

Farm Management

The ins and outs of GMOs

Ask a CCA

Question:
I am considering planting GMO corn next year. What factors should I consider in making my decision?

Traci Bultemeier: The decision to plant GMO corn in Ohio should be a decision driven by economics. For the coming year, many of the technology-laden products will be a "double" or "triple" stack that includes resistance to glyphosate stacked with either corn rootworm protection or European corn borer resistance, or a combination of both.

Question:
What are my options if I need to control corn rootworm?

Bultemeier: If corn rootworm control is your concern, ask your local agronomist to show you root pruning, silk clipping and reduced pollination due to silk clipping from a local field. Larval root feeding in first-year corn by the eastern variant of the western corn rootworm was more prevalent in central Ohio than it has been in previous years, which has caused some down corn.

There were also many acres of corn sprayed this year to control the emerging adult corn rootworms that affected corn pollination in some fields. The dry weather that Ohio experienced in May and June is largely responsible for the high outbreak of corn rootworm this year.

Remember that transgenic rootworm corn does not control adult beetle silk clipping. The protein or proteins (depending on the product used) are active on the gut of the larvae. The protein(s) are not active on the gut of the adult beetle, and thus do not control adult feeding.

Take a look at both local and wide-area data to evaluate the efficacy of the products you are considering for corn rootworm control. Many universities collect unbiased data on a wide range of products which can be useful for deciding which direction to go with corn rootworm control.

Question:
What about European corn borer and black cutworm?

Bultemeier: European corn borer is a common pest that causes some level of damage in Ohio every year and, in extreme cases, can cause major yield losses by providing entry points for stalk rots that can increase stalk lodging, as well as cause dropped ears as a result of the insect boring in the stalk or the shank. Another insect worthy of mention is black cutworm. Though not often a widespread pest for the state, they can be devastating when they are present, such as in 2006. Some parts of the state fight them every year.

Question:
Should glyphosate resistance be included in the stack?

Bultemeier: Many stacked-trait hybrids include glyphosate resistance as part of



BULTEMEIER

the package. Having the option to spray glyphosate on corn can be particularly useful in a dry year like 2007 where weed control by preemergence herbicides was reduced because there was inadequate rainfall to "activate" the herbicide. Glyphosate can also be useful for hard-to-control perennials like Canada thistle and hemp dogbane, as well as for late-emerging annuals such as giant ragweed and burcucumber.

Question:
What other factors should I consider when choosing a GMO hybrid?

Bultemeier: Remember that the value of stacked-trait hybrids is maximized when you plant hybrids that are adapted for your area that are high-yielding, have good natural standability and drydown, as well as good tolerance to leaf and ear diseases. When you are managing for corn rootworm, why not protect all of the yield? What yield you might save from larval feeding could just as easily be taken away by black cutworm; or, worse yet, that expensive seed might not grow at all if it was not protected by Poncho 250 (seed insecticide) and Dynasty (fungicide). First, choose the genetics, then choose the insect and herbicide package that meets your needs.

Question:
What are the GMO refuge requirements?

Bultemeier: A refuge is necessary. A

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refuge is a place for the insects to breed. European corn borer or corn rootworm larvae that survive in an area of the field where traited corn is planted have a greater chance of being tolerant or resistant to the *Bt* protein. It is important that these insects breed with the susceptible insects from the refuge acres to keep susceptibility to *Bt* proteins in the gene pool of the insects.

If growers nationwide were to use 100% *Bt* corn, the potential for resistance to develop to the *Bt* proteins would increase, thus leading to a reduction of the efficacy of the trait. What would happen next if we were to lose this ability to manage insect populations? The goal for good integrated pest management is control, not eradication.

Question:
Is there a difference in requirements for different traits?

Bultemeier: Refuge requirements differ for European corn borer and corn rootworm. Both currently have a 20% refuge requirement. This means that 80% of the corn can contain an insect-resistant trait, while the other 20% must not contain that trait. Insect resistant management requirements suggest a minimum of four rows of refuge acres.

There are a number of options for planting refuge acres. Please consult your local agronomist for assistance in refuge management.

Realize limitations of like-kind exchanges



Country Counsel

By ROBERT MOORE

FARMERS and landowners have long benefited from like-kind exchanges. The concept allows a person to exchange a business property for a similar type property without incurring immediate tax liability. Perhaps benefiting most from like-kind exchanges are those landowners that have sold high-priced land for development and have used those funds to purchase farmland elsewhere. For example, a landowner may sell land for development for \$20,000 per acre and use those sale proceeds to purchase farmland for \$4,000 per acre, thus receiving 5 acres for every 1 sold, all while incurring no immediate tax liability.

Nearly all types of business assets are eligible for like-kind exchanges. A machine can be exchanged for another machine, a tractor for a tractor, or a dairy cow for a dairy cow. However, in the context of this article, we will address only the exchanges of real estate. While like-kind exchanges can be a very

valuable management tool for Ohio farmers and landowners, there are limitations to its use.

Types of exchanges: Real estate can be exchanged in one of two manners. The first is a simultaneous exchange where one property is simply exchanged for another property. The second is a deferred exchange where a property is sold and those funds are used to purchase a replacement property. If participating in a deferred exchange, the landowner cannot take possession of the sale proceeds from the first sale. The sale proceeds must be kept in escrow with a qualified intermediary. If the landowner takes possession of the sale proceeds, the transaction is ineligible for a like-kind exchange.

Deferment of taxes: Like-kind exchanges do not eliminate tax liability; they merely defer the tax liability. The deferment occurs because there is no step up in basis. The tax basis of the exchanged properties does not follow the property; it stays with the landowner. For example, a landowner exchanges land with a fair market value of \$100,000 and a tax basis of \$10,000 for land with a fair market value of \$100,000 and a tax basis of \$50,000. After the exchange, the landowner will still have a tax basis of \$10,000 in the land he received.

Assume the landowner later sells the property for \$200,000. He will realize a taxable gain of \$190,000, including the additional \$40,000 that was deferred in the like-kind exchange. The landowner merely deferred the \$40,000 gain but did not avoid it all together.

Time constraints: There are strict time constraints on a deferred exchange. Within 45 days of the sale of the first property, the landowner must identify potential properties that may be purchased with the initial sale proceeds. After the 45-day period expires, the landowner is limited to only those properties previously identified. The purchase of the replacement property must take place within 180 days of the initial sale. Neither the 45-day nor 180-day deadline can be extended. If either is missed, the entire like-kind exchange will fail.

Related parties: If two related parties exchange properties, the properties must be held for two years after the exchange. If either related party sells his property within the two-year holding period, the like-kind exchange is voided and both parties may have tax liability. Related parties are generally family members and also business entities owned by family members.

Cashing out: Perhaps the least

known restriction of a like-kind exchange is the "cashing out" rule for related parties. In a deferred exchange, a landowner cannot sell land and then use those funds to purchase land from a related party. The IRS disallows this strategy so as to prevent related parties from cashing out their land with no immediate tax liability. For example, a landowner sells land to an unrelated third party. The landowner then uses those funds to purchase land from a related party. This scenario will likely not qualify for a like-kind exchange because a related party has cashed out.

Vacation homes: Landowners are often tempted to use a like-kind exchange to purchase a vacation home. Only property held for productive use in a trade or business may be eligible for a like-kind exchange. A second residence or vacation home is generally not held for business or trade purposes. The purchase of a rental house does qualify for a like-kind exchange and the IRS does allow the owner to stay in the house, rent free, for a very limited time each year.

Before entering into a like-kind exchange, professional advice should be sought.

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