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Insects & Mites

Update on Alfalfa Weevil and Potato Leafhopper as Alfalfa Transitions from First Crop Hay to Second Crop Growth45

Plant Disease

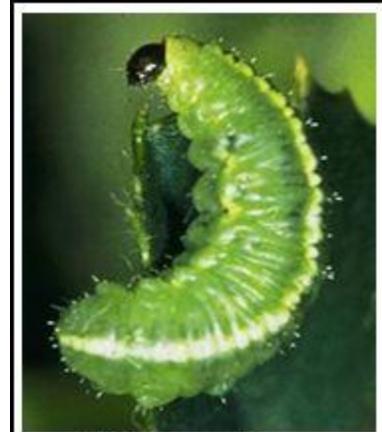
Chilton and Arlington Winter Wheat May 30, 2011.....46
Lancaster and Janesville Winter Wheat May 31, 2011...47
Fusarium Head Blight- Foliar Fungicides.....47

Update on Alfalfa Weevil and Potato Leafhopper as Alfalfa Transitions from First Crop Hay To Second Crop Growth

Eileen Cullen, Extension Entomologist

Alfalfa Weevil - Larval populations of alfalfa weevil have been gradually increasing in first crop alfalfa. The WDATCP Wisconsin Pest Bulletin reported late last week their surveys in south-central and central counties yielded an average of 3 larvae per 25 sweeps in 46 fields scouted. Sweep net samples can be used to detect alfalfa weevil larvae in the field, but leaf tip feeding injury is used to determine economic threshold and need for treatment. In the same survey, WDATCP reported leaf tip feeding is generally less than 10%, however two fields in Dane County showed 30-40%. Damage is expected to become more pronounced this week, particularly if rainy weather continues to delay harvest of first crop. (*Survey Information Courtesy of Krista Hamilton, WDATCP [Wisconsin Pest Bulletin](#)*).

Alfalfa should be harvested in the next 1-2 weeks to prevent damage by the larger and more destructive larval instars. Control is justified for fields that show 40% tip feeding and are more than 7-10 days from harvest. If 40% tip damage is noted within 7-10 days of harvest, alfalfa should be cut rather than treated.



Alfalfa weevil larva



Alfalfa weevil adult

Most alfalfa weevil feeding damage is caused by the larval stages to first crop alfalfa, but adults can cause significant damage at times too and may feed on second crop regrowth. Alfalfa weevil larvae go through four instars between hatching out of the egg and spinning a silken cocoon in which to pupate. The smaller larval instars are slate-colored, but they become a bright green by the time they are full-grown at 3/8 of an inch length.

Later instar alfalfa weevils are clearly distinguished by their green color, a white stripe running down their back and black head capsule. Alfalfa weevil adults can be identified by the dark strip down their back and their snout – like mouthparts.

Natural enemies do an excellent job of controlling the alfalfa weevil including several small, non-stinging species of wasps responsible for keeping weevil populations below treatment levels. There is also a fungal pathogen that attacks weevil larvae and can decimate weevil populations in a few days. Although these natural control factors are effective, conditions may not always be favorable for acceptable results. Always use timely field scouting before making control recommendations.

Potato Leafhopper – Courtesy of WDATCP’s Wisconsin Pest Bulletin, survey observations last week indicate that the first distinct arrival of potato leafhopper adults has occurred. Potato leafhopper adults overwinter in the southern U.S. and migrate to the Upper Midwest typically in late May to Mid-June. Surveys last week found adults in 5 of 9 fields checked in Columbia and Dodge counties, and as far north as Taylor in Jackson County. The last two years, we have seen fairly low potato leafhopper populations overall in Wisconsin. Scout alfalfa fields beginning with second crop re-growth as arrival of adults brings potential of sharp increase in populations in June.

of the net). Nymphs move quickly, typically sideways, when disturbed.

The larger the alfalfa the more PLH it takes to cause economic damage. This occurs both because the older plant is more tolerant of damage and because the PLH will be on the plant less time before it is harvested.

Alfalfa Height (inches)	Potato leafhoppers per sweep
<i>Do not spray if you are within 7 days of your normal cutting schedule, in that case cut if possible</i>	
< 3 inches	0.2
3 to 6 inches	0.5
8 to 11 inches	1.0
12 inches or taller	2.0



Potato leafhopper adult



Potato leafhopper nymph

To obtain an accurate population estimate, sample for leafhoppers when alfalfa is dry, and avoid field edges. Cold, wet or windy conditions may temporarily knock adults and nymphs from plants, resulting in an inaccurate sweep count. Use a standard 15-inch diameter insect sweep net. A total of 100 sweeps should be taken throughout the field, in an approximate “M-shape” through the field to obtain 20 consecutive sweeps in each of 5 randomly selected areas. Click [here](#) to view an instructional UW Extension video titled [Scouting Alfalfa for Potato Leafhopper](#).

Economic thresholds are based on average number of potato leafhoppers/sweep. Keep a running total of the number of leafhoppers caught and divide by 100. Nymphs are not generally recovered in the bottom of the sweep net with adults, but found along the collar of the net (along the wire hoop rim

Potato leafhopper has 3-4 generations per year in the Midwest, so this is an insect to continue monitoring for the remainder of this season. Natural predators and parasites of the potato leafhopper do not typically provide consistent economic suppression of leafhopper. Consult [UW-Extension bulletin A3646 Pest Management in Wisconsin Field Crops](#) for insecticide label information (potato leafhopper rates, pre-harvest interval, restricted entry intervals, and precautions to avoid honey bee kill).

Chilton and Arlington Winter Wheat May 30, 2011

Paul Esker, Extension Field Crops Plant Pathologist

Over the next two days, I will be traveling to all of our wheat plots around the state. For each blog posting, I will also be embedding some short videos that I take at each site showing how the stand looks and also anything that looks a little interesting. Today, we start with Chilton and Arlington.

Chilton:

On my drive up to Chilton this morning, I couldn't help but notice lots of wheel tracks in the majority of winter wheat fields! At Chilton, the Winter Wheat Performance Tests looks very good. The growth stage is Feekes 8 (flag leaf emerging) to Feekes 9 (flag leaf ligule and collar visible). The wheat head is right around the nodal area for the flag-2 leaf. From a disease perspective, things look really clean. There is a little bit of BYDV, some Septoria leaf blotch and also powdery mildew. The key observation for Septoria and powdery mildew is that the symptoms are really only around the base of the plants. Right now, a foliar fungicide would not be warranted here at the Chilton performance tests.

Arlington:

At Arlington, the wheat is looking great. Similar to Chilton, the main diseases noted included BYDV, Septoria leaf blotch, and powdery mildew. Outside of BYDV in the upper canopy, the symptoms and/or signs of Septoria and powdery mildew are in the lower canopy near the base. Wheat ranges from Feekes 8-9 (flag leaf emergence) to the boot stage (Feekes 10) to some early heading depending on the wheat variety. In addition to monitoring for foliar diseases, this also means we

need to turn our attention to monitoring the risk of Fusarium head blight. While we are probably a few days off from early flowering for some of the varieties, a current check of the Fusarium Head Blight Prediction Center indicates that the risk of FHB is low throughout the state. The one to three day prediction's are also indicating a low risk of FHB around the state.

[To view videos included with this articles click here**](#)**

Lancaster and Janesville Winter Wheat May 31, 2011

Paul Esker, Extension Field Crops Plant Pathologist

Finishing the two-day trip to check on our wheat studies, today I visited the Lancaster and Janesville locations. Wheat at both of these locations is rapidly advancing, with Lancaster being at a very solid Feekes 10.5 (inflorescence completely emerged), while at Janesville, the growth stage ranged from Feekes 10.1 (first inflorescence spikelet visible) to 10.5 (inflorescence completely emerged).

With where the wheat growth stages are in the southern part of the state, this means we should be paying critical attention to the weather and risk of Fusarium head blight infection. A check of the Fusarium Head Blight Prediction Center today for the southern third of Wisconsin indicated that the risk of FHB infection was low, except for a few pockets along the Illinois border that were in the moderate range. However, looking at the one to three day forecast, the risk of FHB infection is predicted to be low. A foliar fungicide would not be recommended at the current moment. We will continue to monitor conditions during this week as well as over the next couple of weeks to provide updates for the risk of FHB as well as management recommendations. For information regarding products that can be effective at suppressing FHB (with well-timed applications), please check here. Pay close attention to individual fungicide labels especially in regards to the latest growth stage that a product can be applied as well as any pre-harvest intervals for applications.

What about other diseases? As I scouted at both locations today, there were three main diseases noted including BYDV, Septoria leaf blotch, and powdery mildew. Across the four locations assessed the past two days, the BYDV at Lancaster had the highest incidence and the incidence of this disease at Janesville was similar to what we observed at Arlington yesterday. Powdery mildew also appeared to be slightly more severe at Lancaster than at the other locations, although symptoms were still mostly in the lower canopy to the flag-3 or flag-2 leaf, depending on variety. The two videos below provide some pictorial evidence of what was being seen for both diseases at Lancaster

[To view videos included with this articles click here**](#)**

Fusarium Head Blight - Foliar Fungicides

Paul Esker, Extension Field Crops Plant Pathologist

As we move into flowering in the wheat, in addition to determining if conditions for Fusarium head blight warrant the application of a foliar fungicide (currently, the risk for FHB is low around the state), it is important to pay attention to fungicide product labels since not all products labeled for wheat suppress FHB and many have tight restrictions based on growth stage or pre-harvest interval. Each year, the North Central Regional Committee on Management of Small Grain Diseases (NCERA-184) updates a fungicide efficacy chart. Ratings are based on field testing of products across locations and years and ranged from "poor" to "excellent".

Focusing here on suppression of FHB, I will break things down first by efficacy and then by harvest restrictions. The best suppression occurs with the well-timed application of triazole-based products, although they are not all equal. A strobilurin-based compound would not be recommended, as there is evidence to suggest that there can be an increase in the mycotoxin contamination.

In the triazole group, the following products are rated as "good": Caramba 0.75 SL, Prostar 421SC, Proline 480SC. The following products are rated as "fair": Folicur 3.6 F (also includes generic compounds). Products containing propiconazole (e.g., Tilt 3.6 EC or equivalent generics) are rated as "poor". All of these products have a 30-day preharvest restriction, while Tilt has a harvest restriction based on growth stage (Feekes 10.5).

