Syngenta delivers grower value in sunflowers

At Syngenta, we are proud to support the sunflower industry. To help growers meet increasing demand and capitalize on market opportunities, we continue to invest in research that helps farmers Grow More Sunflowers. We take our company commitment to “think like a grower” seriously, and we diligently assess needs and challenges in the marketplace so we can provide growers and the industry with the tools they need.

We offer sunflower growers solutions to challenges they face every season. We are dedicated to being more than a manufacturer — we’re a partner to help you Grow More Sunflowers.
Quality seed to start strong

At Syngenta, we realize that quality seeds are essential to any successful harvest. That’s why we invest in genetics that create greater opportunity for growers — from disease tolerance that reduces the need for in-season protection to herbicide-tolerant hybrids that deliver options for broad-spectrum weed management.

Our Syngenta researchers work to develop high oleic hybrids that maximize yield and profits. To identify traits that fit growing conditions in the United States, our researchers screen our advanced germplasm from around the world. Then, to ensure the hybrids will meet grower needs at home, the germplasm is brought back to the U.S. and tested for high performance in both yield and oil content. For a complete list of all available Syngenta sunflower hybrids, visit sunflowers.farmassist.com.

Key benefits

- Proven Syngenta brand hybrids provide high yield performance and oil quality
- Diverse portfolio of disease-resistant hybrids lays the foundation for season-long disease management
- CLEARFIELD® Production System for sunflowers enables post-emergence control of both grass and broadleaf weeds
- Excellent standability ensures heads reach full maturity, improves dry down and makes harvest easier
- Robust hybrid portfolio features multiple oil classes and specializes in high oleic content to meet consumer vegetable oil demands

Pelleting technology for improved uniformity

Unistand® technology, an innovative process used with select Syngenta sunflower hybrids, provides growers with easier, more accurate planting, improved crop emergence and more uniform stands. Using a proprietary pelleting technology, Unistand produces a uniform size 3 seed, enabling maximum yield opportunity. Through years of on-farm testing, growers are finding that Unistand consistently delivers excellent singulation during planting. The durability of the pellet means Unistand doesn’t chip or break off the seed like clay-based pellets, saving growers time, money and frustration.

Key benefits

- Always a size 3 sunflower seed, allowing for quicker, more accurate planting without the need for time-consuming planter recalibration
- Unistand pellet doesn’t chip and clog up planters like traditional clay-based pellets
- Evenly spaced, consistent seed placement for more uniform emergence and maximum yield potential
- Stronger stand establishment produces a quicker, more even canopy to help shade out weeds
- Uniform and even growth makes managing insects and diseases easier
- Helps protect against early-season insects and disease when combined with CruiserMaxx® Sunflower seed treatment insecticide/fungicide combination of separately registered products
Applications to Grow More Sunflowers

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Besiege, Gramoxone SL 2.0 and Warrior II with Zeon Technology are Restricted Use Pesticides.

Sunflower seed with Unistand technology

Conventionally treated seed
Early-season insect and disease protection combined with improved vigor

**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.

**Key benefits**

- 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* and *Fusarium*
- Provides superior protection against early-season insect pests such as wireworm, flea beetle and sunflower beetle

**Key pests controlled**

- Sunflower beetle
- Seedling blight
- Wireworm

Refer to label for a complete list of pests.

As a combination of separately registered products, *CruiserMaxx Sunflower* plus *Bion®* seed treatment insecticide/fungicide provides superior insect and disease protection, improved germination and emergence and enhanced stand establishment.

**Key benefits**

- Offers enhanced downy mildew protection
- Unique mode of action minimizes risk of resistance development by activating the plant’s own defense mechanism

**Key pests controlled**

- Downy mildew

Refer to label for a complete list of pests.
Management tools to reduce weed competition

Starting with a clean seedbed is essential for strong stand establishment. Minimizing competition from early-season weeds helps ensure sunflowers use all available moisture and nutrients for growth, yield and quality. Syngenta offers several herbicide options to suit a variety of field needs.

Pre-emergence herbicides

**Sequence®** herbicide combines s-metolachlor with glyphosate for effective contact plus residual control of more than 170 weeds through a pre-plant or pre-emergence application. With two distinct modes of action, **Sequence** delivers weed resistance management benefits with effective knockdown control of existing weeds and residual control of later-emerging weeds. By controlling weeds early, **Sequence** is a time-saving tool for any producer’s weed control program.

**Key benefits**
- Combines the resistance management benefits of s-metolachlor with glyphosate to provide sunflowers with a clean seedbed
- Gives growers freedom to capture moisture and soil conservation benefits in reduced tillage programs while eliminating weeds to start with a clean seedbed
- Controls early weeds and delivers residual control to keep fields free of weeds so sunflower seedlings can establish a strong stand

**Key weeds controlled**
- Barnyardgrass
- Crabgrass
- Foxtails
- Kochia
- Lambsquarters, common
- Mustards
- Palmer amaranth
- Russian thistle (including glyphosate-, ALS- and triazine-resistant populations)
- Waterhemp

Refer to label for a complete list of weeds.

**BroadAxe® XC** herbicide combines multiple modes of action for broad-spectrum control of key broadleaf and grass weeds. In addition, flexible application options bring more convenience to growers across varying geographies and soil types.

**Key benefits**
- Offers long-lasting residual control for early-season weed management
- Provides flexible application timing up to three days after planting, but before crop emergence
- Performs in no-till, minimum till and conventional tillage systems
- Combines multiple modes of action to aid in resistance management

**Key weeds controlled**
- Barnyardgrass
- Foxtails
- Kochia
- Palmer amaranth
- Russian thistle (including glyphosate-, ALS- and triazine-resistant populations)
- Waterhemp
**Burndown herbicide**

**Gramoxone® SL 2.0** herbicide delivers effective control of annual grass and broadleaf weeds so sunflower seedlings emerge in fields free from weed competition.

**Key benefits**

- Broad-spectrum burndown weed control to start the season with a clean seedbed and minimize competition for moisture and nutrients
- Effective resistance management tool to prolong the viability of herbicides
- Excellent tool to control weeds in reduced tillage systems to help conserve moisture

**Key weeds controlled**

- Crabgrass
- Foxtails
- Kochia
- Pigweed

Refer to label for a complete list of weeds.

*Gramoxone SL 2.0 is a Restricted Use Pesticide.*
Reliable insect protection for a more productive stand

Warrior II with Zeon Technology® insecticide protects sunflower plants from insect damage that can reduce yield and quality. During the seedling stage, Warrior II with Zeon Technology stops cutworms and flea beetles from cutting off seedlings and chewing foliage. During the vegetative stage, Warrior II with Zeon Technology stops pests like the sunflower beetle, red and gray seed weevil, and sunflower stem weevil, which commonly feed on flowers, seeds and stems.

Key benefits

• Stops flea beetle feeding so plants retain moisture and develop a productive stand
• Controls sunflower moth which leads to fewer infections of Rhizopus head rot that invades heads through tissue damage from larval feeding
• Controlling sunflower stem weevil helps prevent transmission of Phoma black stem disease

Key pests controlled

• Banded sunflower moth
• Seed weevil (adult)
• Sunflower beetle
• Sunflower moth

Refer to label for a complete list of insects.
Warrior II with Zeon Technology is a Restricted Use Pesticide.

Besiege® insecticide is a powerful, long-lasting foliar insecticide that utilizes two active ingredients to stop a broad spectrum of sunflower’s most damaging lepidopteran pests from affecting your crop. Available as a convenient premix solution, Besiege eliminates the need for tank mixing while offering low application rates. With two distinct modes of action, Besiege controls all stages of lepidopteran pests and other bothersome insects like seed weevil and stink bug.

Key benefits

• Consistently controls insects through contact and ingestion activity
• Easily integrates into resistance management programs
• Flexible application timing allows growers to apply when it is best for their operation

Key pests controlled

• Cutworm spp.
• Fall armyworm
• Seed weevil (adult)
• Stink bug spp.

Refer to label for a complete list of insects.
Besiege is a Restricted Use Pesticide.
Strong disease control for improved crop performance

Quadris® fungicide delivers top-notch disease control so sunflower plants can focus their energy on seed set and seed fill rather than warding off fungal pathogens. Through long-lasting disease control, Quadris helps protect plants to maximize yield and quality. By tank mixing Quadris with an insecticide, growers can also achieve disease and insect control in a single pass.

Key benefits

- Broad-spectrum sunflower disease control includes rust and alternaria leaf spot
- Application flexibility and long-lasting residual disease control allows growers to time applications to fit their farm needs
- Systemic movement through plant leaves protects from disease as the crop grows and allows the plant to deliver better yield and quality

Key pests controlled

- Alternaria leaf spot
- Sunflower rust

Refer to label for a complete list of pests.

Desiccation for timely harvests

Gramoxone SL 2.0

As harvest approaches, sunflowers may need help drying down quickly to avoid damage from severe weather or bird feeding. To help speed time to harvest, Gramoxone SL 2.0 serves as an efficient desiccant so growers can maximize their investment.

Key benefits

- Allows for an earlier harvest, minimizing losses from bird feeding and stopping the spread of Sclerotinia head rot
- Dries down stalks and green matter to facilitate a timely harvest
- Increases combine efficiency and speed while lessening wear and tear
- Reduces foreign matter, seed moisture and dockage

Gramoxone SL 2.0 is a Restricted Use Pesticide.

For more information and product labels, visit sunflowers.farmassist.com.

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Apron XL®, Besiege®, Cruiser®, CruiserMaxx®, Dual Magnum®, Dynasty®, Gramoxone®, Maxim®, Quadris®, Sequence®, Touchdown®, Unistand®, Warrior II with Zeon Technology®, Zeon®, the Alliance frame, the Purpose icon and the Syngenta logo are trademarks of a Syngenta Group Company. Bion® is a trademark of Merck KGaA. BroadAxe® is a registered trademark of FMC Corporation. Clearfield® is a registered trademark of BASF.