

Technical Brochure

The Syngenta logo consists of the word "syngenta" in a lowercase, sans-serif font, with a small leaf icon above the letter 'a'.

syngenta®



The FarMore Technology
Seed Treatment
Platform



TM



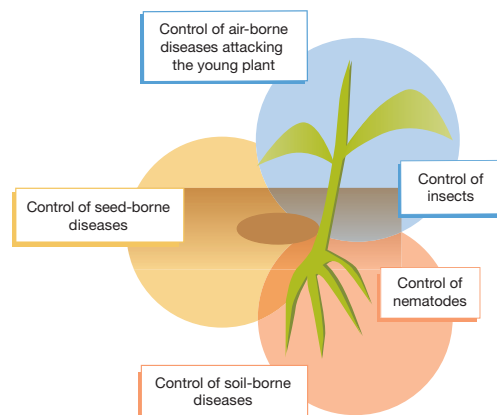
Value of Seed Treatment

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 are unable to protect 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.

Seed Treatments Provide

- Improved seedling health
- Targeted and accurate application
- Protection for 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



FarMore Technology Provides a Novel Approach to Vegetable Crop Protection

With more than two million acres of high-value small-seeded vegetables being planted across the United States each year, seed and soilborne pathogens and pests can inflict significant physical damage to these crops which can lead to substantial financial damage. By attacking seeds and seedlings, these pests can delay emergence, stunt plant growth and even kill plants. Such destruction means added expense to growers looking for ways to improve profitability and quality while minimizing costs.

Syngenta understands the value of these crops to a grower's business and is committed to meeting the individual needs of the vegetable grower. The FarMore® Technology platform is a first-of-its-kind concept to help growers extract the maximum value in the commercial production of vegetables. FarMore Technology delivers cutting-edge, user-friendly offerings for broad-spectrum disease and insect protection and overall plant health.

Commercially applied for grower convenience, the portfolio of products offered within FarMore Technology are selected proprietary combinations of fungicides, insecticides and crop enhancement compounds. 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. FarMore Technology increases the opportunity to improve plant health in high-value vegetable crops.

How FarMore Technology Works

FarMore Technology is a portfolio of technology and product offerings including FarMore F300, FarMore FI400 and FarMore FI500. These offerings provide precisely applied and delivered products directly on the vegetable seed. FarMore Technology maintains the efficacy of seed provider or seed technology company processes such as disinfection, encrusting, pelleting, priming and film coating.

Protection in Small-Seeded Vegetables*

- Bulb or root vegetables (carrot, onion)
- Cucurbit vegetables (cucumber, melons, squash, watermelon)
- Fruiting vegetables (tomatoes, peppers)
- Leafy vegetables (lettuce, spinach)

Key Benefits

- 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
- Excellent compatibility with existing insect protection strategies in crops
- Compatible with Integrated Pest Management (IPM) programs

*Not all FarMore offers are available for all crops.

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. With the active ingredients mefenoxam (Apron XL®), fludioxonil (Maxim® 4FS) and azoxystrobin (Dynasty®), FarMore F300 enhances seedling emergence, plant stand establishment, plant health, early-season vigor and yield potential.

Crop Group

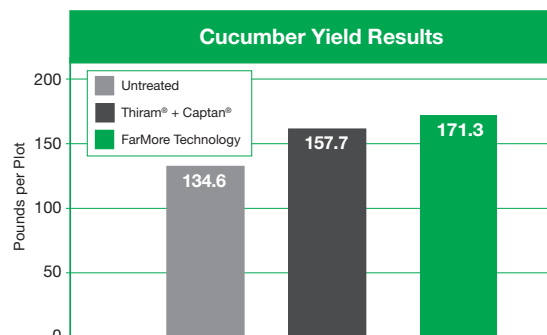
- Cucurbit vegetables
- Leafy vegetables
- Tomatoes
- Onions
- Peppers
- Carrots

Disease Protection

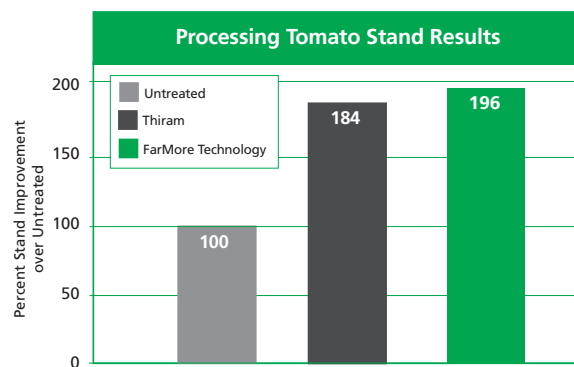
- *Pythium*
- *Fusarium*
- *Rhizoctonia*
- *Helminthosporium*
- *Alternaria*
- *Aspergillus*
- *Penicillium*
- Seed-borne *Sclerotinia* in selected vegetables
- General damping-off and seedling blight



Fungicide Trial Results




Source: Syngenta Results
Variety: Armenian.
Inoculated with *Pythium*. Thiram and Captan applied at the manufacturer's recommended label rate.




Source: California trials.
Inoculated with *Rhizoctonia*. Average of two trials. Thiram is applied at the manufacturer's recommended label rate.

Cucumber Plants, 28 Days
Variety: Armenian



Check, physical root measurement—196.22 cm.



FarMore Technology used, physical root measurement—**461.21 cm.**

	FarMore Technology	Thiram
Damping-off	E	G
<i>Fusarium</i>	E	E
<i>Pythium</i>	E	G
<i>Rhizoctonia</i>	E	G
Seed-borne <i>Sclerotinia</i>	E	G
Seedling blight	E	G

E = Excellent G = Good

FarMore FI400 fungicide/insecticide seed treatment technology helps maximize cucurbit and leafy vegetable production by enhancing performance and value. FarMore FI400 contains the fungicides found in FarMore F300 with the addition of thiamethoxam insecticide. This powerful fungicide/insecticide combination protects cucurbits and leafy vegetables against a broad spectrum of early-season diseases and insects.

Cucurbit Vegetables

Disease Protection

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

Insect Protection

- Cucumber beetles

Leafy Vegetables

Disease Protection

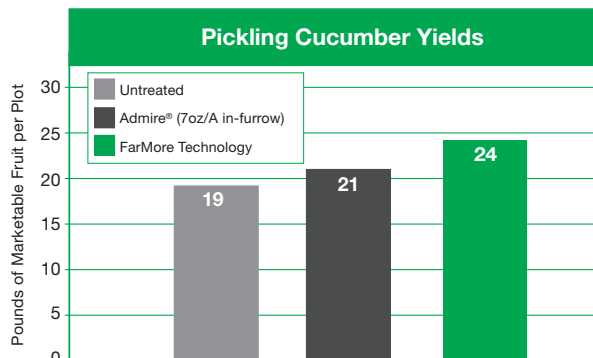
- *Rhizoctonia*
- *Fusarium*
- *Pythium*
- General damping-off and seedling blight

Insect Protection

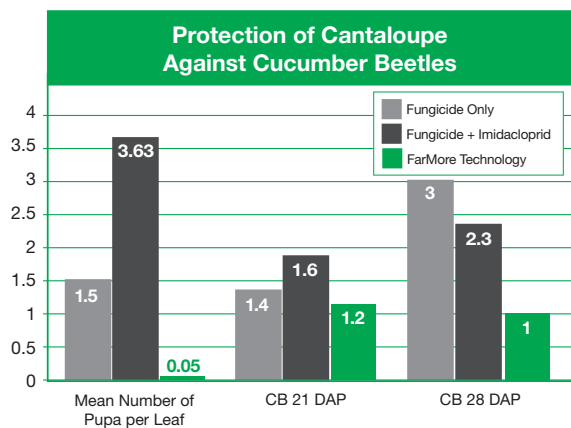
- Aphids
- Leafminers
- Thrips*
- White flies

*Provides reduced damage.

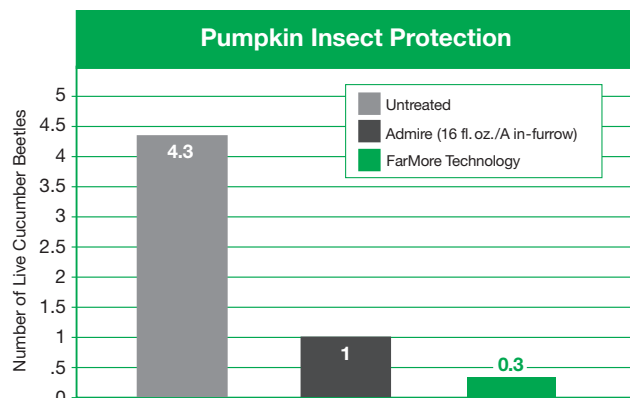




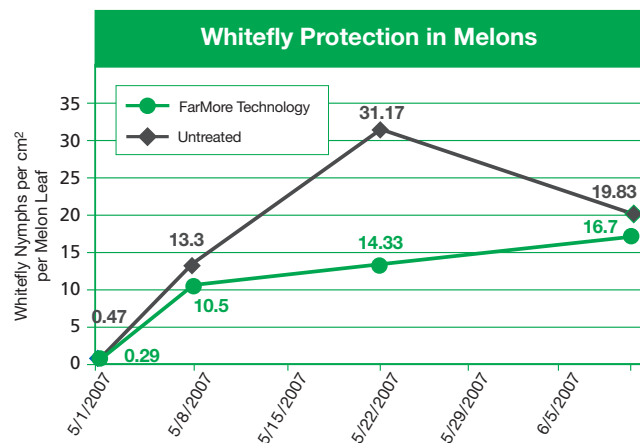
Source: Ohio trials.
Variety: Sassy



Source: California trials.
DAP = Days After Planting



Source: Ohio trials.
Variety: Hybrid Pam



Source: California trials.

FarMore FI500 fungicide/insecticide seed treatment technology offers onion growers the protection of three seed-delivered fungicides and two seed-delivered insecticides. FarMore FI500 contains the active ingredients found in FarMore FI400 plus the additional insecticide, spinosad, for increased protection against seedcorn maggots, onion maggots and onion thrips.

Vegetables

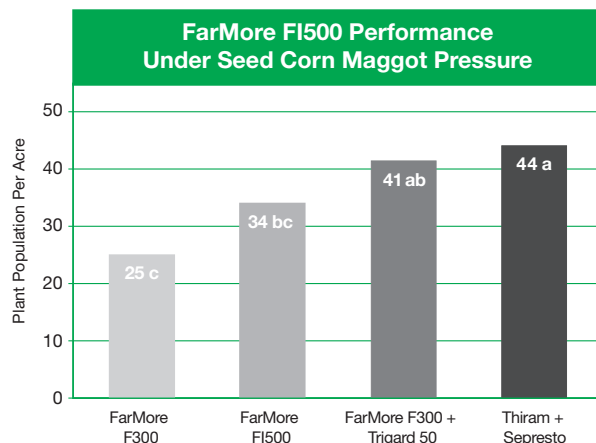
- Onions

Disease Protection

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

Insect Protection

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

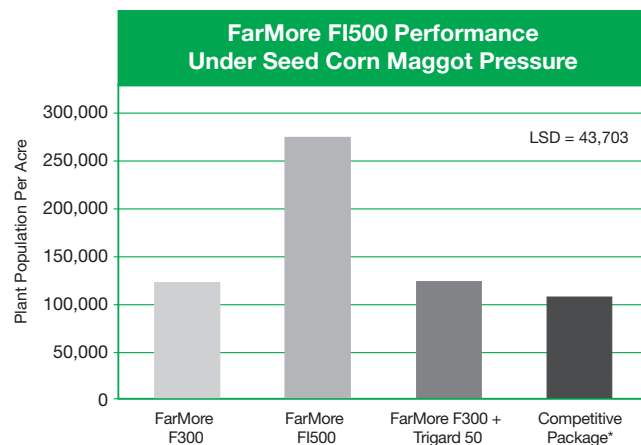


Source: USWF0U4892010: Hermiston, OR

Notes: Plant population 29 DAP (stand/30 row ft); Base Treatment:

Apron XL 7.5 + Maxim 2.5 + Dynasty 2.5 gal/100kg seed

Mertect not included in Base Treatment (2010 trial)



Source: USWF0U5822011: Hermiston, OR

Notes: Base Treatment: Apron XL 7.5 + Maxim 2.5 + Dynasty 2.5 +

Mertect 50 gal a.i./100 kg seed; TBZ included in

Base Treatment; Plant population 27 DAP (stand/A)

*Competitive Package: Thiram + Allegiance + Coronet + Sepresto

Future Plans for Protection Against Nematodes

Nematodes are thread-like, microscopic, nonsegmented worms that feed predominantly in or on plant roots. They damage crops by direct feeding on plant roots, transmitting viruses and/or facilitating bacterial and fungal infections. Nematodes are historically costly, tough-to-control pests that can cause significant damage and even death to susceptible crops.

Current management options such as contact nematicides and soil fumigants are often labor intensive and cost prohibitive, and require high amounts of active ingredients to be effective. Some of these options are currently under scrutiny and may be eliminated or restricted in the near future. Syngenta understands the value of small-seeded vegetable crops and is working to continue to improve the FarMore Technology platform by developing a nematicide component.

Commitment to Long-Term Innovation

The FarMore Technology platform is a new concept in seed treatment for the small-seeded vegetable producer. This evolutionary platform will continue to expand to meet evolving market and grower needs. It is backed by Syngenta Seedcare, a quality product team and continual research and development investment.

Syngenta is dedicated to stewardship, quality assurance and proper implementation and use of this technology, allowing growers to expect more from FarMore Technology. *Expect More™*

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FarMore F300 contains three fungicides: Apron XL, Maxim 4FS and Dynasty.

FarMore FI400 Cucurbits contains Cruiser 5FS insecticide and three fungicides: Apron XL, Maxim 4FS and Dynasty.

FarMore FI400 Leafy contains Cruiser 70 WS insecticide and three fungicides: Apron XL, Maxim 4FS and Dynasty.

FarMore FI500 Onion contains three fungicides, Apron XL, Maxim 4FS and Dynasty, and two insecticides, Regard and Cruiser 70 WS.

Apron XL[®], Beyond Seed Protection[™], Cruiser[®], Dynasty[®], Expect More[™], FarMore[®], Maxim[®], Seedcare[™], Trigard[®], the Alliance Frame, the Purpose icon and the Syngenta logo are trademarks of a Syngenta Group Company.

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For more information about FarMore Technology, please visit www.farmassist.com or call the Syngenta Customer Center at 1-866-SYNGENT(A) (1-866-796-4368).

GS 411.43102 (1/12)

SCP 182-00001-E



Seedcare[™]
Beyond Seed Protection[™]

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