per acre through enhanced RootingPower benefits that deliver longer-lasting disease protection and optimal stand
- » Delivers 29 percent increase in raw sugar pounds per acre over standard fungicide/insecticide packages in trials with high *Rhizoctonia* pressure
- » Complements other seed treatment products for enhanced disease and insect protection
- » Maximum yield begins with early protection provided by Vibrance



syngenta®



Disease Protection

» *Rhizoctonia*

Application Rate

» 1.5 g a.i./100,000 seeds

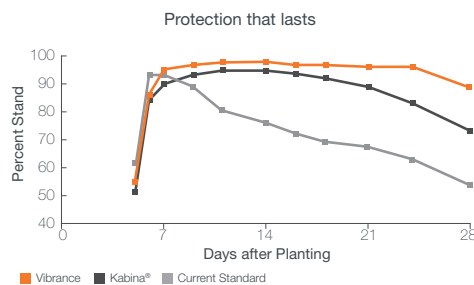
Container Sizing Information

» 15 gallons

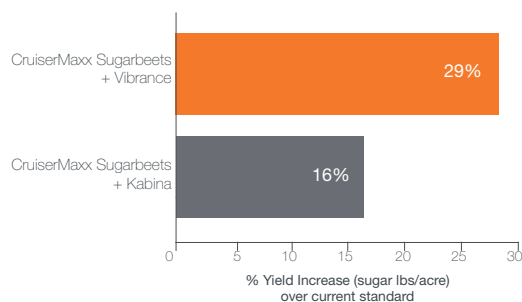
Improved stands under high disease pressure



2014. Photos taken 50 days after planting. Crookston, MN.



2015 greenhouse trial. University of Minnesota, Crookston, MN. Dr. Ashok Chandra lab. Current standard is CruiserMaxx® Sugarbeets seed treatment insecticide/fungicide.



2014. Average of 3 trials in MI & NE.

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SUGARBEETS

CruiserMaxx Sugarbeets

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® SUGARBEETS insecticide/fungicide seed treatment delivers consistent, long-lasting protection against early-season insects and diseases. CruiserMaxx Sugarbeets is an on-seed application of separately registered products containing: Cruiser® 5FS seed treatment insecticide and Apron XL® and Maxim® 4FS seed-applied fungicides.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser 5FS seed treatment insecticide)
- // MEFENOXAM
(Apron XL seed-applied fungicide)
- // FLUDIOXONIL
(Maxim 4FS seed-applied fungicide)

Advantages

- » Convenience of all-in-one insect and disease protection
- » Complements high-value seed and ensures good plant stand
- » Delivers long-lasting activity at very low use rates
- » Helps increase plant stand, uniformity and vigor, and protects yield potential
- » Convenient protection against early-season insect pests, such as leaf miner, wireworm and sugarbeet root maggot
- » Extremely effective against damaging disease pathogens including *Rhizoctonia* and *Pythium*
- » Saves time at planting
- » Works in variable environmental conditions
- » Complements existing integrated pest management (IPM) methods



Insect Protection

- » Sugarbeet root maggot
- » Leaf miner
- » Wireworm
- » Root aphid
- » White grub
- » Springtail
- » Beet leaf hopper

Disease Protection

- » *Rhizoctonia*
- » *Pythium*

Application Rate

- » Cruiser 5FS: 3.39-3.95 fl oz/100,000 seeds
- » Apron XL: 0.085-0.64 fl oz/100 lb seed
- » Maxim 4FS: 0.08-0.16 fl oz/100 lb seed

Container Sizing Information

- » Cruiser 5FS: 1 gallon
- » Apron XL: 1 gallon
- » Maxim 4FS: 1 quart



SUNFLOWERS

The market-leading sunflower seed treatment portfolio from Syngenta allows sunflower crops to get off to a fast, vigorous start, resulting in a more even stand, as well as enhanced yield and return on investment potential. The Syngenta sunflower portfolio includes CruiserMaxx® Sunflower insecticide/fungicide seed treatment – a combination of Cruiser® seed treatment insecticide, Dynasty®, Apron XL® and Maxim® 4FS seed-applied fungicides, and Bion® fungicide. CruiserMaxx Sunflower offers a mode of action to suppress downy mildew and defends against a broad spectrum of diseases and insects so farmers can grow more sunflowers.



SUNFLOWERS

CruiserMaxx Sunflower

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® SUNFLOWER insecticide/fungicide seed treatment helps increase stand, uniformity and vigor to protect yield potential. CruiserMaxx Sunflower conveniently delivers improved insect and disease protection in just one application by combining the cutting-edge insect protection of Cruiser® insecticide along with early-season disease protection from Dynasty®, Maxim® 4FS and Apron XL® fungicides.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser seed treatment insecticide)
- // MEFENOXAM
(Apron XL seed-applied fungicide)
- // AZOXYSTROBIN
(Dynasty seed-applied fungicide)
- // FLUDIOXONIL
(Maxim seed-applied fungicide)

Advantages

- » Helps enhance germination, increase uniformity, improve stand establishment and deliver better yield potential
- » Establishes healthy roots, giving a vigorous start for sunflower crops
- » Protects against seedborne and soilborne diseases including *Pythium*, *Fusarium* and *Rhizoctonia*
- » Provides superior protection against early-season insect pests such as wireworm, flea beetle and sunflower beetle



Insect Protection

- » Sunflower beetle
- » Wireworm
- » Flea beetle
- » Stored grain insects

Disease Protection

- » *Pythium*
- » Damping-off
- » Seedling blight
- » Downy mildew

Application Rates

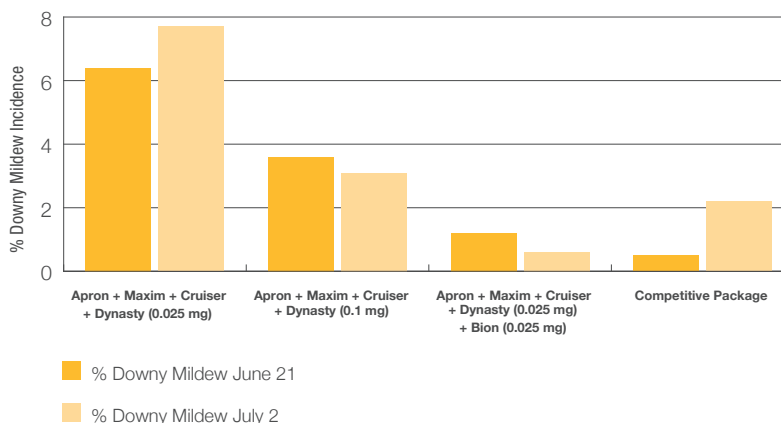
- » Cruiser 5FS: 0.25 mg ai/seed
- » Dynasty: 3.75 fl oz/100 lbs seed* or 0.025 mg ai/seed
- » Maxim 4FS: 0.08 – 0.16 fl oz/100lbs seed or 0.0025 – 0.005 mg ai/seed
- » Apron XL: 1.28 fl oz/100 lbs seed or 0.029 mg ai/seed

Container Sizing Information

- » Cruiser 5FS: 1 gallon
- » Dynasty: 1 gallon
- » Maxim 4FS: 1 quart
- » Apron XL: 1 gallon

*Based on 4,500 sunflower seeds per pound.

CruiserMaxx Sunflower plus Bion Reduces Incidence of Downy Mildew



Dr. Michael Wunsch, NDSU - Carrington, ND

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SUNFLOWERS

Bion

See more at
[syngenta-us.com](https://www.syngenta-us.com)

BION[®] fungicide enhances the downy mildew protection currently offered by CruiserMaxx[®] Sunflower seed treatment insecticide/fungicide combination.

ACTIVE INGREDIENT

// ACIBENZOLAR-S-METHYL

Advantages

- » Offers enhanced downy mildew protection
- » Unique mode of action minimizes risk of resistance development through a lack of direct activity on plant pathogens



syngenta[®]



Disease Protection

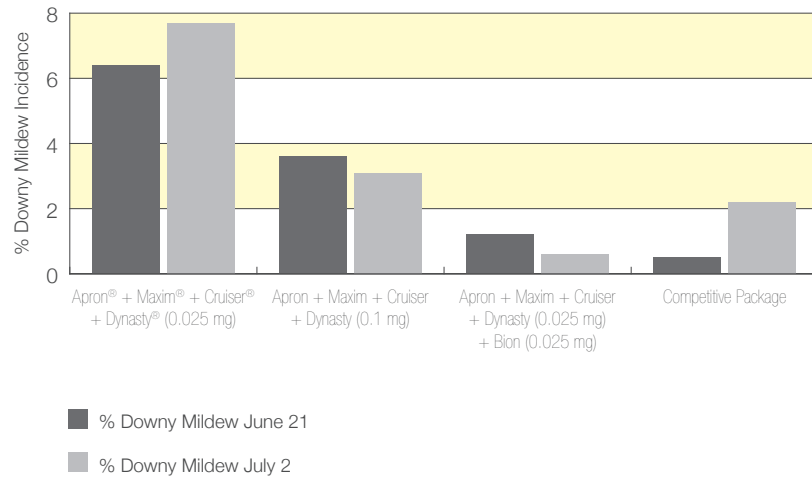
» Downy mildew

Application Rates

» 0.021 mg-0.029 mg ai/seed*

*mg ai per seed rates based on 4,500 seeds per pound.

CruiserMaxx Sunflower plus Bion reduces incidence of downy mildew



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SUNFLOWERS

Plenaris

See more at
[syngenta-us.com](https://www.syngenta-us.com)

PLENARIS[®] seed treatment fungicide provides outstanding protection against downy mildew to aid in stand establishment and promote plant vigor. Plenaris features a unique mode of action that is effective at very low use rates and protects against multiple races of the disease, including those that have exhibited resistance to some resistant genes. When included as part of your seed treatment package, Plenaris exhibits excellent activity on both susceptible and resistant sunflower varieties. Use Plenaris in combination with Bion[®] or Dynasty[®] for improved disease protection.

ACTIVE INGREDIENT

// OXATHIPIPROLIN

Advantages

- » Provides excellent downy mildew control at registered rates
- » Provides excellent protection against all downy mildew races including those resistant to some resistance genes
- » Combine Plenaris with Bion[®] or Dynasty[®] seed treatments for additional control and resistance management

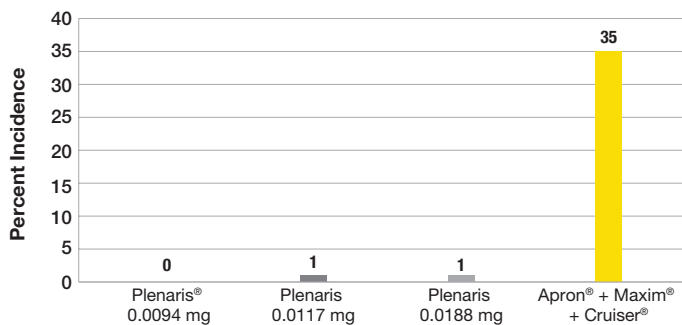
Disease Protection

» Downy mildew

Application Rates

» 0.0094–0.0188 mg ai/seed

Plenaris Minimizes Threat of Downy Mildew



All rates are expressed as active ingredient applied per seed.

All Plenaris treatments included a base treatment of Maxim 4FS mg ai/seed + Cruiser 5FS 0.25 mg ai/seed.

Apron, Maxim, and Cruiser applied at 0.029, 0.0025, and 0.25 mg ai/seed, respectively.



VEGETABLES
SMALL-SEEDED

VEGETABLES, SMALL-SEEDED

With more than two million acres of high-value small-seeded vegetables being planted across the United States each year, seedborne and soilborne pathogens and pests can inflict significant physical damage to these crops, which can lead to substantial financial damage.

The FarMore® Technology platform from Syngenta is a unique concept in seed treatment for the small-seeded vegetable producer. Commercially applied for grower convenience, the portfolio of products offered within FarMore Technology are selected proprietary combinations of fungicides and insecticides. The technology is versatile and can be tailored to match the needs of each vegetable grower, ultimately enhancing seedling emergence, plant stand establishment and early-season vigor as well as protecting yield potential. This evolutionary platform will continue to expand to meet evolving market and grower needs.



VEGETABLES, SMALL-SEEDED

FarMore Technology

See more at
[syngenta-us.com](https://www.syngenta-us.com)

FARMORE® TECHNOLOGY is the first comprehensive combination of separately-registered seed protection products, proprietary application technologies and dedicated seed treatment services that maximize vegetable production value by enhancing performance and quality.

Advantages

- » Provides early-season protection against certain diseases and insects
- » Eliminates or reduces the chance of viruses being transmitted by certain insects
- » Improves yield and quality potential of small-seeded vegetable crops
- » Improved seedling health
- » Targeted and accurate application
- » Protection for high-value seed
- » Optimum stand establishment and plant vigor
- » Improved seed germination and seedling emergence
- » Excellent compatibility with existing insect protection strategies in crops
- » Excellent seed safety
- » Compatible with integrated pest management (IPM) programs



Disease Protection

- » General damping-off and seedling blight
- » *Fusarium spp.*
- » *Pythium spp.*
- » *Rhizoctonia spp.*
- » *Alternaria spp.*
- » Seedborne *Sclerotinia spp.* in selected vegetables
- » *Aspergillus*
- » Penicillium

Formulations

FarMore Technology will evolve with the addition of products added for enhanced performance and may include combinations of:

- » Fungicides
- » Nematicides
- » Insecticides



VEGETABLES, SMALL-SEEDED

FarMore F300

See more at
[syngenta-us.com](https://www.syngenta-us.com)

FARMORE® F300, an advanced fungicide seed treatment technology, delivers protection for a variety of small-seeded vegetable crops against a broad spectrum of seed and seedling diseases. FarMore F300 enhances seedling emergence, plant stand establishment, plant health, early-season vigor and yield potential.

ACTIVE INGREDIENTS

- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)

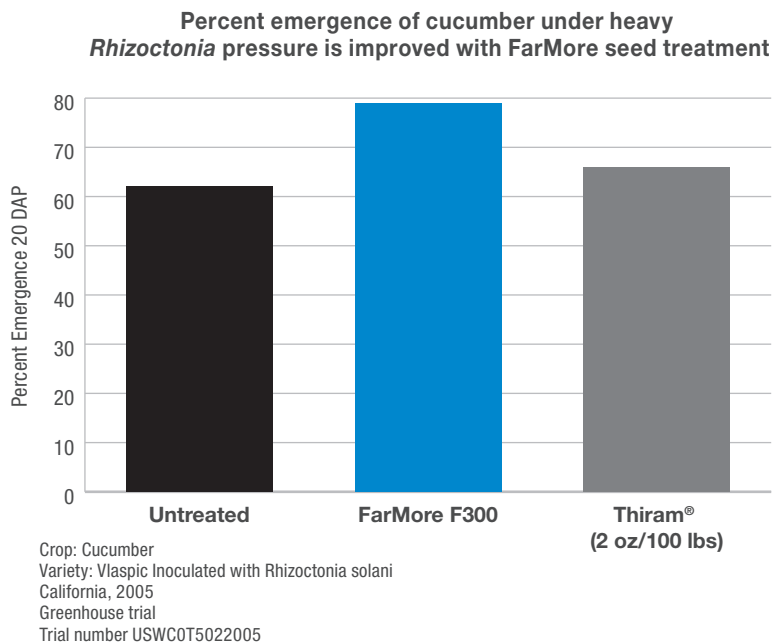
Advantages

- » Provides early-season protection against several diseases
- » Improves yield and quality potential of small-seeded vegetable crops
- » Compatible with integrated pest management (IPM) programs



Disease Protection

- » *Pythium*
- » *Fusarium*
- » *Rhizoctonia*
- » *Alternaria*
- » *Aspergillus*
- » *Penicillium*
- » Seedborne *Sclerotinia* in selected vegetables
- » General damping-off and seedling blight



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VEGETABLES, SMALL-SEEDED

FarMore F400 Watermelon

See more at
[syngenta-us.com](https://www.syngenta-us.com)

FARMORE® F400 WATERMELON fungicide seed treatment provides the first line of defense and protection against *Pythium* spp., *Rhizoctonia* spp. and *Fusarium* spp. seedling diseases. It consists of four active ingredients, mefenoxam, fludioxonil, azoxystrobin and thiabendazole, to offer increased protection against seed-borne *Fusarium* in watermelon.

ACTIVE INGREDIENTS

- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // THIABENDAZOLE
(Mertect® 340-F seed-applied fungicide)

Advantages

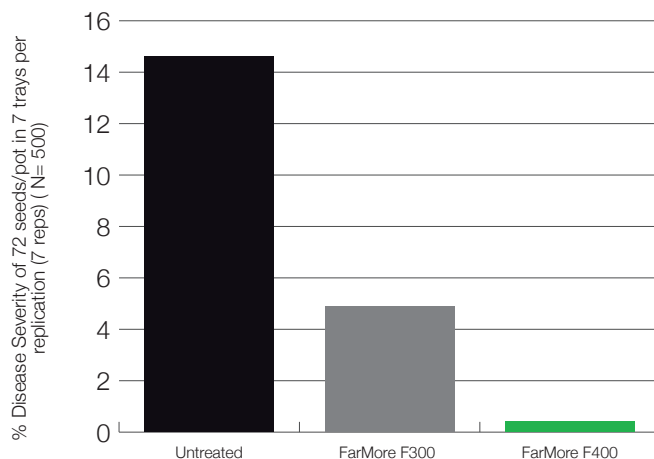
- » Provides early-season protection against certain diseases
- » Helps watermelon crops achieve full yield and quality potential
- » Provides consistent performance to enhance seedling emergence, maximize plant stand establishment, stimulate early-season vigor and plant health, and protect yield



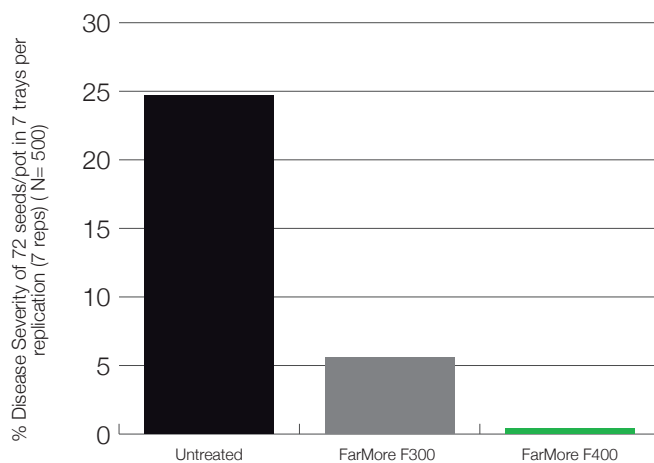
Disease Protection

- » *Pythium*
- » *Rhizoctonia*
- » *Fusarium*

% Disease Incidence 35 DAP



% Disease Severity 35 DAP



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VEGETABLES, SMALL-SEEDED

FarMore FI400 Brassica

See more at
[syngenta-us.com](https://www.syngenta-us.com)

FARMORE® FI400 BRASSICA technology includes a combination of three proven and complementary fungicides that provide the first line of defense and protection against several key seed and seedling diseases including *Rhizoctonia*, *Fusarium*, *Pythium*, general damping-off and seedling blight. In addition, FarMore FI400 Brassica technology contains thiamethoxam, a second generation neonicotinoid, which protects against excessive foliage damage in young plants from aphids, cabbage maggots, root maggots, flea beetles, whiteflies and wireworms.

ACTIVE INGREDIENTS

- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // THIAMETHOXAM
(Cruiser® 70WS seed-applied insecticide)

Advantages

- » Provides early-season protection against certain diseases and insects
- » Eliminates or reduces the chance of viruses being transmitted by certain insects
- » Helps brassica crops achieve full yield and quality potential
- » Compatible with other suitable soil- and foliar-applied products to provide a comprehensive solution for growers
- » Provides consistent performance to enhance seedling emergence, maximize plant stand establishment, stimulate early-season vigor and plant health, and protect yield potential
- » Eliminates the need to repeatedly walk fields, minimizing human traffic in the field



Insect Protection

- » Aphids
- » Cabbage maggots
- » Root maggots
- » Flea beetles
- » Whiteflies
- » Wireworms

Disease Protection

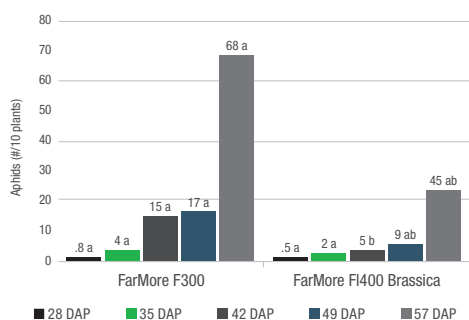
- » *Rhizoctonia*
- » *Fusarium*
- » *Pythium*
- » General damping-off and seedling blight

Application Rate

0.05 to 0.1 mg ai/seed

Cabbage Aphid

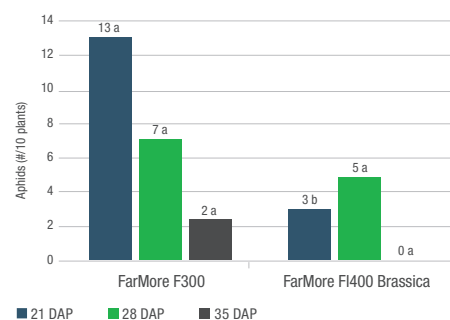
Brevicome brassicae



Source: Trial USWA0U4092010, Santa Maria, CA

Green Peach Aphid

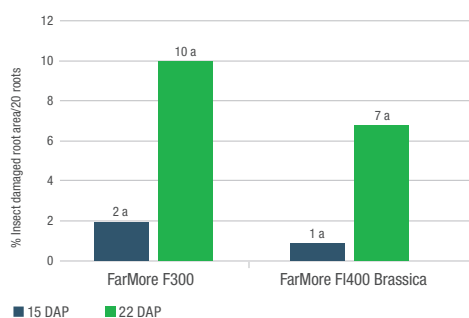
Myzus persicae



Source: Trial USWA0U4112009, Fallbrook, CA

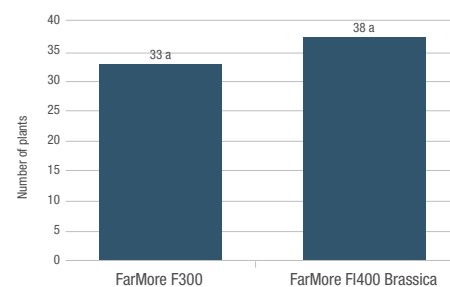
Cabbage Maggot

Delia radicum



Source: Trial USWCOU1012012, King City, AZ

Brassica Crop Emergence and Seed Safety



Source: Trial USWA4012010, Yuma, AZ

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VEGETABLES, SMALL-SEEDED

FarMore FI400 Cucurbits

See more at
[syngenta-us.com](https://www.syngenta-us.com)

FARMORE® FI400 CURCUBITS fungicide/insecticide seed treatment technology helps maximize cucurbit production by enhancing performance and value. This on-seed application of separately registered products and application technology offers cucurbit growers early-season disease and insect protection for a healthy crop start.

ACTIVE INGREDIENTS

- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // THIAMETHOXAM
(Cruiser® 5FS seed treatment insecticide)

Advantages

- » Provides early-season protection against certain diseases and insects
- » Limits excessive damage of foliage from cucumber beetles in young cucumber plants
- » Eliminates or reduces the chance of viruses being transmitted by certain insects
- » Improves yield and quality potential of cucurbit crops
- » Excellent compatibility with existing insect protection strategies in cucurbit crops
- » Compatible with integrated pest management (IPM) programs



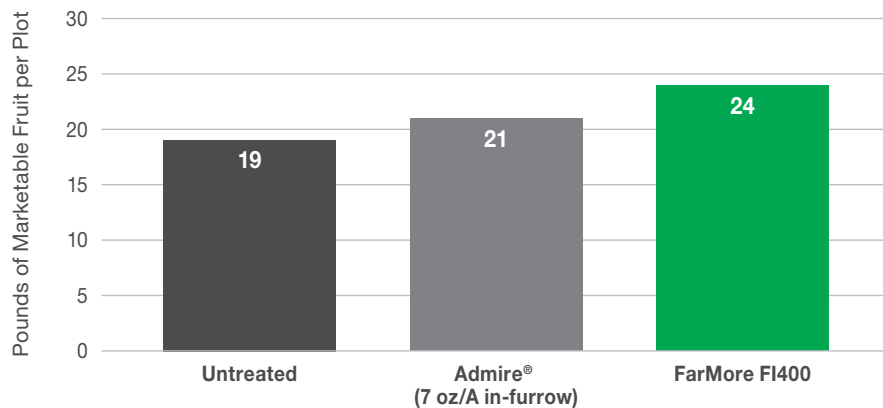
Insect Protection

- » Cucumber beetles

Disease Protection

- » *Rhizoctonia*
- » *Fusarium*
- » *Pythium*
- » General damping-off and seedling blight

Pickling Cucumber Yields



Source: Ohio trials
Variety: Sassy

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VEGETABLES, SMALL-SEEDED

FarMore FI400 Leafy

See more at
[syngenta-us.com](https://www.syngenta-us.com)

FARMORE® FI400 LEAFY fungicide/insecticide seed treatment technology helps maximize leafy vegetable production by enhancing performance and value. This on-seed application of separately registered products and application technology offers leafy vegetable growers early-season disease and insect protection for a healthy crop start.

ACTIVE INGREDIENTS

- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // THIAMETHOXAM
(Cruiser® 70WS seed treatment insecticide)

Advantages

- » Provides early-season protection against certain diseases and insects
- » Limits excessive damage of foliage from leafminers and aphids in young leafy vegetable plants
- » Reduces the chance of viruses being transmitted by certain insects
- » Improves yield and quality potential of leafy vegetable crops
- » Excellent compatibility with existing insect protection strategies in leafy vegetable crops
- » Compatible with integrated pest management (IPM) programs



Insect Protection

- » Leaf miners
- » Aphids
- » Whiteflies
- » Thrips*

*Provides reduced damage

Disease Protection

- » *Rhizoctonia*
- » *Fusarium*
- » *Pythium*
- » General damping-off and seedling blight

SEEDING RATES Seeds per acre	Milligrams thiamethoxam per seed	Expected level of protection against important insect pests
Up to 160,000	0.7	Early-season protection against aphids, leaf miners, flea beetles
160,000 - 260,000	0.46	Early-season protection against aphids, leaf miners

Important: Do not use at a rate that will result in more than 0.266 lb. thiamethoxam per acre (120.66 grams a.i./A) per season.

ALWAYS FOLLOW LABEL RATES. SPECIFIC APPLICATION RATES ON A PER SEED BASIS SHOULD FIT WITHIN THE FRAMEWORK OF THE APPROVED LABELED USE RATES OF THE CRUISER 70WS LABEL. AS GUIDANCE, THE SUGGESTED RATES AND EXPECTED LEVEL OF PROTECTION ARE FOR THE POPULAR SEEDING RATES AGAINST IMPORTANT INSECT PESTS.

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VEGETABLES, SMALL-SEEDED

FarMore FI500 Onions

See more at
 [syngenta-us.com](https://www.syngenta-us.com)

FARMORE® FI500 ONIONS fungicide/insecticide seed treatment technology helps maximize onion production by enhancing performance and value. This on-seed application of separately registered products and application technology offers onion growers early-season disease and insect protection for a healthy crop start.

ACTIVE INGREDIENTS

- // AZOXYSTROBIN
(Dynasty® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // THIAMETHOXAM
(Cruiser® seed treatment insecticide)
- // SPINOSAD
(Regard™ seed treatment insecticide)

Advantages

- » Helps maximize onion production by enhancing performance and value
- » Provides early-season insect protection against a variety of insects including seedcorn maggots and onion thrips
- » Provides early-season disease protection against a variety of diseases including *Rhizoctonia*, *Pythium* and *Fusarium*



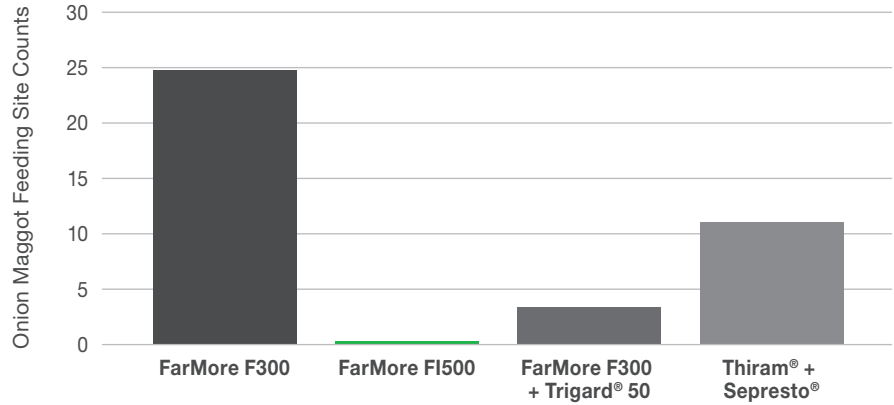
Disease Protection

- » *Rhizoctonia*
- » *Fusarium*
- » *Pythium*
- » General damping-off and seedling blight

Insect Protection

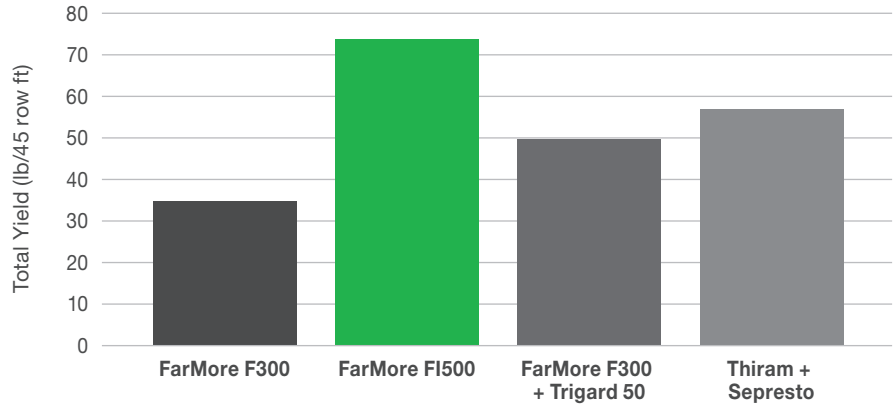
- » Seedcorn maggots
- » Onion maggots
- » Early-season thrips
- » Onion thrips

FI500/Onions/Target – Onion Maggot, *Delia antiqua*
Onion Maggot Damage, Salem, OR



USWF0U4902010: Salem, OR

FI500/Onions/Target – Onion Maggot, *Delia antiqua*
Marketable Yield, Salem, OR



USWF0U4902010: Salem, OR

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VEGETABLES
LARGE-SEEDED

VEGETABLES, LARGE-SEEDED

Syngenta offers large-seeded vegetable growers top-of-the-line protection with a variety of fungicide and insecticide seed treatment options.

Seed-applied fungicides including Apron XL[®], Maxim[®] 4FS, Dynasty[®] and Dividend Extreme[®] offer superior protection against soilborne and seedborne diseases, and Cruiser[®] 5FS seed treatment insecticide works systemically to protect sweet corn, garden bean and green pea crops against harmful insects.



VEGETABLES, LARGE-SEEDED – Sweet Corn
Cruiser 5FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® 5FS seed treatment insecticide works systemically to protect the plant from within, defending early-season sweet corn from flea beetles and other insects.

ACTIVE INGREDIENT

// THIAMETHOXAM

Advantages

- » Superior protection against early-season chewing and sucking insect pests, including flea beetles, seedcorn maggot and wireworms
- » Helps increase stand establishment, uniformity and vigor to protect yield potential
- » Effective at low rates
- » Offers an excellent seed safety profile
- » Works in variable weather conditions
- » Excellent fit and compatibility with superior performing Apron XL®, Dynasty®, Maxim® 4FS and Dividend Extreme® seed-applied fungicides to protect against diseases and insects at the same time
- » Via the Cruiser Vigor Effect, Cruiser 5FS helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Cutworm
- » Flea beetle
- » Seedcorn maggot
- » Southern corn leaf beetle
- » White grub
- » Wireworm

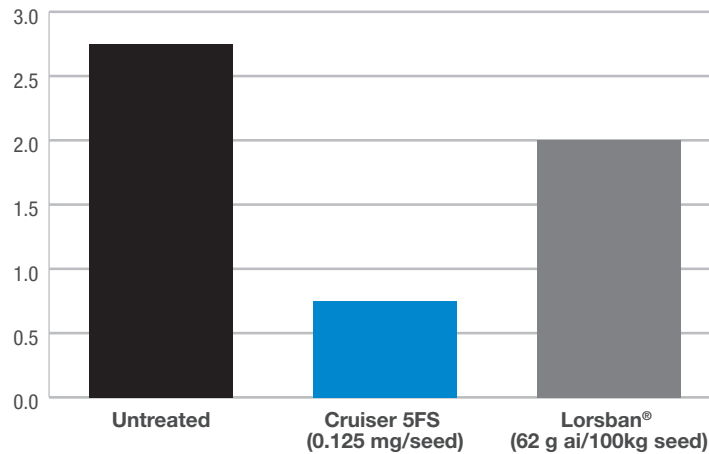
Application Rate

- » 0.25 – 1.25 mg a.i./kernel

Container Sizing Information

- » 1 gallon

Number of seedcorn maggot larva found per 5 sweet corn seeds examined 15 days after planting





VEGETABLES, LARGE-SEEDED – Sweet Corn

Dividend Extreme

See more at
[syngenta-us.com](https://www.syngenta-us.com)

DIVIDEND EXTREME® seed-applied fungicide provides sweet corn growers with systemic protection, no delayed emergence, healthy roots, stronger stands and more heads – which ultimately enhances yield performance and improves return on investment potential.

ACTIVE INGREDIENTS

- // DIFENOCONAZOLE
(Dividend® seed-applied fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)

Disease Protection

- » Suppression of post emergent die-back complex and damping-off

Application Rate

- » 2.0 to 5.0 fl oz/100 lbs seed

Container Sizing Information

- » 2.5 gallon

Advantages

- » Provides sweet corn growers with systemic protection, no delayed emergence, healthy roots, stronger stands and more heads
- » Provides suppression of post emergent die-back complex and damping-off

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VEGETABLES, LARGE-SEEDED – Sweet Corn Dynasty

See more at
[syngenta-us.com](https://www.syngenta-us.com)

DYNASTY[®] seed-applied fungicide is a broad-spectrum systemic fungicide that provides improved disease protection against all four classes of fungal pathogens. Azoxystrobin, the active ingredient in Dynasty, helps prevent disease pathogens from ever taking hold and works systemically to stop diseases from spreading during the early stages of development.

ACTIVE INGREDIENT

// AZOXYSTROBIN

Disease Protection

- » Seedborne and soilborne fungi causing decay, damping-off, and seedling blight.
- » *Rhizoctonia spp.*
- » *Penicillium spp.*
- » *Pythium spp.*
- » Seedborne head smut (*Sphacelotheca reiliana*)

Application Rate

- » 0.153 fl oz/100 lbs seed or 0.0025 mg a.i./kernel*

Container Sizing Information

- » 1 gallon

*Based on 1,777 corn seed per pound

Advantages

- » Systemic protection for emerging seedlings
- » Offers excellent seed safety
- » Broad-spectrum seed treatment fungicide for control of seedborne and soilborne diseases

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VEGETABLES, LARGE-SEEDED – Garden Beans

Apron XL

See more at
[syngenta-us.com](https://www.syngenta-us.com)

APRON XL® fungicide seed treatment protects against systemic downy mildew and diseases caused by soilborne *Pythium* and *Phytophthora spp.*. It is labeled for use on more than 50 crops, including garden beans.

ACTIVE INGREDIENT

// MEFENOXAM

Disease Protection

- » *Pythium*
- » *Phytophthora spp.*

Application Rate

- » 0.64 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon

Advantages

- » The worldwide standard for *Pythium* control
- » Low use rate for ease of handling and good plantability
- » Provides increased performance, yield and return on investment potential versus competitive products
- » Provides superior protection of seedborne and soilborne diseases such as *Pythium* and early-season *Phytophthora*
- » Ultra-low use rates ensure seed germination for increased yield potential
- » Provides outstanding activity for excellent early crop vigor, typically resulting in higher yields at harvest

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VEGETABLES, LARGE-SEEDED – Garden Beans
Cruiser 5FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® 5FS seed treatment insecticide offers garden bean growers a superior tool for the management of early-season soil and foliar insect pests in snap beans and green beans.

ACTIVE INGREDIENT

// THIAMETHOXAM

Advantages

- » Provides superior early-season protection against leafhoppers and aphids, supporting the suppression of viruses
- » Improved seed safety features, allowing crops to get off to a fast, healthy start
- » Systemic activity right from planting, enabling plants to fully develop yield potential
- » Consistent performance under variable weather conditions
- » Excellent fit and compatibility with leading seed-applied fungicides Maxim® 4FS and Apron XL®
- » Via the Cruiser Vigor Effect, Cruiser 5FS helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Aphids
- » Bean leaf beetle
- » Potato leafhopper
- » Seedcorn maggot
- » Wireworm

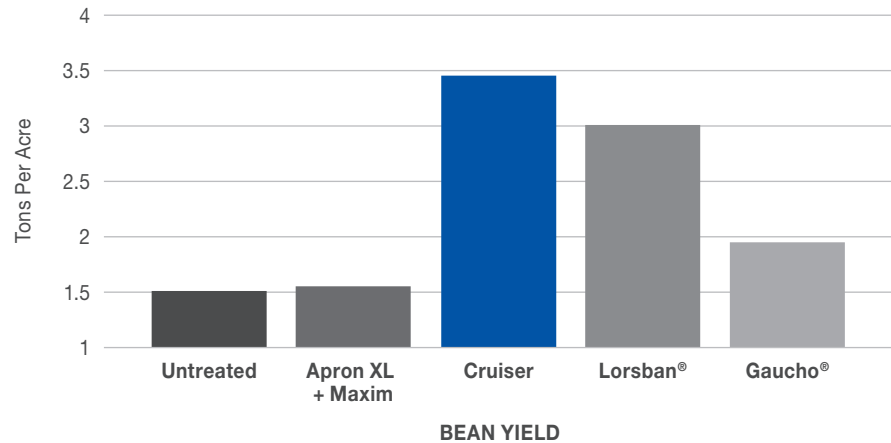
Application Rate

- » 1.28 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon

Cruiser Impact on Garden Bean Yields in Tons per Acre



Average of seven trials
Apron XL (0.34 fluid oz/100 lbs) + Maxim (0.08 fluid oz/100 lbs)
Cruiser (1.28 fl oz/100 lbs)
Lorsban (2.75 fl oz/100 lbs)
Gaucho (2 to 4 fl oz/100 lbs)



VEGETABLES, LARGE-SEEDED – Garden Beans Dynasty

See more at
[syngenta-us.com](https://www.syngenta-us.com)

DYNASTY[®] seed-applied fungicide is a broad-spectrum systemic fungicide that provides improved disease protection against all four classes of fungal pathogens. Azoxystrobin, the active ingredient in Dynasty, helps prevent disease pathogens from taking hold and works systemically to stop diseases from spreading during the early stages of development.

ACTIVE INGREDIENT

// AZOXYSTROBIN

Disease Protection

- » Seedborne and soilborne fungi causing decay, damping-off, and seedling blight
- » *Rhizoctonia solani* (seedling damping off)

Application Rate

- » 0.153 – 0.765 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon

Advantages

- » Systemic protection for emerging seedlings
- » Offers excellent seed safety
- » Broad-spectrum seed treatment fungicide for control of seedborne and soilborne diseases

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VEGETABLES, LARGE-SEEDED – Garden Beans

Maxim 4FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MAXIM® 4FS seed-applied fungicide has become the standard in early-season disease protection because of its top-of-the-line activity against key plant pathogens. Currently registered on more than 200 crops, including garden beans, Maxim 4FS offers growers excellent seed safety at a low use rate.

ACTIVE INGREDIENT

// FLUDIOXONIL

Disease Protection

- » Seedborne and soilborne fungi which cause decay, damping-off, and seedling blight

Application Rate

- » 0.08 – 0.16 fl oz/100 lbs seed

Container Sizing Information

- » 1 quart

Advantages

- » The standard in early-season disease protection for a wide variety of crops
- » Protects the genetic potential of seed at a low use rate
- » Offers excellent seed safety
- » Provides top-notch protection against seedborne and soilborne fungi
- » Adheres to particles in the root zone, allowing it to move with the root system as it grows for optimum early-season protection

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VEGETABLES, LARGE-SEEDED – Green Peas Apron XL

See more at
[syngenta-us.com](https://www.syngenta-us.com)

APRON XL® fungicide seed treatment protects dry and green peas against systemic downy mildew and diseases caused by soilborne *Pythium* and *Phytophthora spp.*

ACTIVE INGREDIENT

// MEFENOXAM

Disease Protection

- » *Pythium*
- » *Phytophthora spp.*

Application Rate

- » 0.16 – 0.64 fl oz/100 lbs
- » For *Pythium* damping-off and systemic downy mildew protection of peas: 1.28 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon

Advantages

- » The worldwide standard for *Pythium* control
- » Low use rate for ease of handling and good plantability
- » Provides increased performance, yield and return on investment potential versus competitive products
- » Provides superior protection of seedborne and soilborne diseases such as *Pythium* and early-season *Phytophthora*
- » Ultra-low use rates ensure seed germination for increased yield potential
- » Provides outstanding activity for excellent early crop vigor, typically resulting in higher yields at harvest

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VEGETABLES, LARGE-SEEDED – Green Peas
Cruiser 5FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® 5FS seed treatment insecticide defends dry and green peas against a broad range of harmful early-season sucking and chewing pests, including pea leaf weevil and wireworm.

ACTIVE INGREDIENT

// THIAMETHOXAM

Advantages

- » Superior protection against pea leaf weevil and other early-season sucking and chewing insects
- » Helps increase stand establishment, uniformity and vigor to enhance yield potential
- » Effective at low use rates
- » High levels of crop safety features reduce stress on young seedlings
- » Provides rapid uptake in wet and dry conditions
- » Compatible with Apron XL® and Maxim® 4FS seed-applied fungicides
- » Via the Cruiser Vigor Effect, Cruiser 5FS helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Aphids
- » Pea leaf weevil
- » Seedcorn maggot
- » Wireworm

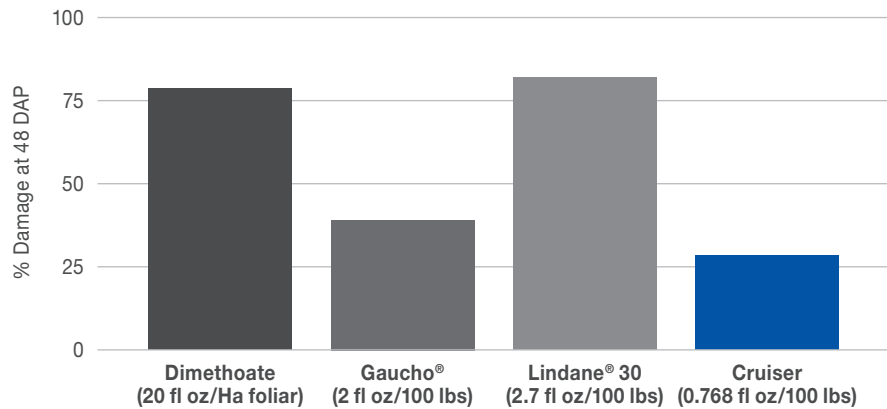
Application Rate

- » 1.28 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon

Pea Leaf Weevil Control



Crop: Pea
Variety: Columbia
Pest: *Sitona lineatus*
Location: Washington
Foliar Spray Date: June 2, 2003



VEGETABLES, LARGE-SEEDED – Green Peas

Maxim 4FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MAXIM® 4FS seed-applied fungicide has become the standard in early-season disease protection because of its top-of-the-line activity against key plant pathogens. Currently registered on more than 200 crops, including dry and green peas, Maxim 4FS offers growers excellent seed safety at a low use rate.

ACTIVE INGREDIENT

// FLUDIOXONIL

Disease Protection

- » Seedborne and soilborne fungi which cause decay, damping-off, and seedling blight

Application Rate

- » 0.08 – 0.16 fl oz/100 lbs seed

Container Sizing Information

- » 1 quart

Advantages

- » The standard in early-season disease protection for a wide variety of crops
- » Protects the genetic potential of seed at a low use rate
- » Offers excellent seed safety
- » Provides top-notch protection against seedborne and soilborne fungi
- » Adheres to particles in the root zone, allowing it to move with the root system as it grows for optimum early-season protection

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WHEAT

WHEAT

Syngenta has proven to be an industry leader in the development of top-performing seed treatments in cereals. Dividend[®], the first broad-spectrum systemic fungicide seed treatment for cereals, received registration in 1994, setting the standard for fungicide seed treatments in cereals. The innovation continued with Cruiser[®] seed treatment insecticide offering benefits extending beyond insect protection to produce more vigorous plants, a phenomenon known as the Cruiser Vigor Effect.

Approximately half of the U.S. winter wheat seed is treated before planting, and that percentage is expected to rise as more and more growers are looking to protect their high-quality seed investments from yield-robbing pests. Some areas of the country, like the Pacific Northwest, have nearly a 100 percent treatment rate. Growers who apply a seed treatment witness the benefits of even emergence and stronger stands after using a seed treatment.

Syngenta continues to be a leader in seed treatment innovation as the company launched a new commercial seed treatment fungicide, Vibrance[®], in 2012 based on the active ingredient sedaxane. Through this seed treatment mode of action from the Succinate Dehydrogenase Inhibitor (SDHI) class of fungicides, the Vibrance line of products provides improved disease protection and enhanced root health.



WHEAT
Cruiser 5FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® 5FS, a systemic insecticide seed treatment, brings wheat growers superior protection against some of the most destructive insect pests from day one to help improve stand establishment and vigor, and enhance yield potential.

ACTIVE INGREDIENT

// THIAMETHOXAM

Advantages

- » Provides convenient, seed-delivered protection against wireworms, aphids and early-season Hessian fly
- » Reduces the risk of the crop transmitting barley yellow dwarf virus by protecting against aphids that vector the disease
- » Helps produce healthier, more vigorous plants under certain conditions, even in the absence of insect pressure, to increase yield potential
- » Provides peace of mind by delivering consistent performance under a wide range of growing conditions
- » Flexibility to tailor the rate to the specific pest spectrum needs of each field
- » Combines with Vibrance Extreme® seed-applied fungicide to deliver insect and disease protection at the same time
- » Offers growers added convenience by replacing planter box, in-furrow and foliar insecticide applications
- » Promotes faster emergence, good plant health and earlier canopies
- » Helps achieve stronger plant stands, increased root mass, thicker stems, and taller and greener plants
- » Via the Cruiser Vigor Effect, Cruiser 5FS helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Bird cherry-oat aphid
- » English grain aphid
- » Grasshopper (reduces damage)
- » Greenbug
- » Hessian fly
- » Russian wheat aphid
- » Wireworm

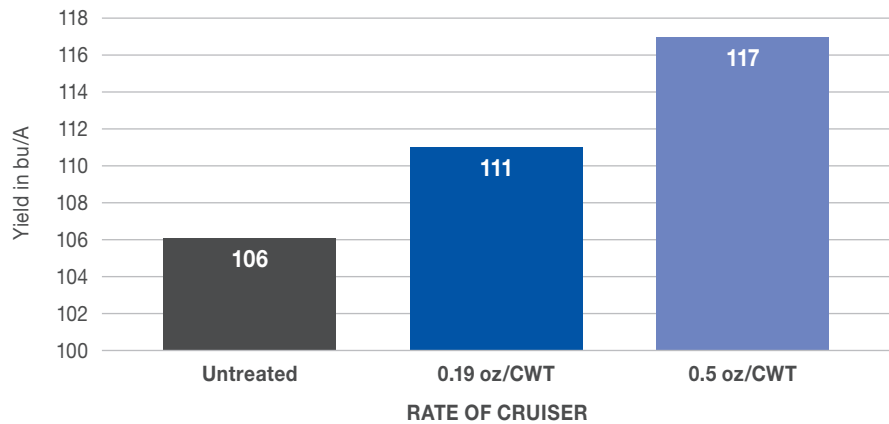
Application Rates

- » 0.19 – 0.25 oz/100 lbs seed for early-season wireworm suppression
- » 0.75 – 1.33 oz/100 lbs seed for other insect pests

Container Sizing Information

- » 15 gallon, 110 gallon

Wireworm Protection Contributes to Higher Yield – Winter Wheat



Note: all treatments (including untreated) contained 2 oz/CWT Dividend Extreme
One trial from the McGregor seed company



WHEAT

CruiserMaxx Vibrance Cereals

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® VIBRANCE® CEREALS seed treatment insecticide/fungicide combines the power of four chemistries to deliver a boost to RootingPower™ in wheat and barley and safeguard seeds, young seedlings and roots from a broad range of seedborne and soilborne diseases, as well as insects. The combination of chemistries, including Vibrance seed treatment fungicide for *Rhizoctonia* protection and Cruiser® seed treatment insecticide for insect protection, helps cereal crops establish stronger, more vigorous roots that help boost crop productivity and increase yield potential.

ACTIVE INGREDIENTS

- // SEDAXANE
(Vibrance seed treatment fungicide)
- // THIAMETHOXAM
(Cruiser seed treatment insecticide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // DIFENOCONAZOLE
(Dividend® seed-applied fungicide)

Advantages

- » Provides enhanced *Rhizoctonia* activity and broad spectrum insect and disease protection
- » Boosts RootingPower through longer-lasting disease protection
- » Enhances germination and improves stand establishment for higher, more consistent yield potential
- » Leads to powerful roots and improves crop performance
- » Compatible with Cruiser 5FS insecticide and Maxim® 4FS fungicide seed treatments for improved insect and disease protection
- » Affords consistent yield performance and stability under a wide range of growing conditions
- » Can be applied on-farm or through commercial, on-site seed treater or seed company
- » Provides a resistance management tool as it adds another seed treatment mode of action from the SDHI class of fungicides to the Syngenta Seedcare portfolio



Disease Protection

- » Common bunt
- » Dwarf bunt
- » Karnal bunt
- » *Cochliobolus spp.*, suppressed (common root rot)
- » Covered smut
- » False loose smut
- » Loose smut
- » True loose smut
- » *Fusarium* crown and foot rot (suppressed)
- » *Fusarium* seed scab
- » General seed rots
- » *Pythium* damping-off
- » *Pythium spp.*
- » Seedling blight, root rot and damping-off caused by seedborne and soilborne *Fusarium spp.* or *Rhizoctonia spp.*
- » Seedling blight, root rot, and damping-off caused by soilborne *Pythium spp.*
- » Seedborne *Septoria*
- » *Septoria* leaf blotch
- » Take-all (suppressed)

Advantages (Continued)

- » Delivers the Cruiser Vigor Effect to help enhance germination, increase vigor, improve stand establishment and deliver better yield potential
- » Delivers wireworm suppression with the ability to add Cruiser 5FS to enhance wireworm protection and protect against aphids, Hessian fly and other key pests
- » Delivers healthier root systems and stronger plant stands to help winter wheat better prepare for dormancy and promote better crop vigor

Insect Protection

- » European Chafer
- » Wireworms

Application Rate

- » 5 – 10 fl oz/100 lbs seed

Container Sizing Information

- » 2.5 gallons, 15 gallons, 30 gallons, 110 gallons



WHEAT
Vibrance Extreme

See more at
[syngenta-us.com](https://www.syngenta-us.com)

VIBRANCE® EXTREME fungicide seed treatment supplies cereal growers with *Rhizoctonia* activity; protects against a broad spectrum of seedborne and soilborne diseases; and promotes effective seedling germination, robust stands and more heads. Applied on-farm or through commercial, on-site seed treater or seed company, Vibrance Extreme delivers enhanced RootingPower™ to help achieve optimized root health and consistent yield stability from year to year.

ACTIVE INGREDIENTS

- // SEDAXANE
(Vibrance seed treatment fungicide)
- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // DIFENOCONAZOLE
(Dividend® seed-applied fungicide)

Advantages

- » Combines three proven active ingredients, offering extended protection against a broad spectrum of early-season diseases for a healthier start and stronger crops
- » Provides longer-lasting, broad-spectrum performance with enhanced *Rhizoctonia* activity to deliver better yields under stress
- » Supplies superior protection against dwarf bunt in high-snowfall winter wheat areas
- » Combines sedaxane with difenoconazole and mefenoxam to deliver extended protection against a broad spectrum of early-season seedborne and soilborne diseases
- » Offers exceptional performance against true loose smut in barley
- » Creates more robust root systems that more efficiently utilize moisture and nutrients
- » Boosts RootingPower through enhanced disease protection that leads to more powerful roots and improved crop performance



Broad-Spectrum Disease Protection

- » Common bunt
- » Dwarf bunt
- » Karnal bunt
- » *Cochliobolus spp.*, suppressed (common root rot)
- » Covered smut
- » False loose smut
- » Flag smut
- » Loose smut
- » True loose smut
- » *Fusarium* crown and foot rot (suppressed)
- » *Fusarium* seed scab
- » General seed rots
- » *Pythium* damping-off
- » Seedling blight, root rot and damping-off caused by seedborne and soilborne *Fusarium spp.* or *Rhizoctonia spp.*
- » Seedling blight, root rot and damping-off caused by soilborne *Pythium spp.*
- » Seedborne *Septoria*
- » *Septoria* leaf blotch
- » Take-all (suppressed)

Advantages (Continued)

- » Affords seed protection that stimulates quality root systems to deliver better emergence, stand establishment, nutrient uptake and stress tolerance
- » Produces healthier, stronger stems and foliage better able to withstand stresses from weather, diseases and insects
- » Fully compatible with Cruiser® seed treatment insecticide to protect wheat and barley seedlings from diseases and insects at the same time
- » Delivers convenient protection of the seed's genetic potential to help maximize yield and quality, ensuring every seed counts
- » Provides excellent seed safety for optimal seedling development and root growth

Application Rates

- » 2.8 – 5.6 fl oz/100 lbs of seed

Container Sizing Information

- » 2.5 gallons, 30 gallons, 110 gallons



LEGUMES

For dry bean growers who need a combination of insect and disease protection, CruiserMaxx® Beans insecticide/fungicide seed treatment offers a great solution. In addition to this complete offering, the lineup of seed treatments for the large-seeded vegetable portfolio can be combined to meet the unique pest pressures in each field.



VEGETABLES, LARGE-SEEDED – Dry Beans Dynasty

See more at
syngenta-us.com

DYNASTY[®] seed treatment is a broad-spectrum systemic fungicide that provides improved disease protection against all four classes of fungal pathogens. Azoxystrobin, the active ingredient in Dynasty, helps prevent disease pathogens from taking hold and works systemically to stop diseases from spreading during the early stages of development.

ACTIVE INGREDIENT

// AZOXYSTROBIN

Disease Protection

- » Seedborne and soilborne fungi causing decay, damping-off, and seedling blight
- » *Rhizoctonia solani* (seedling damping off)

Application Rate

- » 0.153 – 0.765 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon

Advantages

- » Systemic protection for emerging seedlings
- » Offers excellent seed safety
- » Broad-spectrum seed treatment fungicide for control of seedborne and soilborne diseases

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VEGETABLES, LARGE-SEEDED – Dry Beans

Maxim 4FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

MAXIM® 4FS seed-applied fungicide has become the standard in early-season disease protection because of its top-of-the-line activity against key plant pathogens. Currently registered on more than 200 crops, including dry beans, Maxim 4FS offers growers excellent seed safety at a low use rate.

ACTIVE INGREDIENT

// FLUDIOXONIL

Disease Protection

- » Seedborne and soilborne fungi which cause decay, damping-off, and seedling blight

Application Rate

- » 0.08 – 0.16 fl oz/100 lbs seed

Container Sizing Information

- » 1 quart

Advantages

- » The standard in early-season disease protection for a wide variety of crops
- » Protects the genetic potential of seed at a low use rate
- » Offers excellent seed safety
- » Provides top-notch protection against seedborne and soilborne fungi
- » Adheres to particles in the root zone, allowing it to move with the root system as it grows for optimum early-season protection

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LEGUMES – Dry Beans

Apron XL

See more at
[syngenta-us.com](https://www.syngenta-us.com)

APRON XL® fungicide seed treatment protects dry beans against systemic downy mildew and diseases caused by soilborne *Pythium* and *Phytophthora spp.*

ACTIVE INGREDIENT

// MEFENOXAM

Advantages

- » The worldwide standard for *Pythium* control
- » Low use rate for ease of handling and good plantability
- » Provides increased performance, yield and return on investment potential versus competitive products
- » Provides superior protection of seedborne and soilborne diseases such as *Pythium*
- » Ultra-low use rates ensure seed germination for increased yield potential
- » Provides outstanding activity for excellent early-crop vigor, typically resulting in higher yields at harvest



Disease Protection

- » *Pythium*
- » *Phytophthora spp.*

Application Rate

- » For *Pythium* damping-off protection: 0.16 – 0.64 fl oz/100 lbs seed
- » For *Pythium* damping-off protection in field beans, kidney beans, navy beans, pinto beans, and lentils when disease pressure is expected to be low: 0.085 – 0.32 fl oz/100 lbs seed in combination with other seed treatment products labeled for these crops
- » For early-season *Phytophthora* protection: 0.64 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon



LEGUMES – Dry Beans

Vibrance Maxx

See more at
[syngenta-us.com](https://www.syngenta-us.com)

VIBRANCE® MAXX fungicide seed treatment contains three fungicides for broad-spectrum, early-season disease protection, including superior *Rhizoctonia* protection, to help ensure healthy stand establishment in chickpeas, lentils, and peas.

ACTIVE INGREDIENT

- // MEFENOXAM
(Apron XL® seed-applied fungicide)
- // FLUDIOXONIL
(Maxim® 4FS seed-applied fungicide)
- // SEDAXANE
(Vibrance seed-applied fungicide)

Advantages

- » Industry leading *Rhizoctonia* protection against seed decay, seedling blight, and damping off
- » Healthier plants to better withstand periods of stress



Disease Protection

- » *Rhizoctonia*
- » *Pythium*
- » *Fusarium*

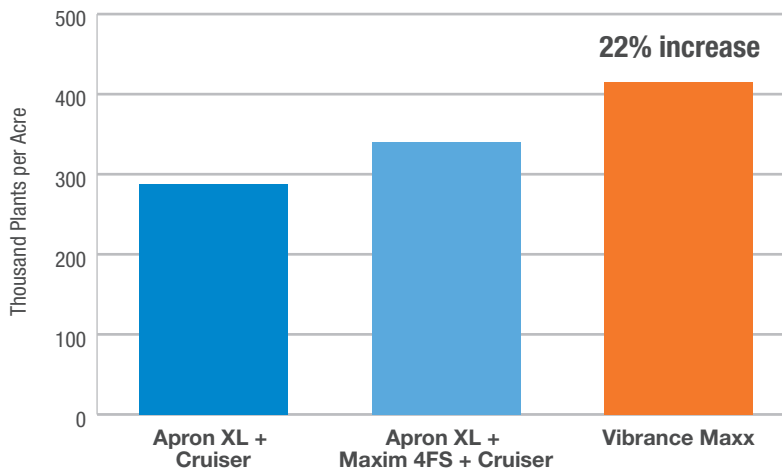
Application Rate

- » 1.54 fl oz/100 lbs seeds

Container Sizing Information

- » 2 x 2.5 gallons, 15s and 110s

Adding Vibrance with Apron XL & Maxim improves Lentil stands



All treatments are inoculated
Source: USNNT0232015 / ND / Wunsch / lentil 'Richlea'

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LEGUMES – Dry Beans

CruiserMaxx Beans

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISERMAXX® BEANS insecticide/fungicide seed treatment guards dry beans against early-season insects and diseases while offering the added convenience of a seed treatment for protecting crop investment. A combination of the active ingredients found in Cruiser® 5FS seed treatment insecticide and Maxim® 4FS and Apron XL® seed-applied fungicides, CruiserMaxx Beans provides protection the moment the seed is planted increasing plant stand, vigor and health for improved yield potential.

ACTIVE INGREDIENTS

- // THIAMETHOXAM
(Cruiser 5FS seed treatment insecticide)
- // MEFENOXAM
(Apron XL seed-applied fungicide)
- // FLUDIOXONIL
(Maxim 4FS seed-applied insecticide)

Advantages

- » Increases plant stand, uniformity and vigor, and as a result, improves yield potential
- » Increases operational efficiency by providing a wider window to scout and monitor insects
- » Protects against early-season insect damage and often reduces insect populations later in the season
- » Provides protection against target pests with reduced impact on beneficial insects
- » Increases yield potential even under low insect pressure
- » May reduce virus incidence and transmission
- » Comprehensive early-season disease protection against major seed and seedling diseases
- » Effective at low use rates
- » Convenient, starts protecting plants even before the seed germinates
- » Excellent crop and seed safety
- » Via the Cruiser Vigor Effect, CruiserMaxx Beans helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Aphids
- » Bean leaf beetle
- » Leafhoppers
- » Mexican bean leaf beetle
- » Seedcorn maggot
- » Wireworm

Disease Protection

- » *Pythium*
- » *Rhizoctonia*
- » *Fusarium*
- » Seed and seedling rots
- » Early-season *Phytophthora*
- » Seedborne *Sclerotinia*

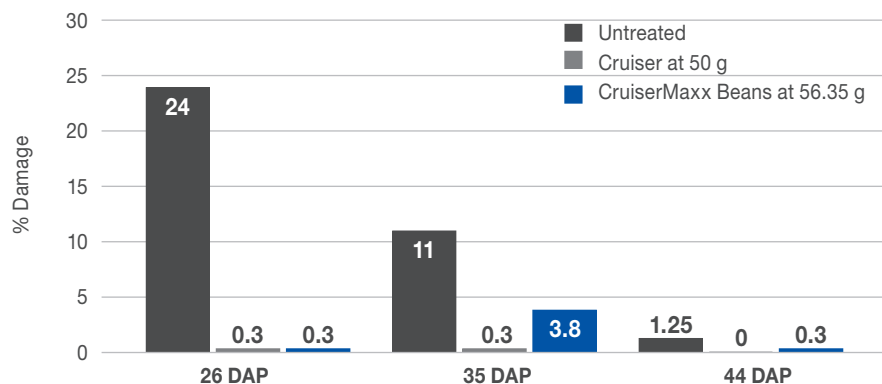
Application Rate

- » 3.0 fl oz/100 lbs seed with additional Apron XL at 0.16 to 0.48 fl oz/100 lbs seed

Container Sizing Information

- » CruiserMaxx: 15 gallon
- » Maxim 4FS: 1 gallon, 1 quart
- » Apron XL: 1 gallon

CruiserMaxx Beans Provides Bean Leaf Beetle Protection



DAP = Days After Planting.

Rates in grams are grams a.i./100 kg. Thiamethoxam rates in grams a.i./100kg are equal.

Thiamethoxam seed treatments extend bean leaf beetle control out to 44 DAP.

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LEGUMES – Dry Beans

Cruiser 5FS

See more at
[syngenta-us.com](https://www.syngenta-us.com)

CRUISER® 5FS seed treatment insecticide offers dry bean producers protection against the early-season sucking and chewing pests that threaten crops.

ACTIVE INGREDIENT

// THIAMETHOXAM

Advantages

- » Superior protection against early-season insects
- » Excellent performance against leafhoppers, reducing the impact of hopperburn
- » Defense against aphids to minimize the impact of viruses
- » Improved seed safety features, allowing crops to get off to a fast, healthy start and grow more uniformly
- » Systemic activity right from planting to reduce the need for foliar insecticide applications
- » Long-lasting and consistent performance under variable weather conditions
- » Offers an excellent crop safety profile
- » Excellent fit and compatibility with leading seed-applied fungicides Maxim® 4FS and Apron XL®
- » Via the Cruiser Vigor Effect, Cruiser 5FS helps plants to better withstand unfavorable environmental conditions and stresses to deliver higher and more consistent yields



Insect Protection

- » Aphids
- » Bean leaf beetle
- » Mexican bean beetle
- » Potato leafhopper
- » Seedcorn maggot
- » Wireworm

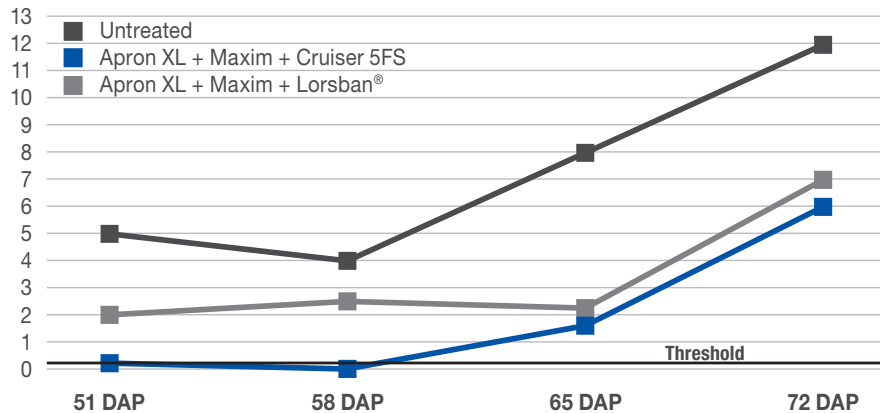
Application Rate

- » 1.28 fl oz/100 lbs seed

Container Sizing Information

- » 1 gallon

Potato Leafhopper Protection in Dry Beans
Potato Leafhopper Per Trifoliolate



Vista navy beans planted 5/10/05

DAP = Days After Planting

Apron XL (0.34 fl oz/100 lbs seed) + Maxim (0.08 fl oz/100 lbs seed) + Cruiser 5FS (1.28 fl oz/100 lbs seed)

Apron XL (0.34 fl oz/100 lbs seed) + Maxim (0.08 fl oz/100 lbs seed) + Lorsban (2.75 fl oz/100 lbs seed)



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