Impact of spring weather on field crops insects

Chris DiFonzo, PhD, MSU Department of Entomology

Early and late planting

Sometimes wet spring weather leads to delayed planting, and creates a patchwork of older (early planted) and younger (late planted) fields, rather than fields planted over a short period of time. Some insects will tend to favor or accumulate in fields based on crop stage.

Several insects favor early-planted crops (the oldest fields in a region). Watch for first-generation corn borer in corn and bean leaf beetles in soybean.

Several insects favor late-planted crops (the youngest fields in a region). These include second-generation corn borer attacking corn in late July/August; plant Bt hybrids in these fields if possible to avoid 2nd generation damage. Aphid populations also may be greater in late-planted soybean. On the positive side, late-planted crops may escape other insects present earlier in the season, such as bean leaf beetle.

Late-planted corn has a smaller root system when corn rootworm eggs hatch. Thus many larvae starve and root damage is often less, unless conditions are cool and egg hatch is also delayed (not the case this year).

Replanting

Fields may be replanted due to frost, heavy rains, or insect damage. For replanted fields, all of the comments about late-planting apply. Replanting may occur in fields previously treated with an insecticide. In these cases - especially if switching crops (most often from corn or sugarbeets to soybeans) - note the following label restrictions:

Soil insecticides in corns:
Aztec: Maximum of one application per acre per season. Corn may be replanted immediately. All other crops can be planted 30 days after the original application.
Counter CR & 15G: Maximum of one application at planting per season (i.e. cannot replant a Counter treated field w/ another Counter-treated crop)
Lorsban 15G: One application per year, or maximum 16 oz/1,000 feet of row per acre per season.
Force 3G: Maximum of one application per crop.
Fortress 5G: Maximum of one application per year.

Seed treatments on corn
Cruiser: Treated areas may be replanted immediately to the following crops - corn, barley, canola, sorghum, succulent and edible podded beans (for ex. snap beans), sunflower, plus and cucurbit/fruiting/ & tuber vegetables. For all other crops, the plant back restriction is 120 days. THIS INCLUDES SOYBEAN and DRY BEAN. A cover crop may be planted may be planted for erosion control sooner than the 120 days interval, but it may not be grazed.
Poncho: Replant to corn and canola immediately. Replant cereal grain, grasses, SOYBEAN, and dry beans after 30 DAYS. All other crops = one year.
Wet springs

Excessive rainfall, wet fields (or parts of fields), and cloudy conditions in the spring are common in Michigan. These conditions can lead to insect problems later in the season.

Crops germinating and growing slowly are vulnerable for a longer period of time to early-season crop pests such as slugs, wireworms, and seedcorn maggot.

Planting into wet soils can lead to open seed furrows. This increases the chance for slug injury. The slugs literally use the open furrow as an interstate highway to get to the vulnerable seeds and seedlings.

Heavy rains can move soil insecticides out of the root zone. Soil insecticides are not designed to kill all the rootworms hatching in a field. Instead, they benefit yield by protecting the central part of the root mass and the brace roots. If excessive rainfall moves insecticides out of this zone, growers may see unexpected rootworm damage later in the season.

Seed treatments may also be effected by excessive rainfall. Cruiser is very water soluble (a good thing if conditions are dry!) and it may move out of the root zone.

Wet conditions can delay herbicide applications. Armyworms and cutworms often target weedy fields or parts of fields for egg laying. Once herbicides are applied, these caterpillars leave the dying weeds and move onto the crop. After herbicide application, check such fields for cut-plants or armyworm feeding.

Heavy rains makes it difficult to spray or cut weevil-infested alfalfa. If weevils are over threshold and you cannot get into the field to cut, an aerial application is probably not as good as a ground application, but better than doing nothing. Weevils may already be quite large and may be pupate before the alfalfa is cut. If weevils are still in the larval stage at cutting time, remember to check regrowth for feeding - big hungry weevil larvae could do significant damage to new growth in a short period of time.

If cutting is delayed so alfalfa is blooming, but a spray is needed, watch for honey bees and note bee restrictions on the label. Inform neighboring beekeepers about the treatment, as they may be able to move or cover hives.

Depending on wind direction and storm track, storms probably carried pest insects from south to north, depositing them further up into central Michigan and the Thumb. This includes insects such as potato leafhopper, grain aphids, armyworms, and cutworms.