Selecting and placing hybrids is one of the most important decisions corn growers make each year. Successful hybrid selection starts with knowledge of the past pest and disease pressure in your fields. Specifically, corn rootworms (CRW) pose a significant threat to yield and profit, making it a pest that cannot be ignored. Understanding the level of risk from corn rootworm in your area and specific fields will help you choose the best hybrids to lower risk and maximize profit.

Knowledge is power
Corn rootworm pressure, and the risk of rootworm feeding, is very hard to predict from year to year. The risk of significant rootworm feeding depends on many factors, some of which are hard to measure, but there are actions a corn grower can and should take to better understand the risk in their specific fields. Past field history is one predictor of future risk, and continuous corn fields are typically at a higher risk than first year corn fields.

The best way to predict rootworm risk the following year is to monitor corn rootworm beetle activity during the growing season. In order to better understand the rootworm pressure in our marketing area, and to help our customers make better decisions, Wyffels has conducted a rootworm beetle monitoring program the last five years using yellow sticky traps.

Traps are placed in over 500 fields across our marketing geography, replaced each week, and the number of beetles on each trap was recorded. The number of beetles in each trap was averaged across the field and then divided by the number of days the trap was deployed to result in the number of beetles per trap per day (beetles/trap/day) in each field.

University and extension research has established thresholds for the number of beetles/trap/day that would lead to significant damage the following year. According to Iowa State University, fields that recorded peak beetle activity at or above 2 beetles/trap/day are at a high risk of damage the following year. While it’s hard to know exactly what level of beetle activity will lead to damage the following year, this monitoring provides a guide of beetle activity to better assign risk of rootworm damage the following year.

Assessing risk for 2019
In 2018, Wyffels monitored 518 fields for adult rootworm activity. Traps were placed in corn fields to monitor northern and western rootworm beetle levels in continuous corn production, and in soybean fields to measure the population of the western corn rootworm variant that can affect corn planted after soybeans.

The bar chart shows peak beetle activity across these crops. In soybeans, 96% of the fields had very little beetle activity with 44% of fields never capturing a beetle. In first-year corn fields, 93% had very little activity and 43% had zero beetles. Beetle activity in continuous corn fields was more robust with 16% of fields over threshold and another 10% near threshold.

The following maps illustrate where beetle activity occurred and can serve as a guide to better understand risk in your area. Green symbols are fields with no beetle activity, blue symbols represent minimal activity, gold symbols are fields where peak activity was below but near threshold, while red symbols are fields with above threshold activity. Areas with gold and red symbols indicate increased beetle activity and carry more risk of rootworm damage next year.
Making Plans for 2019

Beetle activity in soybean fields was low in many areas this year. In these areas, non-GMO or VT Double Pro® hybrids with or without a soil insecticide could be viable options for first year corn fields in 2019. However, beetle activity was higher in parts of NW Illinois, SW Wisconsin, and NE Iowa signifying more risk of rootworm damage next year in first year corn. If using a non-rootworm traited hybrid in these areas be sure to use a soil insecticide or plant a SmartStax® hybrid.

In corn fields, beetle activity varied and was randomly distributed across our marketing area. Planting an unprotected hybrid in continuous corn, especially long-term continuous corn, is risky. Planting a SmartStax hybrid or a VT Double Pro hybrid with insecticide is recommended on second-year corn acres in 2019. Fields with multiple years continuous corn naturally pose a higher risk than a second-year corn field, so planting a SmartStax hybrid is recommended in fields with 3 or more years of continuous corn.

Manage Risk and Maximize Profit

With lower commodity prices some corn growers may consider selecting hybrids without rootworm protection to lower input costs. However, selecting non-RW traited hybrids without monitoring pest pressure to understand risk of CRW can expose growers to risk of yield loss and standability issues costing significantly more than is saved on seed costs. Understanding the risk of corn rootworm damage in your specific fields will help you make the best management decisions to manage risk and maximize profit in 2019.

From the desk of

Mitch Heisler
Marketing Manager
309.945.7032 cell
mheisler@wyffels.com

Dr. Brent Tharp
Agronomy and Product Training Manager
309.737.6434 cell
btharp@wyffels.com