

Pest & Crop Newsletter

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Corn Leaf Aphid Populations Plummeting from Fungal Disease

(Christian Krupke) & (John Obermeyer)

Corn leaf aphid (CLA), is typically an occasional presence in cornfields within the Midwest – they can be found in most fields closer to harvest time, when corn is starting to senesce and they don't/can't have much impact. They are typically not a pest of concern during the summer months.

This year is different! In Indiana and throughout the Midwest, this aphid has made its presence known this year. We don't know all the reasons why this year's populations have been so much worse, but it is very likely progression of remnants of Hurricane Beryl from south to north (July 8 and 9) distributed winged aphids throughout our region; this is a common route of aphid transport.

Since last week's Pest&Crop article, winged aphids have been found on multiple plants/crops, including many that CLA are unable to feed on. This morning while running the dog in the yard, John Obermeyer pulled out some nutsedge at his suburban estate and noticed winged CLA on them! They are grass feeders only. Sedges and broadleaf plants, e.g., soybean, will not sustain them. But they will land on some of these hosts and "probe" them just to see if there is any nutrition, or at least a drink, to be gained.

As quickly as this CLA event has unfolded, it seems to be coming to abrupt end. Joel Wahlman, SEPAC farm manager, in southeastern Indiana alerted us that the plots he was assessing for treatment on the 29th contained dead aphids. The next day, at the Purdue research farm (ACRE) northwest of town, over a hundred miles from SEPAC, it became obvious that CLA are dying from a fungal disease, known as an epizootic (see accompanying pictures). This is the typical end to many aphid infestations (including soybean aphid), and a "plague" of sorts that accompanies dense populations, coupled with high humidity. You will likely find the same thing in your corn!

Controls at this point will not correct damage already done by these suckers, as scattered plants in some fields sustained damage, refer to last week's pictures. It is unlikely that controls will be needed in any cornfields in the state, as the epizootic spreads quickly through the population. Many winged aphid are likely infected and a carrier of the disease. It is unknown what impact foliar fungicide applications may

have. In theory, the fungicides could lower the incidence of aphid disease. Your shared observations would be appreciated.

As asked many times in the past week, the treat thresholds for CLA are as follows:

Pre-tassel: 15 aphids/plant whorl 3 weeks before tasseling and plants under moisture stress. Post-tassel: 50% of tassels covered prior to 50% pollination and plants under moisture stress. There are no guidelines after pollination, for obvious reasons. By this time, the story is written and aphids won't be a factor. As soon as the CLA were being exposed with the tassels, predators and disease were quickly decimating them. Natural enemies at their best. Happy scouting!



Close-up of diseased corn leaf aphid, winged and "babies" (live birth), on corn leaf.



Multiple Asian lady beetle larvae devouring remaining corn leaf aphid on this sweet corn tassel.



Winged aphid attempting to disperse to a new field/county/state. She climbed over multiple dead bodies, got to the leaf tip, spread her wings, then proceeded to fall to the ground.



Diseased corn leaf aphid, winged and nymphs, revealed on whorl leaves.



Close-up of live corn leaf aphid, winged and "baby" nymphs, found within tightly rolled whorl leaves. If you look closely, some nymphs are beginning to discolor, indicating this isolated colony is becoming diseased.

Reminder: 2024 OISC Clean Sweep

Pesticide Disposal

(John Obermeyer)

*****LAST REMINDER*****

*****Forms are due August 9, 2024*****

The 2024 OISC Clean Sweep Pesticide Disposal participant form is attached and available via the OISC website at the link below.

Clean Sweep Pesticide Disposal Link:

https://oisc.purdue.edu/pesticide/clean_sweep.html

If you are planning on participating in the program, please complete the attached 2024 OISC Clean Sweep participant form and return the form to me via the contact info on the form. Please keep the info form as that form has the dates and locations.

If you are an organization, such as Extension, Purdue Pesticide Programs, Solid waste Districts, Recycling districts, media and other organizations please forward the attached participant form onto all interested parties. The program would not be a success without all you do getting the word out!

Take Time to Evaluate Yield, Quality, Resistance, Persistence When Selecting Forage Varieties

(Keith Johnson)

Many times, I get frustrated when I go to the grocery store. The task seems simple enough; purchase a can of beans. The problem for me as I stare up and down the bean shelf is there are too many darn bean choices. Some are no spice, low spice, medium spice, or hot spice. Some are white beans, red beans, black beans or brown beans. Beans are labeled by Company A through Company G. Some are higher price, moderate price or lower price. The beans are canned, in glass, or in a plastic bag. After complete evaluation, I make my decision on what bean type I am going to buy after too much valuable time has passed. Then, I need to move up the aisle and do the same thing with corn and carrots. Needless to say, but I will, "I don't like to shop for groceries".

I hope you take more time evaluating what forage species and variety of that species should be purchased than the time taken to buy a vegetable at the grocery store. I perceive that way too often a person walks into a farm store and purchases an inferior forage variety because they don't start the evaluation process soon enough and the top varieties have already been sold, they are novices and don't realize that there are variety choices within a forage species, or the farm store employee is not a forage seed expert and is not fully informed on the differences among species and varieties.

I encourage you to get seed ordered now if you have perennial forages to seed in the next month. Do not wait until the week or day before seeding to start the process.

What considerations should be made when selecting a forage variety?

- **Seed source** – Select a seed company that has personnel that understands the product they have to sell and can give specific information about forage species and species within a variety.
- **Named variety** – Select a named variety and not one with

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"Variety Not Stated" or "VNS" on the seed tag. The genetic attributes of unnamed varieties are not known.

- **Yield** – See if yield data is available for performance comparisons among varieties. Put more trust in true yield differences among varieties when statistical analysis has been done and are part of the data tables.
- **Seed Quality** – Be aware of germination and purity of the seed before it is purchased. Low germination, high hard seed count in legumes, and low purity seed are not desired. Note whether there are weed seed and other crop seed with the desired forage seed species. The following link provides useful information about reading seed tags.
<https://extension.purdue.edu/extmedia/AY/AY-375-W.pdf>
- **Forage Quality** – Less likely to be found than yield data, but consider selecting a sorghum-sudangrass or pearl millet with the brown midrib trait for improved digestibility when used as a summer-time crop. Less lignin alfalfa varieties are now available, too.
- **Resistance** – Diseases that are problematic in your area should be considered when selecting varieties. Genetic resistance to diseases is an important step in reducing yield and forage quality losses, and improving persistence of the forage. Potato leafhopper resistant alfalfa varieties are available to lessen damage caused by this sap-sucking insect. Orchardgrass leaf diseases can be reduced by selecting varieties with high resistance.
- **Persistence** – Perennial forage varieties that are economically sustainable through many seasons are preferred to short-lived ones.

Excellent management skills are necessary to exploit the value of improved varieties. Use "Best Management Practices" as it relates to soil fertility, seeding date, seeding rate, harvest date, grazing intensity, and scouting to get the most from purchased varieties.

Take time to select forage species and variety choices. It has more value than selecting a bean type in the grocery store!



Spending more time evaluating the right forage variety for purchase has more value than selecting the right bean on the grocery shelf.

Photo source – Keith Johnson, Purdue University Extension Forage Specialist

