Refuge strategy proposed

By **WILLIE VOGT**

THERE'S little doubt that U.S. corn growers like biotech corn for control of both aboveground and belowground insect pests. Trouble is, refuge management strategies aimed at preventing insect resistance have become troublesome to handle. Producers of these high-tech crops are considering their own approaches to this issue.

Late in February, Pioneer Hi-Bred, a DuPont business, submitted a proposal to the U.S. EPA that would put the refuge right in the bag. The approach, which will roll out in two phases, would offer growers options for control of these pests with a simpler way to achieve an acceptable level of refuge.

Key Points

- Pioneer proposes different way to tackle refuge acre issue.
- First phase involves in-the-bag strategy for Herculex.
- Phase II adds YieldGard for dual-mode pest protection.

Phase I, which should be available for the 2009 season, is Optimum AcreMax 1. "We're looking for this concept to have reduced refuge to improve the productivity and use of Herculex," says Frank Ross, Pioneer vice president, North American operations. "For the first time, farmers will be able to plant all their acres with a single product that satisfies refuge requirements."

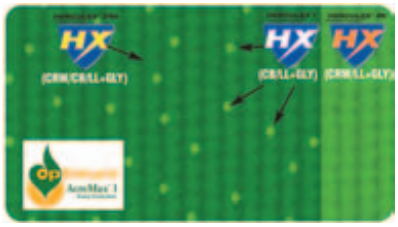
AcreMax 1 would eliminate the need to plant a separate corn rootworm refuge. Pending regulatory approval, the first phase will be a combination of a base hybrid with the Herculex Xtra trait and that same base hybrid with the Herculex I trait all in the same bag. This approach would reduce the need to plant a separate rootworm refuge.

All seeds in this package will be glyphosate and glufosinate tolerant and treated with an insecticidal seed treatment that protects from secondary pests.

Phase II, which the company hopes to have available by 2011, is Optimum AcreMax 2 which would add the YieldGard corn borer gene with Herculex Xtra, offering two modes of action for aboveground pests.

Part of the approach to EPA is to prove that the new refuge strategy is effective in preventing resistance. The company is actually proposing a reduction in the size of the refuge (the level is not being published) and incorporating it into the bag.

OPTION 1: By satisfying the corn rootworm refuge in the bag, Optimum AcreMax 1 would allow growers to place the required corn borer refuge in a different field, up to one-half mile away.



OPTION 2: With corn rootworm refuge integrated into the bag, growers can plant 80% of a field to Optimum AcreMax 1 and use a Pioneer hybrid with Herculex RW to serve as the 20% corn borer refuge, resulting in 100% coverage.

A look at Phase I

A grower that plants Optimum AcreMax 1 would have two different options for refuge management. Since the corn rootworm refuge is managed in the bag, growers would have the option of planting their corn borer refuge within a half-mile of the field. That would mean filling the planter with Optimum AcreMax 1 and planting the field, then planting the refuge crop in a separate operation.

Option 2 with this program would be to plant 80% of the field to Optimum AcreMax 1, then utilize a Pioneer hybrid with Herculex RW to serve as the 20% refuge. That gives the grower 100% in-plant rootworm coverage in the field while meeting the corn borer refuge requirement.

"I think growers will most likely opt for the first choice," says Bill Neibur, DuPont vice president, crop genetics research and development. "They can just fill the planter and go in that single field, then plant the refuge in another field."