**Considerations for Managing *Neopestalotiopsis* from Planting to Dormancy**

We're already over a month into fall now and we've had some ups and downs with temperature and rainfall. I've gotten several questions from growers and county agents over the last two weeks regarding disease management and fungicide timing/selection in strawberry, and I'd like to thoroughly address many of these topics so everyone can make the best decision for their farm. Just a reminder that we currently recommend applying effective fungicides every 10-14 days in the fall to manage *Neopestalotiopsis*. In addition, I just want to note that we have seen very little *Neopestalotiopsis* compared to last year, and I hope it stays that way. Ultimately, we should still treat this year as if the risk is high, as the potential losses far outweigh the cost of additional sprays.

**What's up with Thiram?**

First off, many growers are having issues finding Thiram SC, and it feels like it is not going to become any easier to find. The EPA has been reviewing the registration for Thiram since 2015 and has proposed the removal of all non-seed treatment uses, including strawberry and peaches, since at least 2021. See the amended proposed interim decision (PID) from April 2024 for an outline of the details and timeline https://www.federalregister.gov/documents/2024/04/30/2024-09181/pesticide-registration-review-proposed-decisions-for-several-pesticides-notice-of-availability. The posting of that PID started a comment period that allowed stakeholder input through July 2024, which is now closed. We have not heard any further updates since then.

The reality is that until *Neopestalotiopsis* became an issue, this review wasn't on our radar. It was occurring at the same time as others we were talking about, like the review of Captan. The good thing is that the comment period occurred after we had our worst year of *Neopestalotiopsis* across the entire country, meaning the EPA will have to fully consider the impact this decision will have on strawberry production in the US alongside their findings of risk of use. The reality of any pesticide review is that they are necessary to ensure the safety of our communities and farms, which can only be accomplished if we take continued looks at registered pesticides as technology and medical understanding advances over time. This system does a great job of weighing potential risk with impacts to food production. These checks and balances were evident with the Captan review, where the initial PID was backed down heavily after comment periods as grower groups and universities clearly communicated its importance in preventing increased pesticide.

Another reality is the actual production of pesticides like thiram. Many producers are struggling to find thiram and what we have heard from some distributors is that the production may have come to a standstill. The reality is that the production company could

have decided that the future of a product under review may not be a profitable endeavor. We've seen this with many other products, such as those that contain chlorpyrifos, where the main producers decided to go in other directions once the possibility of a ban increased. The good thing is that if the EPA backs down from the current verbiage of the PID on thiram, there is a large need for the product and generally someone will try to fill that need. The reality here is that even if strawberry uses stay on the label, the product will be hard to find in mean time since distribution has dried up.

**Without Thiram, what options do you have for the fall?**

Thiram is our go-to product for fall management of *Neopestalotiopsis*. It is critical to spray plants immediately after they are planted to reduce disease inoculum, and continued protection is necessary until we significantly cool down. Below is a list of the products that have exhibited acceptable efficacy in reducing *Neopestalotiopsis* **(Table 1)**. Without thiram we could only consider Inspire Super, Rhyme, Switch, and Tilt as our full arsenal of labeled and effective products to cover fall and spring spray schedules. See the end of the document for a suggested full season spray schedule **(Figure 1)**. You may wonder why other states are recommending Inspire instead of Inspire Super, but no label exists for Inspire in Arkansas currently. Old stock could still be used if purchased when it was labelled.

**Table 1 – Fungicides that are effective in suppressing *Neopestalotiopsis* in strawberry**

| Product | Active Ingredient | FRAC | Use Rate | Uses and Notes | PHI (days) |
|---|---|---|---|---|---|
| Thiram | thiram | M3 | 2.5 qts | 5 apps East of Mississippi River | 0 |
| Switch | cyprodinil+ Fludioxonil | 9+12 | 11-14 oz | 5 apps at 11 oz/A rate | 0 |
| Rhyme | flutriafol | 3 | 7 fl oz | 4 apps max | 0 |
| Tilt | propiconazole | 3 | 4 fl oz | 3 apps max | 0 |
| Inspire Super | difenoconozole + cyprodinil | 3 + 9 | 16-20 fl oz | 4 apps max | 0 |

We currently only recommend thiram for fall use to save some fungicides like Switch or Inspire Super for the spring where they are vital for management of Anthracnose fruit rot and grey mold. You may ask, "Why don't we save Switch for the spring and use Inspire Super in the fall?" The problem is that fungicide labels consider any application of Inspire Super as one use of Switch due to their shared active ingredient, cyprodinil. Spraying five, 11 oz applications of Switch in a season would fully use up your allowable cyprodinil limits.

We also run into a few speed bumps when considering Rhyme or Tilt for fall use. First, Rhyme can be harder to find than many of the other chemicals listed, and I have heard from many small producers that it has been cost prohibitive for them. Second, Tilt, and other propiconazole containing products, have been known to stunt strawberry plants. Previous research indicates that significant stunting is evident above three applications, which is why we don't recommend the four applications allowed by the label. Some southeastern states have recommended propiconazole usage in the fall for *Neopestalotiopsis* suppression, however we don't think that would be a good strategy in our growing region.

It can be very difficult in our region to get plant size and crown numbers necessary for optimal yield prior to the dormancy period, especially considering variable plant deliveries and how variable our climate can be. I'd highly recommend you take a look at all of Amanda McWhirt's research on these factors, where she has consistently demonstrated how important it is to maximize time for growth before dormancy. Growers often even leverage risks to maximize growth with extended row cover use to make up for lost time, which really showcases how a fungicide that slows down plants may do more harm than good. In fact, Guido Schnable at the University of Clemson looked at propiconazole usage in the fall on strawberries in 2024/2025 and did observe numerically lower plant size and yield, although no statistically significant impact was found at his location. I believe the risk is much higher in our growing region compared to South Carolina. We have a much shorter time from planting to dormancy and plants usually withstand much cooler temperatures earlier in their transition into dormancy. Ultimately propiconazole use in the fall may be worth it with heavy disease loads and normal planting times, you should just expect some lower yields to lower the disease risk.

For more information on DMI (FRAC 3) usage in strawberry, consider the follow article by Phil Brannen in the Small Fruit News. https://smallfruits.org/2025/09/dmi-fungicides-for-*Neopestalotiopsis*/

**Recommendations for fall *Neopestalotiopsis* sprays if you don't have Thiram**

If you can't find Thiram, your go-to product in the fall needs to be Rhyme. This product is available from several sources online and I would highly recommend you weigh heavy losses from *Neopestalotiopsis* against the price to buy it. In the 2024-2025 strawberry season, producers who put out effective fungicides in the fall were the ones that saw the least amount of plant loss from *Neopestalotiopsis*. If you still haven't put out an effective product this fall, I highly recommend you get something out ASAP. The priority needs to be spraying ASAP after planting, then we usually recommend considering all the factors you can on when to continue applications. In years when plants appear clean, as

many do this year, and we are relatively dry with a quick cool-down, I think 1-2 applications would get you to dormancy. If you have pervasive leaf spot and/or have been hit by several rain events, you really need applications out every 10-14 days, which would probably mean 3-4 applications in the fall.

If you have to rely on Rhyme due to not having thiram, I would highly recommend mixing it with captan for each application. Captan has shown some suppression of *Neopestalotiopsis* in some studies, which may mean effective resistance management when relying more heavily on FRAC 3 fungicides. For smaller growers it's possible you could get away with using Captan as a replacement, especially this year where the risk appears be lower. Captan has been shown to have some activity on *Neopestalotiopsis*, and I really think getting it out every 10-14 days in the fall will be better than not spraying. I've talked with some growers who have none of the products listed above as of late October and had not applied fungicides yet to their strawberries. I think in this situation get out Captan ASAP if you have it and try to get your hands on Rhyme in case this cool down doesn't last.

**Spraying around rain events**

Not every situation has a perfect solution, and I think in the last week many growers have grappled with several excessive rain events in a week. Many were 10-14 days from their last spray and looking at 3 days of rain in their near future. The main factor you need to consider is time since your last spray and the weather that occurred during that interval. *Neopestalotiopsis* will readily sporulate and germinate in mild or warm temperatures when leaf wetness and heavy rain events are abundant. If it has been 10 days since you sprayed and it rained during that period, your plants are at a high risk of further infection of *Neopestalotiopsis* if another rain event is in the near future. Even if a protectant fungicide like Thiram may get washed away in 1-2 days, it is still worth applying before the rain event to reduce the number of spores that will germinate during the extended periods of leaf wetness in your near future. In most cases, spraying before the rain event will be the correct decision if you can get 12 hours of time from application to any rain event to ensure rain-fastness and activity of the fungicide.

**When to terminate applications for the fall**

*Neopestalotiopsis* is a disease that doesn't necessarily need warm weather to occur, but in our experience once it cools down the risk of continued development and furthered infection reduces significantly. Once the high gets between 50-60°F with cold nights, I think we have reached our last spray for the fall. We plan to make our last application in our trials the first week of November unless we get a big warmup after this last week of October, and I feel confident that it will be the same for many others in the

state. Keep an eye out for extended warm periods (highs between 70-80°F and warmer nights) and if you are playing catch-up with diseased plants, I would extend sprays further into the fall.

As always there are many nuances when making these decisions. Feel free to give me a call or send me a text or email anytime to discuss your situation and we can try to find a successful path forward.

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**West of Mississippi River**

| App # | Fungicide | FRAC Groups |
|---|---|---|
| Fall 1 | **Thiram** | M03 |
| Fall 2 | **Thiram** | M03 |
| Fall 3 | **Thiram** | M03 |
| Fall 4? | **Thiram** | M03 |
| Spring 1 | **Switch** | 12 + 9 |
| Spring 2 | **Captan + Elevate + Rhyme** | M04 + 17 + 3 |
| Spring 3 | **Switch + Captan** | 12 + 9 + M04 |
| Spring 4 | **Captan + Elevate + Rhyme** | M04 + 17 + 3 |
| Spring 5 | **Luna Sensation + Thiram** | 7 + 11 + M03 |
| Spring 6 | **Switch + Captan** | 12 + 9 + M04 |
| Spring 7 | **Luna Sensation + Captan + Tilt** | 7 + 11 + M04 + 3 |
| Spring 8 | **Switch + Captan** | 12 + 9 + M04 |
| Spring 9 | **Luna Sensation + Captan + Rhyme** | 7 + 11 + M04 + 3 |
| Spring 10 | **Switch + Captan** | 12 + 9 + M04 |
| Spring 11 | **Cabrio + Captan + Tilt** | 11 + M04 + 3 |

**East of Mississippi River**

| App # | Fungicide | FRAC Groups |
|---|---|---|
| Fall 1 | **Thiram** | M03 |
| Fall 2 | **Thiram** | M03 |
| Fall 3 | **Thiram** | M03 |
| Fall 4? | **Thiram** | M03 |
| Spring 1 | **Thiram + Switch** | M03 + 12 + 9 |
| Spring 2 | **Captan + Elevate + Rhyme** | M04 + 17 + 3 |
| Spring 3 | **Switch + Thiram** | 12 + 9 + M03 |
| Spring 4 | **Captan + Elevate + Tilt** | M04 + 17 + 3 |
| Spring 5 | **Luna Sensation + Thiram** | 7 + 11 + M03 |
| Spring 6 | **Switch + Thiram** | 12 + 9 + M03 |
| Spring 7 | **Luna Sensation + Captan + Tilt** | 7 + 11 + M04 + 3 |
| Spring 8 | **Switch + Thiram** | 12 + 9 + M03 |
| Spring 9 | **Luna Sensation + Thiram + Rhyme** | 7 + 11 + M03 + 3 |
| Spring 10 | **Switch + Thiram** | 12 + 9 + M03 |
| Spring 11 | **Cabrio + Thiram + Tilt** | 11 + M03 + 3 |

**Figure 1. Example spray schedules for strawberry protection in the Mid-South**