Mycogen Facts corn

THE NATIVE RESISTANCE ALTERNATIVE

It can be a guessing game out there. Is this the year European corn borer (ECB) will strike conventional hybrids or will they remain free from attack?

Many growers have chosen to reduce their risk of yield losses from ECBs by selecting *Bt* hybrids. While *Bt* hybrids offer assurances, growers must be concerned that planting all their corn acres with *Bt* hybrids could lead to ECB resistance. Therefore, they need to follow a recommended refuge program. In the past, their refuge has consisted solely of conventional hybrids that are vulnerable to ECB attacks.

Today, enhanced native resistance corn hybrids are available that address these concerns. They offer protection against ECBs, but at the cost of conventional hybrids.

In today's climate of low corn prices and tight margins, a high-yielding crop is essential. Native resistance hybrids help protect your investment in a cost-effective manner.

What Is Native Resistance?

In the spectrum of corn hybrids available to growers, native resistance hybrids sit squarely between conventional and *Bt* hybrids.

While conventional hybrids give almost *no* protection against ECB and *Bt* hybrids offer good full-season protection, native resistance hybrids provide good early protection, which helps a young corn plant mature to a level where it can achieve its full yield potential.

In Mycogen's NatureGard® native resistance hybrids, this level of resistance to ECB has been bred into the hybrid just like yield and other agronomic traits are bred into conventional hybrids. Even though native resistance hybrids give a level of ECB control, they do not carry the *Bt* gene like our NatureGard NGBt1 hybrids. Native resistance hybrids occupy a unique position between conventional and *Bt* hybrids, and offer unique benefits to growers.

Who Benefits From Native Resistance Hybrids?

- Growers who want to protect their fields against ECB, but feel they can't justify the *Bt* investment, can protect their fields from first brood infestations at the cost of conventional hybrids.
- Growers with large acres of *Bt* corn can reduce potential yield risks by using native resistance hybrids.
- Growers with large acres of *Bt* corn can use native resistance hybrids as part of a university-recommended program for preventing ECB resistance to *Bt*. As a refuge, native resistance hybrids will provide the protection that conventional hybrids can't give.

Benefits For Conventional Hybrid Users

Corn growers who occasionally face ECB pressure must rely on insecticide treatments to control pests or be willing to accept yield losses from ECB infestation. Often, these same growers choose not to use *Bt* hybrids because they feel they can't justify the cost.

Native resistance hybrids are an effective alternative for conventional hybrid users who do not normally spray for ECB and whose corn fields occasionally suffer damage from ECB. These fields will receive protection from low-level infestations.

Since the native resistance trait is a result of breeding, the cost to use these hybrids is the same as for other conventional hybrids. And, because growers receive a much higher level of protection against first brood ECB damage, higher yields and profits are usually the result.

Benefits For *Bt* Hybrid Users

Bt hybrids have given growers with fields susceptible to heavy ECB infestations an economical means to combat the problem. With the insertion of the NGBt1 gene, the corn plant is protected until it has reached its full yield potential.

But government, university and industry entomologists are concerned that the overuse of *Bt* hybrids could lead to *Bt*-resistant ECB. That's why it's recommended that growers plant at least 20 percent of their acreage with conventional hybrids as a refuge for ECB.

Native resistance hybrids:

- Produce high yields even when ECB pressure ends up being less than anticipated.
- Are an excellent choice to plant on acres planned for an ECB refuge as they provide a level of ECB control most conventional hybrids can't match.

Solid Performance Traits

Native resistance hybrids offer other agronomic benefits, too:

- Superb stalk and root strength and ear retention due to protection against first brood ECB. This reduces yield losses from second brood ECB.
- Above average to superior yield depending on the levels of ECB pressure during the season.

Choose The Hybrid That Fits Your Field

When it's time to decide whether to use a native resistance hybrid, be sure to select the hybrid that has the agronomic attributes that match your soil and climate conditions. Take a common-sense approach. Know the risk your acreage has to ECB damage.

Remember that native resistance hybrids will present a high level of control against first brood ECB, but they aren't bred to match the full-season protection of *Bt* hybrids. Likewise, while native resistance hybrids have a number of strong agronomic traits, there are conventional hybrids that may perform better in situations where ECB pressure isn't a concern.

When used as an alternative to an insecticide treatment for first brood control or as an alternative choice in non-*Bt* refuge acres, native resistance hybrids can play a vital role in your overall corn program.

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