

Field Crops Newsletter

Granville and Person County
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INSIDE

Thrips and Disease in 2023

Money Saving Do's and Don'ts

Join the Facebook Group!

Upcoming Events



Planning for 2023 Thrips and Disease

With this very warm "winter" season we experienced, there is some concern about Tomato Spotted Wilt Virus (TSWV) pressure after transplanting. As a reminder, TSWV is vectored, or spread, by thrips. There is a back-and-forth stream of the virus that is relayed between sensitive crops and winter weeds by these insect pests. Typically, a hard, wet winter will lower thrips populations, which we just plainly did not have this year. Though we have had a relatively wet winter season, we did not see any true, cold, "winter" weather. The latter half of March was helpful for us, with those few cold spells and higher-than-average rainfall. This hopefully helped with the thrip populations, but caution is still needed as we look towards planting season.

Dr. Matthew Vann has sent out some considerations to keep in mind as we get into transplant season to help combat the impact that we will most likely see from TSWV this season.

Planning for 2023 thrips and disease management:

There is no one single answer to this issue, but hopefully a combination of the things below will be of use:

1. Follow the Tobacco Thrips Flight and TSWV Intensity Predictor tool (<https://products.climate.ncsu.edu/ag/tobacco-tswv/>). In fact, if it were me, I'd probably look at the flight models on a daily basis once the tool is live on April 1st. This may help someone decide when to start, or even when to postpone setting.

This newsletter is designed to give you up to date information on crops from NC State University and other sources. For more information:

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Planning for 2023 Thrips and Disease Continued...

2. Think about planting date. Most consistently, we see our best agronomic results when tobacco is transplanted as early as possible. The relationship between planting timing and TSWV incidence is much less consistent – unfortunately, adjusting planting date is not a silver bullet to reduce disease. However, we do know that as tobacco plants get older, they become less susceptible to TSWV transmission during thrips feeding events. In my mind, it makes sense to plant on the early side (assuming environmental conditions are favorable), so that we can have those seedlings in the soil about four weeks before the highest populations of the third-generation thrips flight. If we cannot do this, then early planting may prove to be as much or a greater risk than planting slightly later. Again, it's just too early to tell, which is why we STRONGLY recommend the use of the Intensity Predictor (please see web link in the previous section).



Photo of a tobacco thrip adult. *Photo by Robert M. McPherson, University of Georgia.*

3. What pesticide products will you use? Traditionally, imidacloprid has been used as a tray drench or transplant water application and has proven to be very consistent at reducing plant stand losses in North Carolina. As discussed at Tobacco GAP meetings earlier this year, there is predicted to be a serious shortage of Admire Pro (our most commonly used imidacloprid formulation) and there are questions about the availability of generic imidacloprid products. Fortunately, there are alternatives, such as Platinum (thiamethoxam) and Durivo (thiamethoxam + chlorantraniliprole, which can ONLY be used in the transplant water). Verimark (cyantraniliprole) also has a 2ee label for TSWV suppression. Whatever you choose, be sure to READ and follow the product labels - as each of these products and different formulations may have different application rates. In general, we recommend using the highest labeled rates to maximize thrips control while limiting disease transmission. One final alternative that growers have asked about is Actigard, which is a plant defense activator that upregulates immunity to disease. In North Carolina, we generally have not had enough consistent TSWV pressure to justify using Actigard, nor do we have enough experience with the "do's and the don'ts" of Actigard application to feel comfortable using the product. This product may have a fit in tobacco fields with a consistent history of TSWV. If this year stacks up to be a big thrips year, prioritizing proactive management decisions, with products like Actigard, may make good sense in some scenarios. If this is a product you are interested in using, reach out to your local extension agent (**Mikayla Berryhill @ Person (336-599-1195) or Granville (919-603-1350)**) so we can discuss the use of this product further.

4. When or how will you apply your systemic insecticide? History tells us that greenhouse tray drench applications of our systemic insecticides were the norm some 10 or so years ago. However, there has been a recent shift to transplant water applications. This shift actually makes sense when you consider the ease and safety of the transplant water application when compared to the tray drench. The shift also makes sense when one considers the time between devastating outbreaks was roughly 15 years. We tend to forget things pretty easily, at times. When we consider one application method versus the other, one must think about the efficacy and protection offered by the tray drench application (where seedlings have absorbed the insecticide before they leave the greenhouse) and the window of vulnerability offered by the transplant water application (where plants must absorb the insecticide from the transplant water that is placed into the soil). There is no doubt in my mind that the transplant water application leaves seedlings exposed and vulnerable for several days before the product is moved into growing tobacco tissues. The question is this, just how long is the window? While I've not measured TSWV losses in these two systems head-to-head, I have measured insect damage (flea beetles) over the first six weeks of a growing season. When comparing the non-treated control plots to transplant water treatments of imidacloprid, it wasn't until the third or fourth week after transplanting that flea beetle feeding was statistically lower in the treated plots. A latency period between systemic application and full protection is consistent with many other cropping systems (e.g., potato, vegetables, tree fruit). For tobacco, several unprotected days could be very meaningful for disease risk, especially when thrips are abundant in the landscape.



Corn Earworm/Tobacco Budworm. *Photo by Mikayla Graham*



Italian Ryegrass. *Photo by Mikayla Graham*



Soil Sampling. *Photo by Mikayla Graham*

Money Saving Do's and Don'ts!

It is well known across the agriculture community that input prices are through the roof. Margins are incredibly tight, and everyone is doing their best to identify ways to reduce input costs for this growing season. BE CAREFUL! There are some input-reducing production tips that can impact your crop's success and potentially have lasting effects on your farm.

DO...

- **Make insecticide application decisions based on scouting.** In many cases, insects are not at an economic threshold when growers make applications. Depending on the product, this can waste money by an application not increasing the yield of the crop OR can make insect problems worse by decreasing the number of beneficial insects in a field. Scouting can ensure that insects have reached the point where they are going to impact yield before spending money and time on an insecticide application.
- **Carefully choose planting dates.** Planting a crop earlier or later in the season can allow you to avoid or suppress specific pests. For example, planting soybeans on the earlier side can allow the crop to shade out some later season weeds, reducing your need for pesticide applications.
- **Follow your soil test.** If you tested your soil this past year, follow the fertility recommendations to ensure you provide enough nutrients for your crop, but don't overfertilize and lose nutrients to leaching or other environmental factors. If you have not tested your soil, you still can at the NCDA&CS Agronomic Division and with turnaround times at 7-10 days you can get information quickly.

DON'T...

- **Put out partial herbicide rates.** Trying to reduce costs by putting out partial herbicide rates will only lead to trouble. You will not effectively control the weeds you are trying to control, meaning the application was a waste of time and money, all while yield will be reduced due to the presence of weeds. You also risk the chance of herbicide resistance occurring in your weed populations in the future, meaning more time and money being spent down the road.
- **Substitute non-fertilizer products for fertilizer.** This advice was given by Dr. Matthew Vann at tobacco production meetings in 2022, but is also applicable to other crops. Nothing can substitute applying nutrients to your soils based on your soil test recommendations and past experiences. Foliar fertility products should only be considered if there is a deficiency in the crop, otherwise is not effective at supplying the crop with nutrients.

Please note that this is not an all-inclusive list of money-saving methods you could (or should not) utilize this year, but it may give you a few ideas! If you need any help scouting or want to discuss potential management practices for this year, please contact me at the extension office, I am happy to help!

Join the Granville/Person County Field Crop Extension Group on Facebook!

Are you on Facebook? If you are, please join the Granville/Person County Field Crop Extension Group! I will be updating this group with information from NC State, event updates, and more! Go to <https://www.facebook.com/groups/persongranvilleextension/>



Upcoming Events:

2023 Wheat Whistle Stop Field Day – Person/Granville Counties

April 12th, 2023 @ 8:30AM

- IN PERSON at 4092 Salem Road, Oxford, NC 27565
- Come and see the NC State Official Variety Trial Plots for wheat! This is where the data for the Variety Selection Tool (<https://ncovt.medius.re>) comes from.
- Breakfast will be provided.
- N, D, O, and X pesticide recertification credits offered.
- Registration required: go to <https://go.ncsu.edu/2023whistlestop> or call your local extension office.

Bioenergy Research Initiative/New and Emerging Crops Meeting

Wednesday, April 13th @ 8:30AM – 4:30PM

- Brought to you by the Bioenergy Research Initiative at the NCDA&CS
- IN PERSON at the NC Department of Agriculture – Steve Troxler Agriculture Services Center (4400 Reedy Creek Road, Raleigh, NC)
- Lunch will be provided
- Registration required: go to <https://www.eventbrite.com/e/bioenergy-research-initiativenew-and-emerging-crops-researchindustry-mtg-tickets-541778162067>

2023 Wheat Whistle Stop Field Day – Alamance County

April 17th, 2023 @ 9AM

- IN PERSON by the Burlington Alamance Radio Kontrol Society off Major Hill Road in Graham, NC
- Hear from Dr. Angela Post on this past season and some insights on wheat variety selection.

Women's Tractor & Truck/Trailer Workshop

Friday, May 5th @ 8:45 AM – 4:30 PM

- IN PERSON at the Butner Beef Cattle Field Lab (8800 Cassam Rd., Bahama, NC)
- \$25 per person
- Lunch and snacks will be provided.
- Registration required: go to go.ncsu.edu/2023womenstractor or contact Kim Woods at 336-599-1195 or 919-603-1350 or kim_woods@ncsu.edu.

ABOUT N.C. COOPERATIVE EXTENSION

North Carolina Cooperative Extension is a strategic partnership of NC State Extension, The Cooperative Extension Program at N.C. A&T State University, USDA-NIFA, and 101 local governments statewide. Extension professionals in all 100 counties and the Eastern Band of Cherokee translate research-based education from our state's land-grant universities, NC State and N.C. A&T, into everyday solutions. Extension specializes in agriculture, youth, communities, food, health and the environment by responding to local needs.

NC State University and N.C. A&T State University are collectively committed to positive action to secure equal opportunity and prohibit discrimination and harassment regardless of age, color, disability, family and marital status, gender identity, genetic information, national origin, political beliefs, race, religion, sex (including pregnancy), sexual orientation and veteran status. NC State, N.C. A&T, U.S. Department of Agriculture, and local governments cooperating.

In compliance with the Americans with Disabilities act, N.C. Cooperative Extension or NC State University will honor requests for reasonable accommodations made by individuals with disabilities. Please direct accommodation requests to Mikayla Graham, Mikayla_graham@ncsu.edu, 9195031350 or 336-599-1195. Requests can be served mor effectively if notice is provided at least 10 days before the event.