



## Let's Talk About Roots

A strong, healthy root system is critical to maximizing crop performance in corn. A larger root surface area improves a plant's ability to absorb water, take in nutrients and manage stress. That means protecting tiny root hairs goes a long way toward improving yield potential.

One of the greatest threats to corn root health is *Rhizoctonia*, a soil-borne fungus that weakens plants during the early development stages by feeding on root systems. Due to the impact on plant health, lost root potential may never be regained once *Rhizoctonia* attacks. Since the damage often occurs at the root level, the effects of *Rhizoctonia* are not always seen above ground.

Good root health begins with a good seed treatment. Since the value of genetics and traits is so high, you need to make every effort to protect the roots and the yield potential of your seed.

### The Best Insect and Disease Protection Comes with Enhanced Root Health

**CruiserMaxx® Vibrance® Corn**, a combination of separately registered products, is an insecticide/fungicide seed treatment that offers superior insect and disease protection with enhanced root health. The addition of Vibrance to the already robust fungicide package in CruiserMaxx Corn brings a third mode of action against *Rhizoctonia* and increases each crop's RootingPower.

The result is comprehensive early-season insect and disease protection for healthy, vigorous seedlings, the strongest root system possible and the highest potential yields.



CruiserMaxx Vibrance Corn



Untreated check

## Insect Protection

In addition to its best-in-class disease protection, CruiserMaxx Vibrance Corn offers superior action against a broad spectrum of early-season insects, including:

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

CruiserMaxx Vibrance Corn is available in three different versions, with varying levels of the insecticide component:

- **CruiserMaxx Vibrance Corn 250** insecticide (0.25 mg thiamethoxam/seed)
- **CruiserMaxx Vibrance Corn 500** provides an increased rate of insecticide (0.50 mg thiamethoxam/seed) for enhanced insect protection
- **CruiserMaxx Vibrance Corn 1250** offers the highest available rate of insecticide (1.25 mg thiamethoxam/seed) for added insect protection against corn rootworm and billbug. It is a key component in an effective corn rootworm management plan.

## Disease Protection

CruiserMaxx Vibrance Corn offers the most comprehensive combination of seed treatment fungicides on the market today, protecting against the following diseases in corn:

### Seed-Borne:

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

### Soil-Borne:

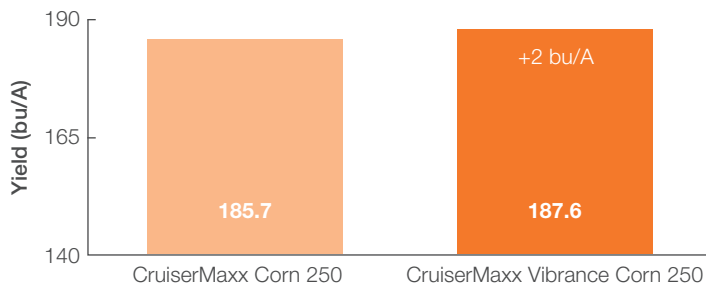
- *Pythium*
- *Rhizoctonia*
- *Fusarium*
- *Fusarium graminearum*
- *Fusarium verticillioides*
- *Macrophomina*
- *Diplodia (Stenocarpella)*
- *Sporisorium (Sphacelotheca)*
- *Penicillium*
- *Colletotrichum*

## Proven in the Field

The addition of Vibrance to the CruiserMaxx Corn package has shown improvements in yield, both in high and low disease pressure environments.

### CruiserMaxx Vibrance Corn 250 vs. CruiserMaxx Corn 250

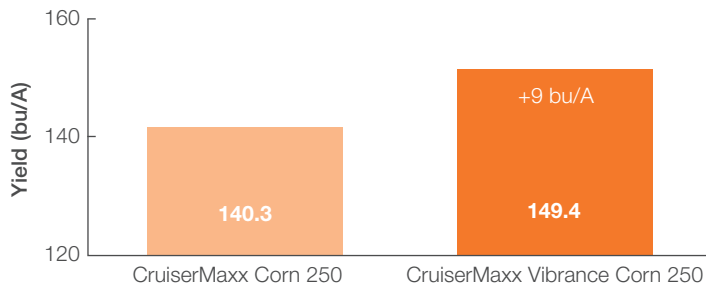
84 Trials Across 4 Years – Low Disease Pressure



In 84 comparisons in lower disease pressure, Vibrance shows an average of nearly **2 bu/A improvement** in yield.

### CruiserMaxx Vibrance Corn 250 vs. CruiserMaxx Corn 250

7 Trials Across 3 Years – High Disease Pressure



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

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

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

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# Your Genetics, Protected from *Pythium*.

## A New Standard: Vayantis

*Pythium* poses a huge threat for corn growers, causing more damage than *Fusarium* and *Rhizoctonia* seedling diseases combined. **Vayantis® fungicide seed treatment**, a novel mode of action that has no cross resistance with existing *Pythium* chemistries, represents the most powerful compound ever developed to protect corn seedlings from *Pythium*, allowing your genetics to shine. It provides substantially better protection than older technologies and offers a highly effective overlapping mode of action (MOA) to combat all known U.S. *Pythium* species.

### Vayantis provides:

- The most robust *Pythium* protection ever provided by a seed treatment, compared to existing protection molecules metalaxyl or ethaboxam
- Increased seed germination, emergence and improved plant stand uniformity across variable soil types and environmental conditions
- Reliable resistance management due to overlapping effective MOAs
- Long-lasting activity for efficient seedling protection
- Outstanding seed safety and compatibility with other products
- Excellent bolt on protection to your corn genetics, allowing more yield potential to be realized

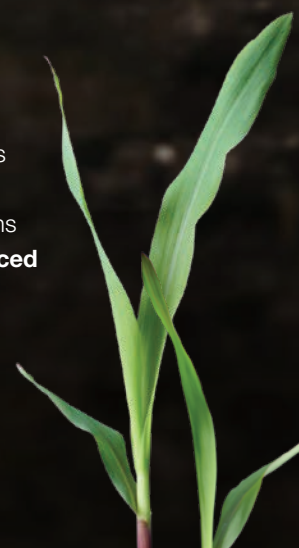
## No Amount of *Pythium* is Safe

You know that *Pythium* poses a great risk for your customers. More than 50 known *Pythium* species commonly infect U.S. soil, and the problem is fueled by growing trends such as planting earlier into cool wet soil, reduced and no-till situations, and increased use of cover crops. *Pythium* can also be unpredictable, as environmental conditions drive which *Pythium* species are troublesome in any given year.

You can't prevent *Pythium*, but you can plan for it. Vayantis provides the added security of knowing your genetics are protected, and that means better returns and more yield potential for your customers.

### *Pythium* causes:

- Reduced plant stands
- Stunting
- Under-developed roots
- Damping-off
- Lower plant populations
- **And ultimately, reduced yield potential**







# Over 100 million bushels

The estimated corn loss annually in the U.S. and Ontario,<sup>1</sup> from root rots and seedling blights, even with currently available management tools and methods.

Young seedlings may not recover from *Pythium* damage



## A New Standard of Protection

In lab trials, Vayantis showed greater inhibition over two different species of *Pythium*, (*Pythium ultimum* and *Pythium irregulare*) than metalaxyl or the untreated check.

	Vayantis (2.5 g ai/100 kg seed)	Metalaxyl (2 g ai/100 kg seed)	Untreated
<i>Pythium irregulare</i>			
<i>Pythium ultimum</i>			

Syngenta trials at The Seedcare Institute™, MN; August 2020

The greater protection of Vayantis against *Pythium ultimum* can clearly be seen as crops emerge.



Vayantis (2.5 g ai/100 kg seed)



Metalaxyl (2 g ai/100 kg seed)



Untreated

Syngenta trials at The Seedcare Institute™, MN; August 2020



Healthier roots produce more robust, uniform corn plant stands.



Vayantis (2.5g) + Base



Check

Syngenta trials at Fisher, IN; August 2016

## A Strong Resistance Management Tool

As evidenced by documented cases of resistance and insensitivity of *Pythium* to ethaboxam, current seed treatments are not enough. The addition of Vayantis is critical due to its unrivaled robust spectrum of *Pythium* protection. Containing more power per gram of active ingredient, Vayantis provides an overlapping mode of action which enables a step-change for early-season *Pythium* protection, solidifying its place as an important resistance management tool and giving you additional options to protect your genetics.

**420** Isolates Vayantis demonstrated activity on, including many isolates that show resistance or insensitivity to ethaboxam

Vayantis protects against a wider spectrum of *Pythium* spp. than ethaboxam

	Vayantis + Base (0.003 mg ai/seed)	Ethaboxam + Base (0.013 mg ai/seed)	Untreated
<i>Pythium ultimum</i>			
<i>Pythium irregulare</i>			

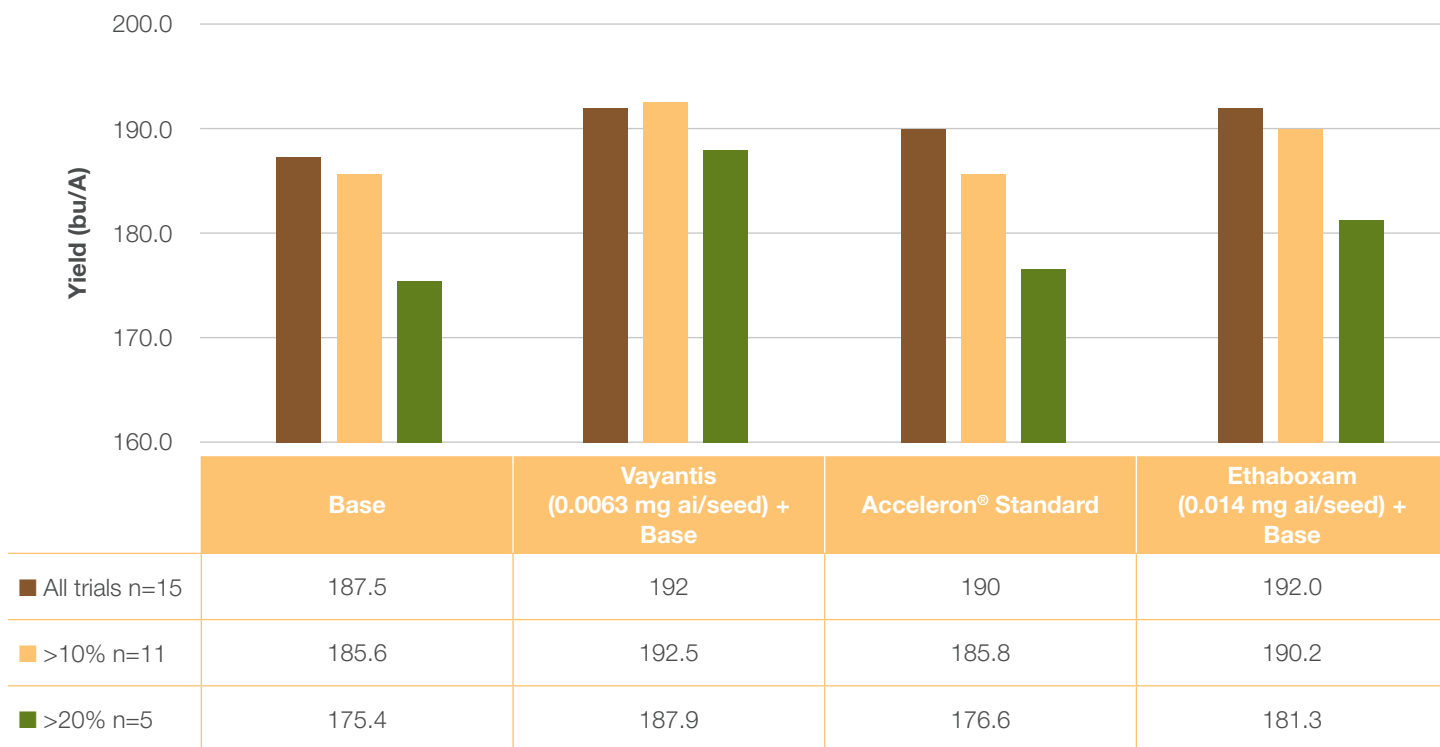
G. Olay a, Vero Beach, Syngenta; 2018

Base (mg ai/seed): Fludioxonil 480FS (0.006), Sedaxane 500FS (0.013), Thiabendazole 360FS (0.05) and Thiamethoxam 600FS (0.25)

## Higher Potential Yield through Superior Disease Protection

By protecting seedlings from costly *Pythium* damage, field trials show that Vayantis can increase your customers' potential yield by an average of 2 bu/A on the broad acre and 4 to 6 bu/A in moderate to high pressure situations. Protect what you've invested in helping build the best seed genetics with a yield difference that has the potential to put money back in your customers' pockets.

### Average Yield Difference



>10% & >20% stand loss data series (dark brown & light brown bars) describe Check Trt stand loss associated with increasing *Pythium* spp. Pressure.

PCBX trts on top of Base; ETBO trt = ETBO 0.0141 + MLX 0.005 + SDX 0.0125 + FDL 0.0063 + CYNT 0.25 + TMX 0.25. Base = SDX 0.0125 mg ai/seed + AZ 0.0025 + TBZ 0.05 + MFX 0.005 + FDL 0.0063 + CYNT 0.25 + TMX 0.25.

Syngenta field trials in IA, IL, IN, KY, MI, MN, NE, OH and WI; 2015-2017

For more information about Vayantis, visit [SyngentaUS.com/Vayantis](https://www.SyngentaUS.com/Vayantis).



<sup>1</sup> Mueller, D.S. et al., 2016. Corn yield loss estimates due to diseases in the United States and Ontario, Canada from 2012 to 2015. Plant Health Progress 17:211-222. <https://doi.org/10.1094/PHP-RS-16-0030>. Harvested corn acres from USDA and OMAFRA.

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All photos are either the property of Syngenta or are used with permission. Trials reflect treatment rates and mixing partners commonly recommended in the marketplace. Performance assessments are based upon results or analysis of public information, field observations and/or internal Syngenta evaluations. Product performance assumes disease presence.

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