First Generation European Corn Borer

Bryan Jensen, UW Extension and IPM Program

Southern Wisconsin is approaching peak first generation European corn borer flight (600 DD, base 500 F). The best treatment time is usually around 800-1000 degree days. A lot of Wisconsin’s corn will not be attractive for oviposition and/or too small to support survival (< 18 inches extended leaf height). However, scouting would be suggested for those fields which are tall enough be attractive and have an extended leaf height greater than 18 inches.

European corn borer populations were the lowest on record during the 2015 growing season. However, there were locally heavy and economic populations during 2016. Concentrate scouting efforts on the tallest corn in your area. After hatching, larvae will migrate to the whorl to feed. Initial symptoms are small window-pane feeding scars that may not completely perforate the leaf. As larvae develop these holes will penetrate the leaf and appear in a random pattern. Prior to tunneling into the stalk the feeding pattern may appear as transverse holes across the leaf.

To get an unbiased assessment of corn borer populations, determine % of the plants which have feeding damage by observing 10 sets of 5 consecutive plants at random across the field. Pull the whorl leaves from two damaged plants in each of the 10 sets of plants. Count the number of larvae by unrolling these leaves and divide by the number of whorls pulled (20) to determine average number of larvae/infested plant. This information will give you the baseline information needed to calculate and economic threshold.

You may calculate a field specific economic threshold for first generation ECB by using the worksheet found on p. 57 of A3646, Pest Management in WI Field Crops, 2017. It is always a little dangerous to suggest treatment levels for ECB because economic thresholds vary by level of infestation, # larvae/infested plant, selling price, expected yield and applications costs. However, to give you a ballpark estimate, a field with 60% of the plants infested and an average of 1.2 larvae/plant which yields 150 bu/A and projected selling price of $3.80/bu will likely give a $27 loss/acre if your insecticide is 80% effective.
Larvae are only susceptible to insecticide applications while they are feeding within the whorl. This time period is usually in the neighborhood of 7-10 days but depends on weather.

True Armyworms

Bryan Jensen, UW Extension and IPM Program

Surrounding states have reported armyworm alerts and damage. Furthermore, DATCP’s WI Pest Bulletin has indicated a moderate flight so far. Although I’ve only received a few phone calls so far, it would be a great time to start spot checking likely areas for damage. Armyworms are often recognized as grass feeders, however, injury can occur to soybeans and stand loss can occur under extreme circumstances.

Armyworm larvae feed on leaves and this feeding will appear to have ragged edges. The migrating moths are most attracted to fields with grassy cover including, wheat, cover crops, emerging weeds and sometimes alfalfa. Larvae are nocturnal and can be difficult to find. Check under leaf litter during the day or you may find them hiding in the whorl of corn plants. However, leaf feeding is usually apparent.

Larvae may grow up to 1 ½ long, however, it is important to find infestations before they reach this size to prevent as much economic damage as possible. Larvae are hairless, have alternating dark and light colored strips, a faint orange strip on each side of the body and a light colored abdomen. Color intensity of these stripes can vary significantly. Their head is tan and has net-like marking on the compound eyes.

In corn and soybeans, damage may with either be uniform, spotty and/or found along field margins. Low infestations in corn (15-20% injured plants) may warrant a revisit because egg hatch may not be a short, well-defined occurrence as you might expect from overwintering insects. If 50% of corn seedlings have injury, control maybe be warranted if larvae are still relatively small which indicates significant feeding may yet to come. Remember, as long as the seed furrow is closed, the growing point is not exposed until V6 and corn can recover. Soybeans may not be a preferred host but are more susceptible to stand loss because growing point(s) are exposed.

Wheat and other small grains are also at risk and damage may be concentrated in lodged areas. Check all fields closely by looking for both leaf defoliation and head-clipping. An economic threshold of 3 or more larvae/square foot has been established. However, crop stage and presence of head-clipping may influence your decision.

Wisconsin Hosts 2017 Manure Expo, August 22-23, at ARS

If you are interested in the latest equipment and technology for professional manure management, plan to attend the 2017 North American Manure Expo on August 22 and 23, 2017. Wisconsin hosts the Expo this year and it will be held at the University of Wisconsin-Madison Arlington Agricultural Research Station.
The 2017 North American Manure Expo will feature tours, field demonstrations, hands-on product and safety education, educational sessions, exhibitor booths, and commercial vendor displays. Tours on August 22 require a $20.00 registration fee. There is no cost to attend any of the Expo events on August 23.

Tours, demonstrations, exhibitors, educational sessions, and sponsorships are nearly finalized. Visit the website http://www.manureexpo.com/ for up-to-date information on all the activities associated with this year's Expo.

The North American Manure Expo is presented by the Professional Nutrient Applicators Association of Wisconsin, University of Wisconsin Extension – Nutrient Management Team, Annex Business Media, Manure Manager Magazine and is supported in part by a consortium of land grant universities and conservation agencies from across the United States.

For more information about the 2017 North American Manure Expo, please contact George Koepp or Richard Halopka, Columbia County and Clark County Agricultural Agents, respectively, University of Wisconsin-Extension. George: 608-742-9682, george.koepp@ces.uwex.edu; Richard: 715-742-5121, richard.halopka@ces.uwex.edu.

**Video: Using the roller-crimper system with early planted emerged soybean**

Erin Silva, Organic and Sustainable Cropping Systems Specialist Department of Plant Pathology, University of Wisconsin-Madison

Advantages of planting soybean into boot stage rye, and then crimping 2-3 weeks later over the emerged soybean are demonstrated in the field. Experimental yield increased for the early planted beans versus beans planted later after crimping at anthesis stage of the rye. Planting was easier at rye boot stage before crimping as well.

Interest in organic no-till production continues to grow, not only among organic farmers but also among conventional farmers wanting to integrate cover crops and alternative weed management strategies into their farming strategies.

This video demonstrates some basic components to integrate cover crop based no-till on Wisconsin farms, as well as some specific planting modifications to make the technique more successful.

The picture below shows how a field looks during the growing season with the thick rye mulch providing weed management.

**More information about Erin Silva's program -**

http://www.uworganic.wisc.edu
Wisconsin Winter Wheat Disease Update – June 2, 2017

Damon Smith, Extension Field Crops Pathologist, Department of Plant Pathology, University of Wisconsin-Madison, Brian Mueller, Graduate Research Assistant, Department of Plant Pathology, University of Wisconsin-Madison

Many winter wheat varieties in Wisconsin are headed out and at, or will be at, anthesis (flowering) this weekend. Currently, the Fusarium Head Blight Prediction Center is ranking much of the primary winter wheat growing area of Wisconsin at medium risk with many pockets of high risk for FHB on susceptible varieties (see map below). Warm temperatures and the threat of rain this weekend will make conditions further favorable for FHB. In addition, stripe rust is quickly increasing in many fields on susceptible varieties. I have observed 20% stripe rust severity on flag leaves in several fields with high incidence across those fields.

The primary fungicides for control of FHB are Caramba and Prosaro. These same products are rated as “excellent” on stripe rust. I would urge you to verify anthesis has begun in your field before applying either product. We have observed poor control of FHB where application of these effective fungicides was made before anthesis. In fact, we have observed improved control of FHB and lower levels of DON in finished grain where fungicide application was delayed 4-5 days after the beginning of anthesis, compared to applications at the start of anthesis. Also, remember that application of fungicides should be made no later than 6-7 days after the start of anthesis. After this time, fungicide efficacy on FHB is much reduced. Finally, DO NOT use any fungicide products that contain a strobilurin fungicide after the “boot” stage in wheat. Some studies have demonstrated that using strobilurin fungicides at, or after heading, can result in increased vomitoxin (DON) levels in finished grain.

New Rules for Pesticide Certification and Training

Glenn Nice, PAT Program Manager

A new article that addresses the changes as they relate to the State of Wisconsin Pesticide Certification and Training has been posted on the Pesticide Applicator Training (PAT) website.

http://ipcm.wisc.edu/pat/program-info/new-ct/

It will take time before the new requirements are implemented in Wisconsin. States have three years to modify existing state plans to comply with the new requirements, and an additional two years may be granted by the EPA if requested. The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) is preparing a plan that will have to be accepted by the EPA and then the State Statutes will have to be opened and changed to fit the new C&T rules. So, we have some time before these rules kick in.

Wisconsin crop planting progress reports from the USDA

Paul D. Mitchell, Agricultural and Applied Economics, University of Wisconsin-Madison

Corn planting is at or near 5-yr avg and soybeans are still a little behind that average. Recent good weather for most areas of the state has allowed Wisconsin to make big progress. The United States Department of Agriculture National (USDA) Agricultural Statistics Service issues weekly reports at the website linked below.

https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress &_Condition/

As an example, last week’s report is attached as the last page of this newsletter.
LOOKING AHEAD: Viburnum leaf beetle confirmed by UW in Winnebago County

FORAGES & GRAINS: Surveys continue to find variable alfalfa weevil pressure

CORN: Stalk borer larvae expected to begin migrating into corn

SOYBEANS: Soybean aphids now colonizing soybean fields

FRUITS: Codling moth treatment window opening soon

VEGETABLES: Red turnip beetle found in extremely high numbers this week

NURSERY & FOREST: Impatiens downy mildew detected in Sheboygan greenhouse

DEGREE DAYS: Degree day accumulations through June 7, 2017
Plants, Haying Progresses with Favorable Weather

There were 5.1 days suitable for fieldwork for the week ending June 4, 2017, according to the USDA’s National Agricultural Statistics Service. Clear weather and warmer temperatures allowed farmers across Wisconsin to make good progress with fieldwork this week. Though it was cool early in the week, temperatures climbed into the 80s and 90s over the weekend, improving crop conditions. Oats planting was wrapping up, while corn, soybean and vegetable planting surged ahead. Soil conditions improved, allowing farmers to fill in spots that were too wet to plant earlier in the season. Reporters noted that many producers, especially dairies, paused planting activities to cut the first crop of hay while conditions were favorable for baling.

Topsoil moisture supplies were rated 0 percent very short, 2 percent short, 74 percent adequate and 24 percent surplus. Subsoil moisture supplies were rated 0 percent very short, 1 percent short, 75 percent adequate and 24 percent surplus.

As of June 4, spring tillage was 94 percent complete statewide, equal to the five-year average.

Corn planting was 91 percent complete, 2 days behind the average. Corn emerged was at 68 percent, 8 days behind last year, and 4 days behind the average. Corn condition was 68 percent good to excellent. Seventy-three percent of the state’s expected soybean acres have been planted, 11 days behind last year, and 4 days behind the average. Thirty-four percent of the state’s soybeans have emerged, 9 days behind last year and 4 days behind the average.

Oats planting was reported as 96 percent complete, 3 days behind the average. Oats emerged was at 87 percent, 10 days behind last year and 4 days behind average emergence. Oats condition was 75 percent good to excellent.

Potato condition was rated 72 good to excellent.

Pasture condition was 83 percent good to excellent.

Winter wheat was 29 percent headed, 5 days behind last year. Winter wheat was 71 percent in good to excellent condition statewide, 2 percentage points lower than last week. The first cutting of alfalfa was reported as 54 percent complete. All hay condition was reported 75 percent good to excellent, 3 percentage points higher than last week.

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### Wisconsin Crop Progress as of June 4, 2017

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<th>Crop and percent of acreage</th>
<th>District average</th>
<th>State average</th>
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<tbody>
<tr>
<td></td>
<td>NW</td>
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<tr>
<td>Alfalfa Hay, First Cutting</td>
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<td>Corn Planted</td>
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<td>86</td>
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<tr>
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<tr>
<td>Spring Tillage</td>
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n.a.=not available

### Days Suitable for Fieldwork and Soil Moisture Conditions as of June 4, 2017

<table>
<thead>
<tr>
<th>Item</th>
<th>District average</th>
<th>State average</th>
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<td>NW</td>
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<td>Topsoil Moisture</td>
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<td>Surplus</td>
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<td>16</td>
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Selected Quotes from Farm Reporters and County Ag Agents

CHIPPEWA-T.P.: Sunny conditions and less than an inch of rain this week allowed a lot of field work to be completed. Warm temperatures moved along crop progress, but also weed growth. Soybean planting is almost complete. Harvest of first crop alfalfa has progressed nicely.

RUSK-S.V.: Only had 1 inch of rain this week so everyone who can is busy in the fields trying to get things done.

ASHLAND/IRON-C.B.: Some nice weather towards the end of the week. Some field activity, as high temperatures with some wind dried some fields out enough to get out and continue tillage/planting activities.

FLORENCE/FOREST-T.B.: Most tillage completed except those areas with heavy soils. Early week rains and heat through the week has hay and pastures looking good.

BUFFALO/PEPIN-S.M.: Much-needed dryer, warmer weather has been welcome this week. Some spotty hail was received in isolated thunderstorms over weekend. Haying and planting is finally being completed.

LA CROSSE-I.H.: Mostly sunny this week, although a little cool until the end of the week. Farmers able to get to the fields and get hay made and more corn and beans planted. Drying topsoil on some of the fields may make it difficult for seed to break through the crust.

WAUPACA/OUTAGAMIE-D.L.H.: Spring planting has wound down with the favorable weather last week. Color of corn and soybeans has improved with the warmer weather. Good progress is being made with alfalfa harvest - the quantity is less than normal as result of the cool spring weather.

CALUMET-K.P.: More rain limited the amount of field work able to be completed - areas of standing water again. We did have a couple days of warmer temperatures and sunshine which has helped - could use a few more of these days.

MANITOWOC-M.R.: Finally had a string of about 5 days of nice weather to get back in the fields to keep working at planting and harvesting first crop hay. Still seems like a fair amount of crops that need to get planted yet.

CRAWFORD-J.B.: Nice weather over the past few days provided area farmers a chance to complete planting corn and go right into planting soybeans. If the weather holds out all planting should be wrapped up by the middle of next week. Many fields in the Kickapoo river bottom continue to have standing water and 2016 corn standing not harvested as a result of last year's flooding, some soybeans as well. Not sure what will happen to those fields. Many area farmers have been cutting first crop hay. If the wind ever dies down, area farmers and agribusinesses will have an opportunity to catch up on much-needed herbicide spraying.

DODGE-M.P.: We finally received a few warm, dry days. A lot of haylage was made and even some dry bales. Producers are scrambling to complete soybean planting before the next round of thunderstorms hit the area. Received another couple of inches of rain over the weekend which will slow things down again for next week.

WALWORTH-N.W.: Amazing what three days of sunshine and warm temperatures can do. A lot of planters were rolling the end of the week trying to make up for lost time. Corn that was planted early is still behind because of the cold and wet weather from earlier in May.