



# Agrisure Trait Technology Helps Grow More Corn

Every field is unique. That's why it is important to have customized solutions that allow growers to choose what works best on their farm. With the right combination of technologies, growers can get results that exceed their expectations. The Agrisure® traits portfolio offers top-performing trait stacks that are proven to deliver the results growers need for a high-yielding crop.

Comprised of high-performance traits that have been developed to provide best-in-class insect control, game-changing drought tolerance and exceptional herbicide tolerance in corn, the Agrisure traits portfolio offers a unique solution for any field, helping to maximize yield potential and grow more corn.

## WHAT'S IN A (TRAIT STACK) NAME?

In an effort to convey the characteristics and advantages of the various Agrisure trait stacks, there is a straightforward naming system to indicate the trait technologies in each trait stack. The naming system, which began with the introduction of the Agrisure Viptera® 3111 trait stack, sets forth a consistent method for identifying technology and trait stacking opportunities.



The **brand suffix** changes as new technologies are introduced.

The **technology series** is indicated by the first number. The 3 technology series represents herbicide tolerance and the 5 technology series represents next generation corn rootworm control.

The **last three numerical identifiers** represent the number of modes of action in each hybrid for broad lepidopteran, corn borer and rootworm control.

The **letter A** indicates that the trait stack includes Agrisure Artesian technology for water optimization.

Note: The naming system does not apply to Agrisure 3000GT.

# Traits and Stacks

## AgrisureDuracade™

Agrisure Duracade™ is the next-generation corn rootworm trait from Syngenta that delivers unmatched corn rootworm control. Agrisure Duracade sets the new standard for control with 99.79% proven efficacy against corn rootworm<sup>1</sup> and dual modes of action that offer growers more confidence and peace of mind around the ability to control corn rootworms while increasing trait durability. This highly anticipated trait expresses a unique insecticidal protein (eCry3.1Ab) for a new mode of action against corn rootworm.

The Agrisure Duracade trait will be available for the 2014 growing season and will be the foundation of revolutionary new trait stacks, including Agrisure Duracade 5122, E-Z Refuge® and Agrisure Duracade 5222, E-Z Refuge, which will offer unprecedented control of corn rootworm and support for resistance management efforts.

### AgrisureDuracade™ 5122 E-Z Refuge®

The Agrisure Duracade 5122, E-Z Refuge trait stack offers growers unmatched corn rootworm control in a 5% integrated, single-bag refuge product. The Agrisure Duracade 5122, E-Z Refuge trait stack combines the Agrisure Duracade trait with the trusted Agrisure RW trait for dual modes of action against corn rootworm; the Agrisure CB/LL trait for control of corn borer; the Herculex® I trait for an additional mode of action against corn borer and broad lepidopteran control; and the Agrisure GT trait for glyphosate tolerance.

 AgrisureDuracade™ +  AgrisureRW™ +  
 AgrisureCB/LL™ +  AgrisureGT™ +  Herculex I™

### AgrisureDuracade™ 5222 E-Z Refuge®

The Agrisure Duracade 5222, E-Z Refuge trait stack offers corn growers a 5% integrated, single-bag refuge product containing one of the most comprehensive above- and below-ground insect control options on the market, featuring two modes of action against corn rootworm and lepidopteran pests. The Agrisure Duracade 5222, E-Z Refuge trait stack includes the same traits as the Agrisure Duracade 5122, E-Z Refuge trait stack with the addition of the Agrisure Viptera® trait for breakthrough control of the multi-pest complex, a collection of the most destructive lepidopteran corn pests.

 AgrisureDuracade™ +  AgrisureViptera™ +  AgrisureRW™ +  
 AgrisureGT™ +  AgrisureCB/LL™ +  Herculex I™

## AgrisureArtesian®

Agrisure Artesian®, a game-changing water optimization technology, harnesses the power of scientifically selected genes for multiple modes of action against drought. In Syngenta field trials across many locations, soil types and rainfall levels, hybrids with Agrisure Artesian technology have demonstrated the ability to deliver up to 15 percent more yield under drought conditions while maximizing yield when moisture stress is not an issue. Agrisure Artesian is available in a variety of Agrisure trait stacks, with more options available each year. The addition of Agrisure Artesian technology into a trait stack will be denoted by an 'A' at the end of the trait stack name.

### AgrisureArtesian® 3011A

The Agrisure Artesian 3011A trait stack combines Agrisure Artesian water optimization technology with the Agrisure 3000GT trait stack, which offers herbicide flexibility as well as protection from corn borer and corn rootworm.

 AgrisureArtesian® +  Agrisure3000GT™

<sup>1</sup>Mortality Impact of Bt Transgenic Maize Roots Expressing eCry3.1Ab, mCry3A and eCry3.1Ab plus mCry3A on Western Corn Rootworm Larvae in the Field. Bruce E. Hibbard, Daniel L. Frank, Ryan Kurtz, Eric Boudreau, Mark R. Ellersieck, and J. Frederick Odhiambo. Journal of Economic Entomology. 2011, 104 (5). 1584-1591.



## Agrisure Viptera®

The Agrisure Viptera trait features Vip3A, a robust mode of action that offers breakthrough control of the multi-pest complex. Agrisure Viptera represents the first-ever Vegetative Insecticidal Protein (VIP) in corn and is the industry's first trait with activity on a wide array of lepidopteran pests. Since its introduction to the marketplace, Agrisure Viptera has brought new meaning to corn insect control.


### Agrisure Viptera® 3111

The Agrisure Viptera 3111 trait stack is a true breakthrough in insect control—providing protection against more insects than any other trait stack on the market. A combination of the Agrisure Viptera trait and the Agrisure 3000GT triple stack, the Agrisure Viptera 3111 trait stack provides unsurpassed multi-pest control of 14 yield- and quality-robbing insects including corn earworm, corn borer, corn rootworm and the multi-pest complex. It also offers the same herbicide flexibility as the Agrisure 3000GT triple stack, providing growers with the choice of glyphosate or glufosinate applications.

 Agrisure Viptera +  Agrisure 3000GT

### Agrisure Viptera® 3110

The Agrisure Viptera 3110 trait stack combines the Agrisure Viptera trait with the Agrisure GT/CB/LL trait stack to provide unparalleled control of above-ground insects. It is ideal for growers for whom rootworm management is not a primary concern, and it offers the same herbicide flexibility as the Agrisure Viptera 3111 trait stack with both glyphosate and glufosinate tolerance.

 Agrisure Viptera +  Agrisure GT/CB/LL

### Agrisure Viptera® 3220 E-Z Refuge®

The Agrisure Viptera 3220, E-Z Refuge® trait stack offers corn growers multiple modes of action against European corn borer and broad lepidopteran pests with a 5% integrated, single bag refuge\*. Boasting best-in-class broad lepidopteran control and industry-leading control of corn earworm, hybrids with the Agrisure Viptera 3220 trait stack are intended for geographies where corn rootworm management is not a primary issue.

*\*Also available as a reduced structured refuge product - Agrisure Viptera 3220 trait stack.*

 Agrisure Viptera +  Agrisure GT/CB/LL + 



## Leading Traits and Trait Stacks for Insect Control and Herbicide Tolerance

### Agrisure<sup>®</sup>3122 E-Z Refuge<sup>\*</sup>

Hybrids containing the Agrisure 3122, E-Z Refuge trait stack offer growers the yield benefits of a 5% integrated, single bag refuge<sup>\*</sup> trait stack featuring two modes of action against corn borer and corn rootworm. The Agrisure 3122 trait stack includes the trusted Agrisure CB/LL and Agrisure RW traits; the Herculex I trait, which provides a second mode of action against corn borer; and the Herculex RW trait, which provides a second mode of action against corn rootworm. It also includes the Agrisure GT trait for glyphosate tolerance.

*\*Also available as a reduced structured refuge product - Agrisure 3122 trait stack.*

 Agrisure<sup>®</sup>CB/LL +  Agrisure<sup>®</sup>RW +  Agrisure<sup>®</sup>GT +  + 

### Agrisure<sup>®</sup>3000GT

Agrisure 3000GT is the only triple stack with no history of yield drag. Agrisure 3000GT hybrids offer herbicide flexibility with both glyphosate and glufosinate tolerance, as well as protection from corn borer and corn rootworm.

 Agrisure<sup>®</sup>GT +  Agrisure<sup>®</sup>CB/LL/RW


### Agrisure<sup>®</sup>CB/LL/RW

The Agrisure CB/LL/RW trait stack delivers proven insect control—combining the season-long corn borer protection and glufosinate tolerance of Agrisure CB/LL with the corn rootworm control of Agrisure RW. Hybrids with the Agrisure CB/LL/RW trait stack can be used as part of a strategy to control glyphosate-tolerant volunteers in corn-on-corn rotations.

 Agrisure<sup>®</sup>CB/LL +  Agrisure<sup>®</sup>RW

### Agrisure<sup>®</sup>GT/CB/LL

The Agrisure GT/CB/LL trait stack provides season-long control of corn borer while offering herbicide flexibility—with both glyphosate and glufosinate tolerance.

 Agrisure<sup>®</sup>CB/LL +  Agrisure<sup>®</sup>GT

### Agrisure<sup>®</sup>CB/LL

The Agrisure CB/LL trait has been providing season-long control or suppression of damaging insects for more than a decade—helping hybrids reach their maximum yield potential. Hybrids containing the Agrisure CB/LL trait provide season-long control or suppression of insects as well as glufosinate tolerance.

### Agrisure<sup>®</sup>GT

Hybrids with the Agrisure GT trait provide excellent tolerance to in-crop applications of glyphosate-based herbicides while offering growers the freedom to choose their preferred glyphosate brand.

The Agrisure traits portfolio provides the best protection on the market with a variety of solutions to help farmers grow more corn. Our diverse selection of technologies fits the unique needs of each farmer, helping to maximize yield potential and increase profit potential.

For more information, please visit [www.agrisuretraits.com](http://www.agrisuretraits.com).

**syngenta**<sup>®</sup>

© 2013 Syngenta. **Caution: Do not spray E-Z Refuge products with glufosinate ammonium based herbicides, including Ignite<sup>®</sup> and Liberty<sup>®</sup> herbicides.** Agrisure<sup>®</sup>, Agrisure Artesian<sup>®</sup>, Agrisure Duracade<sup>™</sup>, Agrisure Viptera<sup>®</sup>, E-Z Refuge<sup>®</sup>, the Alliance frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. HERCULEX<sup>®</sup> and the HERCULEX Shield are trademarks of Dow AgroSciences, LLC. HERCULEX Insect Protection technology by Dow AgroSciences. LibertyLink<sup>®</sup>, Liberty<sup>®</sup> and the Water Droplet logo are registered trademarks of Bayer.

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