MINN-DAK FARMERS COOPERATIVE

BEET TOPics

ISSUE 38 - June 2018
Mike Metzger - Editor

Cercospora Control for 2018...

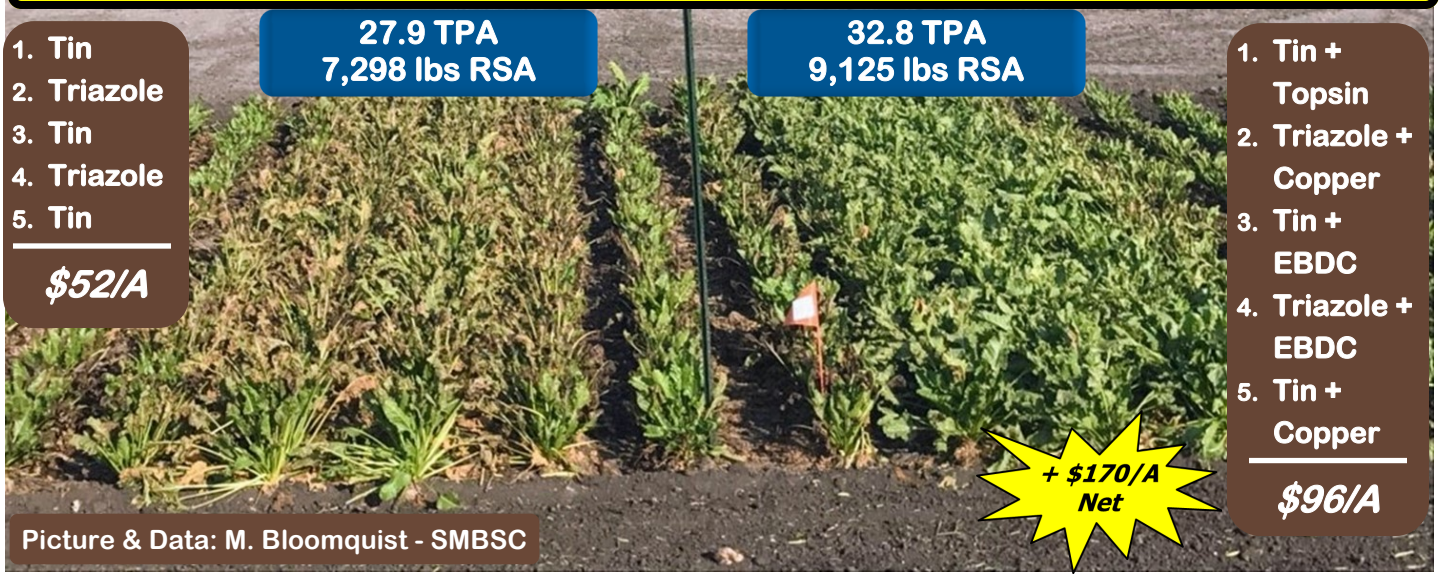
Do I Really Need to Tank-Mix Again This Year?

Simply put - YES. With the Strobilurin chemistry class (products like Headline, Gem, Priaxor, etc.) rendered ineffective due to high levels of fungicide resistance, it is critical to protect the few remaining chemistry classes within our Cercospora Leaf Spot (CLS) portfolio. The loss of the Strobys will result in an increased number of applications of both the Triazoles and Tins. If they are applied alone, the inevitable outcome of the increased application frequency of these two chemistry classes is that more selection pressure will be applied, and the risk of developing resistance to these remaining fungicides will increase significantly over time. Research in sugarbeets and in other crops has consistently demonstrated a couple key points when two effective pesticides are tank-mixed and applied together: 1) The risk of resistance developing can be greatly reduced and 2) Disease control increased on the targeted pathogen. These two reasons are why **no fungicide should be applied alone in 2018.**

What About Tank-Mixing Glyphosate With My Fungicides?

You're going to like this answer about as much as you liked the answer to 'do I have to tank-mix' - **glyphosate and CLS fungicides should NOT be applied together.** The main reason is the amount of water required with each application. CLS fungicide performance can be linked to the volume of water applied on a per acre basis. Research has shown that high water volumes (15 -20 GPA) applied in smaller droplets equates to better fungicide coverage and increased product performance. Glyphosate is just the opposite as it has better performance when applied in larger droplets (pile effect) and lower water volumes (5-15 GPA). They are two completely different approaches to maximize the control offered by each type of product. You are money ahead making separate applications to achieve the needed weed and CLS control rather than making one single application and getting mediocre control of each.

A Picture is Worth a Thousand Words...



Why Aren't You Recommending a Triazole Tank-Mix for the First Spray Application?

It's no secret that not all fungicides are created equal - Some offer better control than others. Research has shown that (from a CLS control standpoint) most of the Triazoles perform better than the Tins, the Tins outperform the coppers, and so on and so forth. With this in mind, it makes a lot more sense to apply your 'silver medal' chemistry when CLS just starts to take hold in the area and follow up with the 'gold medal' chemistry class when CLS really starts to ramp up and come on strong. You never see the best batter on a baseball team first in the lineup, they always let a couple other players have a chance to get on base before they send their 'slugger' to the plate. The same principle applies to our 'CLS batting order.'

How Should I Handle Rainfall That Occurs Between My Fungicide Applications?

Our fungicide program is specifically designed with this in mind. We have tried to partner systemic chemistries (those absorbed into the beet leaf - lower risk of washing) with protectant-type classes (lay on the leaf's surface - higher risk of washing) as often as possible. The most vulnerable applications to rainfall will be #3 (Tin+EBDC) and #5 (Tin+Copper) as all chemistry classes involved are protectants. Regardless of which fungicides you apply, consider these general guidelines:

- Less than one inch of 'normal' rain since the last spray should not significantly affect fungicide residues.
- One to two inches of rain since the last spray (or < 1" delivered in a heavy downpour) will reduce the residues by roughly one-half. As such, reduce the number of days until the next spray by one-half (if the next spray is scheduled for 10-12 days, then reduce that interval to 5-6 days).
- Over two inches of rain since the last spray will remove most of the spray residue. You will need to reapply the tank-mix as soon as possible.

2018 Minn-Dak Cercospora Leaf Spot Fungicide Program

1. **TPTH + Topsin**
2. **Triazole + Copper**
3. **TPTH + EBDC**
4. **Triazole + EBDC**
5. **TPTH + Copper**

Keep fungicide applications to a 10-12 day spray interval

(tighter if rain and/or DIVs require)

Should I Be Paying Attention to the CLS Rating of the Varieties I Planted?

Absolutely – Varieties approved for sale at Minn-Dak can greatly differ in their susceptibility to CLS. Listed below are the CLS ratings for the five most popular varieties planted at Minn-Dak for the 2018 season. The lower the number, the more resistant the variety is to CLS. It is of note to mention that ACH 830 has the highest CLS rating in our entire seed portfolio. Pay close attention to these fields when scouting for the disease.

Variety	CLS Rating
Betaseed 7540	3.91
Hilleshög 4302	4.17
Betaseed 7099	4.36
ACH 012	4.48
ACH 830	5.10

3% of Leaf Surface Infected
PROVEN YIELD LOSS

If I Skip a Spray and/or Stretch My Application Intervals a Little CLS Isn't Going to Hurt My Beets That Bad Is It?

When it comes to CLS, a little bit of disease goes a long way. A proven economic loss occurs when only 3% of the leaf surface area is covered with lesions (60-70 spots). When the disease progresses to this point, the result will likely be reduced tonnage and sugar content, increased impurities and additional losses during long-term storage (both of which complicate processing in the factory).