

SEED CORN TECHNOLOGY OVERVIEW.

NOVEMBER, 2012

TECHNOLOGY	ECB/ OTHER TRAIT	CRW TRAIT	HERBICIDE TOL.		INSECT CONTROL							REFUGE (see notes)
			RR*	LL**	ECB	CRW	BCW	FAW	CEW	WBC	SB	
YieldGard VT Triple® (VT3)	▲	■	✓		●	●	○	◐	◐	○	◐	20%
Genuity® VTDouble PRO® (GENVT2P)	▲		✓		●	○	○	●	●	○	○	5% RIB
Genuity® VT Triple PRO® (GENVT3P)	▲	■	✓		●	●	○	●	●	○	○	10% RIB
Genuity® SmartStax® (GENSS)	▲▲	■□	✓	✓	●	●	●	●	●	●	○	5% RIB
Herculex® XTRA (HXT)	▲	■		✓	●	●	●	●	◐	●	○	20%
Herculex® XTRA/RR (HXT/RR)	▲	■	✓	✓	●	●	●	●	◐	●	○	20%
Herculex® I (HX1)	▲			✓	●	○	●	●	◐	●	○	20%
Optimum® AcreMax® (AM-R)	▲▲		✓		●	○	●	●	◐	●	○	5% RIB
Optimum® AcreMax® 1 (AM1)	▲	■	✓	✓	●	●	●	●	◐	●	○	10% RIB + 20%
Optimum® AcreMax® RW (AMRW-R)		■	✓		○	●	○	○	○	○	○	10% RIB
Optimum® AcreMax® Xtra (AMX-R)	▲▲	■	✓		●	●	●	●	◐	●	○	10% RIB
Optimum® AcreMax® XTreme (AMXT-R)	▲▲	■□	✓		●	●	●	●	◐	●	○	5% RIB
Optimum® TRIsect™ (CHR)	▲	■	✓	✓	●	●	●	●	◐	●	○	20%
Optimum® Intrasect® (YHR)	▲▲		✓	✓	●	○	●	●	◐	●	○	5%
Optimum® Intrasect® Xtra (YXR)	▲▲	■	✓	✓	●	●	●	●	◐	●	○	20%
Optimum® Intrasect® XTreme (CYXR)	▲▲	■□	✓	✓	●	●	●	●	◐	●	○	5%
Agrisure® GT/CB/LL	▲		✓	✓	●	○	○	◐	◐	○	◐	20%
Agrisure® 3000GT	▲	■	✓	✓	●	●	○	◐	◐	○	◐	20%
Agrisure® Viptera® 3110	▲▲		✓	✓	●	○	●	●	●	●	●	20%
Agrisure® Viptera® 3111	▲▲	■	✓	✓	●	●	●	●	●	●	●	20%
Agrisure® Artesian™ 4011	▲	■	✓	✓	●	●	○	◐	◐	○	◐	20%
Agrisure® 3122 E-Z Refuge™	▲▲	■□	✓	✓	●	●	●	●	●	●	◐	5% RIB
Agrisure® Viptera® 3220 E-Z Refuge™	▲▲▲		✓	✓	●	○	●	●	●	●	●	5% RIB
Refuge Advanced® Powered by SmartStax®	▲▲	■□	✓	✓	●	●	●	●	●	●	○	5% RIB

ECB•European corn borer | CRW•Corn rootworm | BCW•Black cutworm | FAW•Fall armyworm | CEW•Corn earworm | WBC•Western bean cutworm | SB•Common stalk borer | RIB•Refuge in Bag

EUROPEAN CORN BORER

- ▲ MON810
- ▲ MON89034 (2 modes)
- ▲ TC1507
- ▲ Bt11

BROAD LEPIDOPTERAN CONTROL

- ▲ MIR162

CORN ROOTWORM

- MON88017
- DAS591227
- MIR604

INSECT CONTROL

- Control
- ◐ Suppression
- No activity

HERBICIDE TOLERANCE

* Tolerant to Roundup® and other glyphosate herbicides
** Tolerant to Liberty® and other glufosinate herbicides

REFUGE NOTES FOR THE CORN BELT

- 20% 20% non-B.t. structured refuge adjacent to or within field
- 20% 20% non-B.t. structured refuge up to 1/2 mile away
- 5% 5% non-B.t. structured refuge up to 1/2 mile away
- 5% RIB RIB 5% = refuge blended in the bag, NO SEPARATE REFUGE NEEDED
- 10% RIB + 20% 10% CRW refuge blended in the bag plus 20% non-B.t. structured refuge for ECB up to 1/2 mile away
- 10% RIB RIB 10% = refuge blended in the bag, NO SEPARATE REFUGE NEEDED

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CORN HYBRIDS AND *B.t.* TECHNOLOGY

Many corn hybrids contain multiple insect protection traits. Fact is, *B.t.* insect protection is a key component in almost all on-farm insect management plans.

Growers who utilize *B.t.* technology are required to plant a non-*B.t.* corn refuge. This insect resistance management (IRM) refuge preserves the insect protection capabilities of these hybrids, and all of the convenience and economic benefits that come with in-the-seed insect control.

REFUGE REQUIREMENTS VARY BY TECHNOLOGY

One thing is certain. While IRM requirements have become more complex and confusing, IRM compliance remains essential. For some technologies, that means a separate, structured insect refuge must be planted. For new refuge in bag (RIB) advancements, IRM is much simpler and easier. RIB products contain a seed blend that meets complete or partial refuge requirements. Having accurate information on each technology utilized is imperative.

TECHNOLOGY OVERVIEW CHART

The technology chart inside lists specific characteristics of each trait as of the date of printing. It is not meant to replace the technology use guides or stewardship agreements developed and distributed by each trait provider. Refer to that information for specific use recommendations.

KNOWLEDGE IS POWER

With better understanding of each trait’s capabilities and requirements, growers are better prepared to select and manage hybrids to maximize their whole farm yield and profitability. Just as importantly, the information enclosed will allow growers to develop an effective IRM plan which meets EPA requirements and helps ensure long-term access to the convenience and economic benefits of *B.t.* technology. ■

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***B.t.* products** may not yet be registered in all states. Check with your seed representative for the registration status in your state.

CONFIRM MARKET OPPORTUNITIES FOR SPECIFIC TRAITS WITH YOUR GRAIN BUYER.


IMPORTANT IRM INFORMATION. Refuge in Bag corn does not require the planting of a structured refuge except in cotton growing regions where corn earworm is a significant pest. See IRM/Grower Guides for additional information on specific traits. Always read and follow IRM requirements.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® brand agricultural herbicides. Roundup® brand agricultural herbicides will kill crops that are not tolerant to glyphosate.


LIBERTY LINK®

Seed products with the LibertyLink® (LL) trait are resistant to the herbicide glufosinate ammonium, an alternative to glyphosate in corn, and combine high-yielding genetics with the powerful, non-selective, postemergent weed control of Liberty® herbicide for optimum yield and excellent weed control.

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Before opening a bag of seed, be sure to read, understand, and accept the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed as set forth in the technology agreement(s) that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.





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