



### **2026 MDFC CLS Fungicide Program: *Utilizing New Fungicide***

1. Proline\* + EBDC
2. Tin + Topsin
3. QoI + EBDC
4. Tin + EBDC
5. Verpixo + EBDC
6. Inspire XT\* or Provysol\* + EBDC
7. Tin + EBDC

### **2026 MDFC CLS Fungicide Program: *Without New Fungicide***

1. Proline\* + EBDC
2. Tin + Topsin
3. QoI + EBDC
4. Tin + EBDC
5. Inspire XT\* or Provysol\* + EBDC
6. Tin + EBDC
7. Triazole\* + EBDC

*\*Remember to rotate the triazoles - refer to tables on page 2*

## **Cercospora Management for 2026**

- First application **just prior to row closure**
  - Target 4<sup>th</sup> week of June (~June 22<sup>nd</sup>)
- **Stay on schedule** — 10-12-day intervals
  - Adjust for rain/weather
- **Spray ahead of forecasted rain event**
- **Tank-mix**
  - Widespread, but patchy, resistance to triazole/tin/QoI fungicides
  - No resistance ever reported to EBDC since registration in 1948
- **Full rates**
- **20 GPA** water volume

Triazoles	Rate/Acre	Pre-Harvest Interval	Reentry Interval
Proline 480 SC	5.7 oz	7 Days	12 Hours
Phobos FC	7.6 oz	7 Days	12 Hours
Domark	6.9 oz	14 Days	12 Hours
Minerva	13 oz	14 Days	12 Hours
Provysol	4 oz	7 Days	12 Hours
Inspire XT	7 oz	21 Days	12 Hours
REGEV	8.5 oz	7 Days	12 Hours
Luna Flex	13.6 oz	7 Days	12 Hours
Enable 2F	8 oz	14 Days	12 Hours
Topguard	14 oz	21 Days	12 Hours
Lucento	5.5 oz	21 Days	12 Hours

**\*Cross resistance exists: Proline 480 SC / Phobos FC / Domark / Minerva / Enable 2F/ Topguard / Lucento  
Cross resistance exists: Provysol / Inspire XT / REGEV / Luna Flex\***

EBDC	Rate/Acre	Pre-Harvest Interval	Reentry Interval
Dry	2 lbs.	14 Days	24 Hours
Liquid	1.6 qts.	14 Days	24 Hours
Dithane F-45 / M45, Koverall, Manzate Max / Pro-Stick, Penncozeb 75DF / 80WP			

Tin	Rate/Acre	Pre-Harvest Interval	Reentry Interval
Liquid	8 oz	7 Days	48 Hours
Agri Tin Flowable / Super Tin 4L			

Benzimidazole	Rate/Acre	Pre-Harvest Interval	Reentry Interval
Liquid	10 oz	21 Days	24 Hours
Dry	0.5 lb	21 Days	24 Hours
Topsin 4.5FL / M WSB, T-Methyl 4.5F / 70 WSB, Talaris 4.5F / 70 WSB, Incognito 4.5F / 85 WDG			

QoI	Rate/Acre	Pre-Harvest Interval	Reentry Interval
Headline	9 oz	7 Days	12 Hours
Gem 500 SC	3.6 oz	21 Days	12 Hours
Flint Extra	3.6 oz	21 Days	12 Hours
Priaxor	6.7 oz	7 Days	12 Hours

**\*Azoxystrobin is more effective on Rhizoctonia than CLS. It is not recommended in the MDFC CLS Program\***

Copper	Rate/Acre	Pre-Harvest Interval	Reentry Interval
Dry	2 lbs.	0 Days	48 Hours
Liquid	2 pts.	0 Days	48 Hours
Badge SC / Champ 2 Flowable / Kocide 3000 / Cuprofix Flex			

**The product label trumps this information at all times - Always read & follow label instructions**

# New Mode of Action for 2026

**Verpixo™**

Adavelt™ active

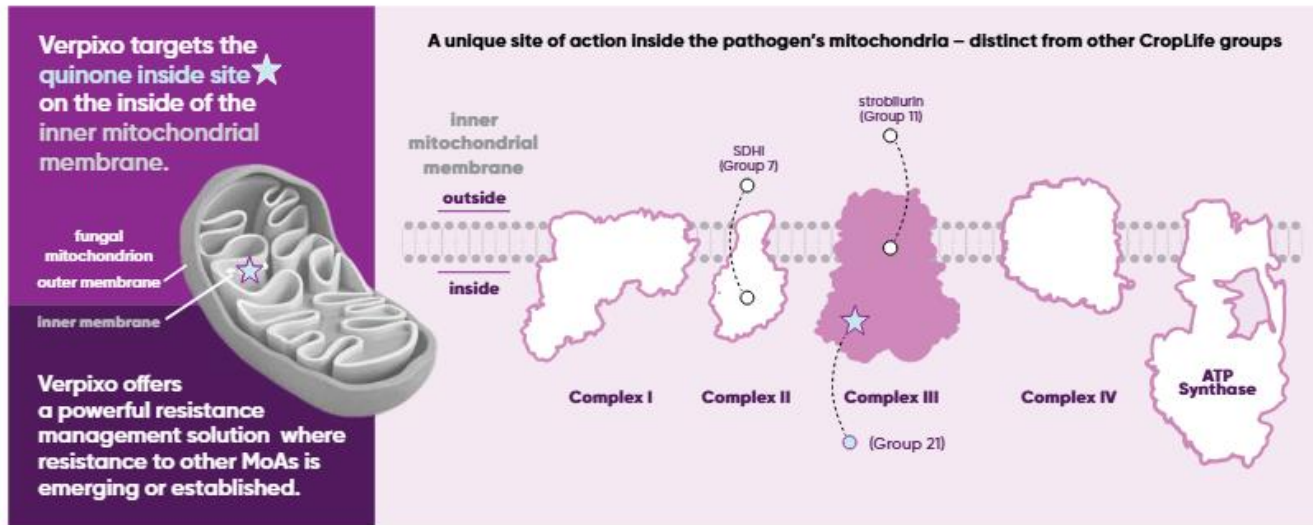
**FUNGICIDE**



**CORTEVA™**  
agriscience

In late April 2026, EPA approved a brand new mode of action fungicide for use in sugarbeet. Minnesota and North Dakota issued state approvals in May 2026. Verpixo, developed by Corteva, is a new FRAC group 21 ~ quinone inside inhibitor (Qil). It inhibits mitochondrial respiration in fungi by blocking electron transfer in the respiratory chain, and binds to complex III at the inner mitochondrial membrane. The Qol (quinone outside inhibitors) fungicides, such as strobilurins like Headline, bind to the same complex (complex III) but at a site outside of the inner mitochondrial membrane. Unlike the protectant fungicides such as tin, EBDC, or copper, Verpixo is locally systemic with translaminar movement; instead of staying on the sugarbeet leaf surface, it is absorbed into the leaf tissue and moves from the top of the leaf to the bottom of the leaf.

**Verpixo Adavelt active controls diseases with established resistance to other MoAs.**



Verpixo Adavelt active is a CropLife Group 21 Quinone Inside Inhibitor (Qil) that binds to complex III on the inside of the inner mitochondrial membrane, which is distinguished from target sites for SDHI (complex II) and strobilurin (Qol) actives. Source: www.frac.info

A new mode of action is fantastic news for resistance management. Not only will it be something that CLS hasn't "seen" before, it also takes some pressure off of the existing chemistries. The MDFC CLS program recommendation was updated to include this new fungicide ~ instead of using three triazoles total (and consequently two from the same "sub-group"), only two triazoles are recommended, with just one from each "sub-group".

The MDFC research team has worked with Corteva to evaluate Verpixo since 2023; NDSU, U of MN, and SMBSC have trialed it as well. Based on the extensive dataset generated by this group, we are confident that Verpixo will be a strong addition to our CLS fungicide program. MDFC has placed it as the 5th application because that allows for more preharvest interval flexibility with the subsequent triazole/tin applications. Please reach out to Emma or your agriculturist if you have any questions.

Qil	Rate/Acre	Pre-Harvest Interval	Reentry Interval
Verpixo	20.5 oz	21 Days	12 Hours
<i>*Only one application per season</i>			

*Infographics provided by and used with permission from Corteva Agriscience.  
Always read & follow the product label.*

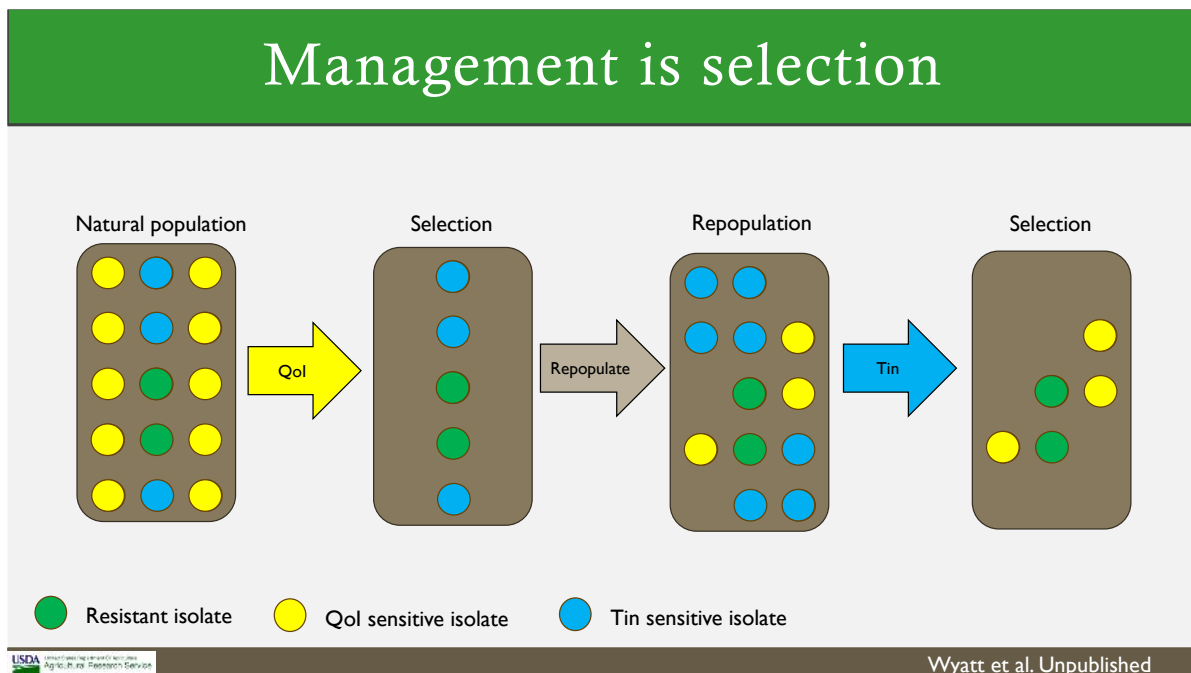
## Spray Ahead of the Rain

A big change to our recommendation for 2026 is that we are asking you to spray ahead of a forecasted rain event. Previously, our stance was “Wait and see what the rain does”. However, after such a tough year in 2025, we revisited the science and changed our recommendation. If there is rain in the forecast and you are close to the end of your spray interval, it is better for you to go out ahead of the rain to get the next fungicide application on. Fungicides, whether systemic like the triazoles or protectant like EBDC or tin, do the majority of their “job” within the first 5-6 hours after application. They have controlled the spores that they can, and what’s left for the remainder of the spray interval is “residual” control. For the systemics, they are “in” the plant protecting it from new infection; the protectants are on the leaf surface, creating a barrier to protect the sugarbeet from new spores that land on the leaves and try to infect the sugarbeet. If rain does happen during your spray interval, the protectants’ barrier can be washed off depending on the amount of rain and how fast/hard it came down. **However, your spray ahead of the rain was NOT wasted.** CLS is continuously going through it’s disease cycle, with new spores always germinating and dispersing, looking to infect sugarbeet. We know that CLS loves a hot, humid, and wet environment — immediately after a rain it can thrive, going through it’s disease cycle in as little as 7 days. If you don’t spray ahead of the rain, not only have you not controlled the CLS spores that were previously present, but you’re also leaving your sugarbeets completely unprotected in cercospora’s ideal environment, with new spores coming on strong. You may need to shorten your spray interval after a rain as well; please pay close attention to DIVs and consult your agriculturist.

## A Review of Data from Dr. Nathan Wyatt, USDA

### Management is Selection

Dr. Wyatt has conducted in-season CLS sampling in addition to the early-season and end-of-season testing that has been done for many years. This data gives us a look at how CLS responds to our management program as the season goes on. The graphic at the bottom of the page gives a quick look. Prior to a fungicide application being made, there is a natural population of CLS spores with a mix of resistant and susceptible isolates present. After a fungicide application is made, the CLS spores “repopulate” and you’re left with a new mix of isolates. For example, after you spray QoI, you’ve controlled the QoI-sensitive isolates and are left with QoI-resistant isolates, as well as isolates that are susceptible and/or resistant to the other chemistries. If you spray Tin next, you will control any spores that are susceptible but not those that are resistant and once again, the resistant isolates repopulate.



# Odds & Ends to Make Your CLS Program More Effective

- **Start your program on time** and stay on schedule. Remember that while the program calls for 7 applications, if the weather in September is hot and humid, an 8th application will be crucial. EBDC alone or mixed with a copper is a good choice should that application become necessary.
- **Keep your spray intervals tight.** The 2026 program is based on 10-12-day intervals, but shortening the interval to 10 days may be needed for some applications — pay attention to weather conditions. Scout your fields and keep in contact with your Agronomist.
- **Watch the NDAWN Daily Infection Values (DIVs).** These color-coded ratings can be found on the NDAWN site. Users can select CLS data from the ten NDAWN stations within the Minn-Dak growing area - Campbell, Elbow Lake, Foxhome, Herman, Rothsay, Sabin, Underwood, and Wolverton, MN, and Mooreton and Wahpeton, ND. The app also features real-time weather conditions from each station for decision making and recordkeeping during spraying season. **Specifically for CLS, the Daily Infection Values (DIVs) can be displayed in both table and graphical formats as well as providing a map with 'infection zones' by station.**
  - [ndawn.info/crops.html](http://ndawn.info/crops.html)
- **High water volumes.** Many of the tank-mix partners are protectants and require a little more water. Ground applications should target 20-25 GPA and aerial applications no less than 5 GPA.
- **Be wary of 'miracle-type' adjuvants.** If there was a 'silver bullet' that could be added to the tank to significantly increase CLS control we would be recommending it. We test LOTS of these products every year and publish the results on our website. Invest your money where you know it will return dividends - increased water volumes, tighter spray intervals, full rates, etc.
- **Use an aerial applicator if needed.** If rain/wet ground is prohibiting you from staying on your spray schedule, call in the 'Air Force.' You are money ahead by staying on schedule - once you get behind the eight-ball of CLS pressure, it's almost impossible to catch up.
- **Pay attention to Pre-Harvest Intervals.** Pay close attention to the PHI of each product you pour into the spray tank - it will have an impact on the August start of preharvest.
- **Don't give up on the dry formulations.** When in doubt, follow the A.P.P.L.E.S. approach recommended by NDSU Weed Science:
  - ⇒ **Agitate**
  - ⇒ **Powders soluble (SG, SP)**
  - ⇒ **Powders dry (DF, WDG, WP)**
  - ⇒ **Liquid flowables & suspensions (ASC, F, ME, SC, SE)**
  - ⇒ **Emulsifiable concentrates (EC, EW, OD)**
  - ⇒ **Solutions (S, SL)**

*Make sure that each product is uniformly mixed in the tank before adding another.*

## Pre-mix ≠ Tank Mix

When it comes to CLS fungicide applications, a "pre-mix product" does NOT mean that it can be considered a 'tank mix.' The table below lists some of the most common products that contain multiple active ingredients in the same jug. If you use these products, they still need to have a tank-mix partner included. Although many of these products utilize the same chemistries that are in our recommended program, the formulations are often 'not as strong' as the stand-alone formulations of each. For example, Delaro (a mixture of Proline and Gem) is formulated such that you would need to add ADDITIONAL Proline to the spray mixture to get the concentration required for adequate control of CLS. Another example of the complexity surrounding these pre-mix products is resistance management. We all know that when it comes to CLS control, using the same product back-to-back is a poor resistance management practice. So when using a pre-mix product like Minerva Duo (a mixture of a triazole and a tin), what would you use next in your rotation since both of the flagship chemistries were utilized at the same time?

Name	Modes of Action
Lucento	Triazole + SDHI
Propulse	Triazole + SDHI
Acropolis	Triazole + benzimidazole
Brixen	Triazole + strobilurin
Delaro	Triazole + strobilurin
Veltyma	Triazole + strobilurin
Minerva Duo	Triazole + tin
REGEV	Triazole + tea tree oil

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***Please reach out to your agriculturist or Emma with any questions or concerns.***

