### Clean fields. Bigger yields. Easy decision.



Advanced trait technology for exceptional weed and above-ground pest control.







## Take your fields to the next level with leading trait technology



PowerCore<sup>®</sup> Enlist<sup>®</sup> corn brings advanced trait technology to your fields with protection against tough weeds and above-ground pests. Available now in new genetics from Titan Pro. Isn't it time to get better protection on your corn fields? If you've already made the switch to Enlist E3® soybeans, PowerCore Enlist corn is the perfect companion, providing the most flexible weed management system available today for your corn and soybeans.



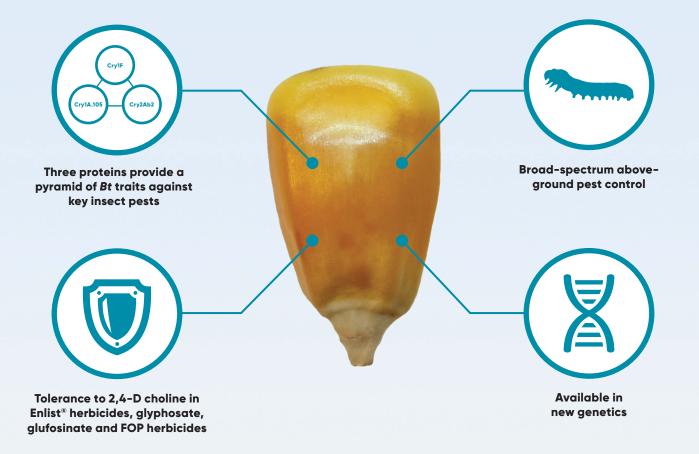
Read on to learn how PowerCore Enlist corn can help you achieve clean fields and bigger yields next season.





### What's inside?

PowerCore Enlist corn is designed to protect yields through an integrated approach to managing weeds and above-ground pests.



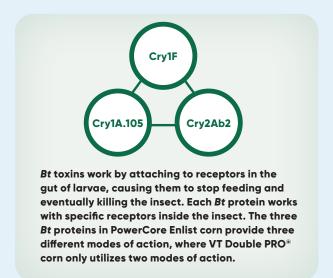




## Broad-spectrum above-ground pest control

#### A pyramid of Bt traits

PowerCore<sup>®</sup> Enlist<sup>®</sup> corn features three *Bt* proteins for superior protection against above-ground insects.



	Primary Pest Controlled	PowerCore® Enlist® corn	VT Double PRO® corn
3 modes of action:	Black cutworm	1	NONE
	European corn borer	<i>」 」 」 」</i>	<i>」 」</i>
	Fall armyworm	<i>」 」 」</i>	<i>\ \</i>
	Southwestern corn borer	<i>」 」 」 」</i>	<b>J J</b>
	Chief and the sent number of modes of action		

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PowerCore Enlist corn provides more effective modes of the provides a broader spectrum of above-ground insect pests.

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#### **Refuge requirements**



 Corn Region: 5% separate, structured refuge

• Cotton Region: 20% separate, structured refuge



• Corn Region: 5% integrated refuge included in the bag

• Cotton Region: 20% additional separate, structured refuge

#### Why do more modes of action make a difference?

Over time, insects can develop resistance to specific *Bt* proteins through the process of natural selection. Researchers believe resistance tends to develop through three main methods: disruption of the activation of the *Bt* protein inside the insect's gut, mutation or regulation of *Bt* receptors inside the insect and changes in insect immune systems.<sup>1</sup> Technologies with a pyramid of traits, like PowerCore Enlist corn, incorporate *Bt* traits that bind to insects in multiple ways, making it more difficult for insects to develop selective resistance to many activities. As part of an integrated pest management program, PowerCore Enlist corn helps farmers simplify their approach to managing resistance risk.\*

### Look out for these yield robbers

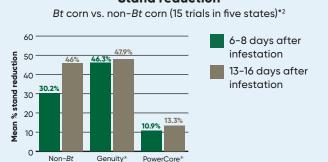
PowerCore Enlist corn helps you fight some of the most damaging pests in corn.



#### **BLACK CUTWORM**

- Damages corn seedlings
- Reduces stands
- Potential yield loss
  - Up to 24% (V3 plants cut)
- Up to 81% (V5 plants cut)

#### **Stand reduction**



VT Double trait technology

PRO®\*\*

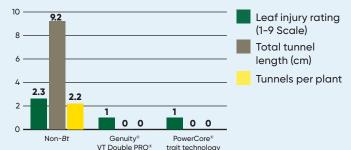


#### **EUROPEAN CORN BORER**

- Feeds on whorl leaves
- Tunnels in stalks
- Ear drop, stalk lodging, increased risk of stalk rot
- Potential yield loss
  - As high as 12% at pre-tassel stage

#### Plant damage

#### Bt corn vs. non-Bt corn (15 trials in five states)\*2





#### **FALL ARMYWORM**

- Feeds on tassels, leaves and kernels
- Can cause serious defoliationPotential yield loss
  - 7% to 45% in cases of total infestation

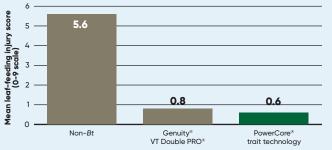


#### **CORN EARWORM**

- Feeds on leaves, tassels, silks
- Damage can allow mycotoxin entry
- Potential yield loss
  - 1.5% to 16%, depending on region

#### Bt corn vs. non-Bt corn (11 trials in six states)\*2

Leaf injury





#### SOUTHWESTERN CORN BORER

- Feeds on whorl leaves
- Tunnels in stalks
- Tunneling limits uptake of water, nutrients
- Potential yield loss
  - 20% to 30% (whorl stage)
  - 12% to 28% (second generation larvae)



 It takes less damage than you might think to impact yield: A loss of just 3 kernels per ear = 1 bu/A in lost yield.

\* Efficacy of the Bt proteins expressed for control of lepidopteran pests \*\* Double PRO does not claim to control black cutworm.



# Effective, convenient herbicide system for superior weed control

#### Tolerant to four herbicides:

- 2,4-D choline in Enlist® herbicides
- Glyphosate
- Glufosinate
- FOP herbicides

VT Double PRO® corn is tolerant to glyphosate only.



If you are planting Enlist E3® soybeans, upgrading to PowerCore® Enlist® corn provides you the most flexible weed management system available today for your corn and soybeans.

#### Herbicides designed to land and stay on target

PowerCore Enlist corn can be sprayed with Enlist herbicides, which provide unrivaled weed control along with flexibility and ease-of-use.

#### Enlist herbicides feature Colex-D® technology

- Reduced potential for physical drift by 90% compared to tank mix of traditional 2,4-D and glyphosate\*
- 96% less volatile than 2,4-D ester
- \* When combined with low-drift nozzles.



COLEX•D<sup>®</sup> technology

#### HERBICIDE

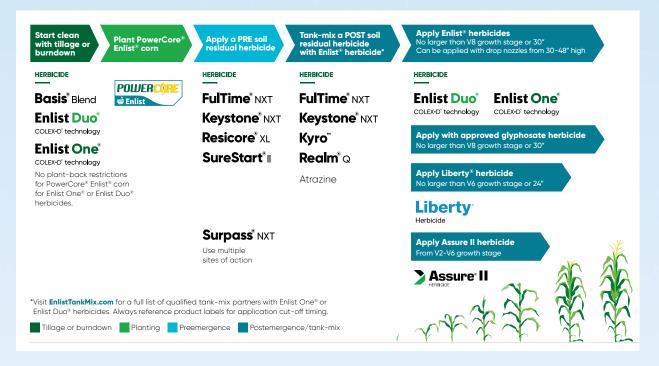
- Convenient proprietary blend of 2,4-D choline and glyphosate
- Two sites of action to deliver control and help minimize the risk for resistance in your fields
- Improved tank stability: Blend stays mixed, for easier tank cleanout



#### HERBICIDE

- Straight-goods 2,4-D choline
- Provides additional tank-mix flexibility with Liberty<sup>®</sup> herbicide and other qualified tank-mix products, allowing for a customized weed control program to fit each farm
  - Find hundreds of qualified tank-mix partners at EnlistTankMix.com
  - Can be mixed with qualified AMS products

The program approach used with the Enlist® weed control system was designed to prevent resistance development seen with past weed control trait technologies.



#### Tolerant to FOP herbicides

If grasses are an issue in your corn fields, PowerCore Enlist corn is compatible with FOP herbicides, including quizalofop, for control of:

Fall panicum

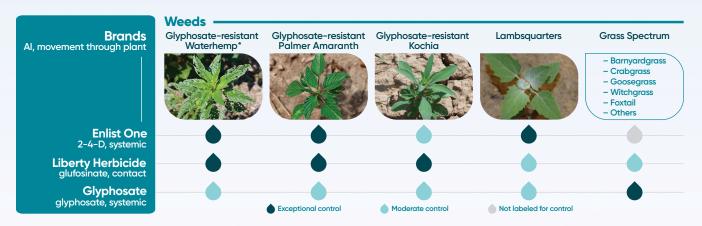
Johnsongrass\*\*

Quackgrass

- Field sandbur
- Giant foxtail

- Shattercane

Volunteer corn



\*\* Glyphosate resistance has been reported in some regions.

Enlist One and Liberty herbicides work in combination to control troublesome broadleaf weeds such as pigweed, kochia, and lambsquarters.





PowerCore<sup>®</sup> Enlist<sup>®</sup> corn is now available from Titan Pro.

#### Upgrade your corn for:

- Broad-spectrum above-ground pest control
- Four herbicide tolerances, plus tank-mix flexibility
- Convenience of one advanced weed control system for soybeans and corn



#### 641.357.7283 www.titanprosci.com

<sup>1</sup> Xiao, Y. and Wu, K. "Recent progress on the interaction between insects and Bacillus thuringiensis crops," Philos Trans R Soc Lond B Biol Sci, 374, (2019), https://www.ncbi. nlm.nih.gov/pmc/articles/PMC6367150/.

<sup>2</sup>Rule, D. M., S. P. Nolting, et al, "Efficacy of pyramided Bt proteins Cry1F, Cry1A.105, and Cry2Ab2 expressed in SmartStax corn hybrids against lepidopteran insect pests in the northern United States," *Journal of Economic Entomology*, 107, 1 (2014) 403–409 https://pubmed.ncbi.nlm.nih.gov/24665726/

\* Colex-D, Enlist Duo, Enlist E3, Enlist One, the Enlist Logos and the PowerCore Enlist Logo are trademarks of Corteva Agriscience and its affiliated companies. PowerCore<sup>®</sup> multi-event technology developed by Corteva Agriscience and Monsanto. PowerCore<sup>®</sup> is a registered trademark of Monsanto Technology LLC. Always follow IRM, grain marketing and all other stewardship practices and pesticide label directions. B.t. products may not yet be registered in all states. Check with your seed representative for the registration status in your state. The transgenic soybean event in Enlist E3<sup>®</sup> soybeans is jointly developed and owned by Corteva Agriscience and M.S. Technologies L.L.C. Enlist Duo<sup>®</sup> and Enlist One<sup>®</sup> herbicides are not registered for sale or use in all states or counties. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your area. Enlist Duo and Enlist One are the only 2,4-D products authorized for use with Enlist corps. Consult Enlist herbicide [abels for weed species controlled. Assure II herbicide (quizalofop) is a Group 1 herbicide for grass control. Assure<sup>®</sup> II herbicide is currently the only FOP herbicide for in-crop use with Enlist<sup>®</sup> corn. Product responses can vary by location, pest population, environmental conditions, and agricultural practices. Please contact your Corteva Agriscience sales professional for information and suggestions specific to your operation. Individual results may vary. Various factors, including pest pressure, reduced susceptibility, and insect resistance in some pest populations may affect efficacy of certain corn technology products in some regions. To help extend durability of these technologies, Corteva Agriscience recommends you implement Integrated Pest Management (IPM) practices such as crop rotation, cultural and biological control tactics (including rotating sources of Bt-protected corn traits), pest scouting, and appropriate use of pest thresholds when employing management practices such as insecticide

your local university extension for more information regarding insect resistance management guidelines, best management practices and to understand whether there has been a shift in susceptibility or insect resistance with certain pests documented in your area. Genuity VT Double PRO® is a registered trademark of Bayer Group. Liberty®, LibertyLink® and the Water Droplet Design are trademarks of BASF. Always read and follow label directions.

