



Cercospora Management Begins at Planting

David Mettler – Research Agronomist

During the 2016 season it is estimated that SMBSC shareholders lost in excess of \$30 million due to Cercospora leaf spot. This is approximately **\$250-300 per acre** just at the field level! This does not include losses incurred at the factory level due to reduced production and beet purity. We can prevent a repeat of the season we experienced in 2016 through careful planning and execution of good management practices.

In 2016:

- There was a high inoculum load following the 2015 season.
- We had early planting and canopy closure.
- Extremely favorable weather for CLS.
- The majority of the CLS population was resistant to strobilurins.



Figure 1.

2017 Planting Practices to Lower Cercospora Potential:

1. Do not drag residue from 2016 sugarbeet fields into 2017 sugar beet fields with spring tillage.
2. Variety tolerance will reduce disease potential (Figure 1).
3. Plant the most Cercospora tolerant variety you have on the common line to 2016 sugarbeet fields (Table 1. Lower scores = most tolerant).

In 2017 we can expect to again have a high inoculum load out in the fields. We cannot predict the weather so we must plan for another long season of fungicide applications to control CLS. With the loss of the strobilurins (Figure 2) we must also protect the fungicide families that are left through tank mixing and fungicide rotation.

Crystal M509	3.7
Beta 9505	3.8
Beta 9475	4.0
Hilleshog 9739	4.1
Beta 92RR30	4.1
Beta 90RR54	4.2
Maribo MA109RR	4.3
Crystal RR018	4.3
Hilleshog 9093RR	4.3
SV RR958	4.4
Crystal M380	4.5
Crystal M579	4.6
Beta 9545	4.8
Beta 92RR60	4.8
Crystal M375	4.8
Crystal RR270	5.5

Table 1.

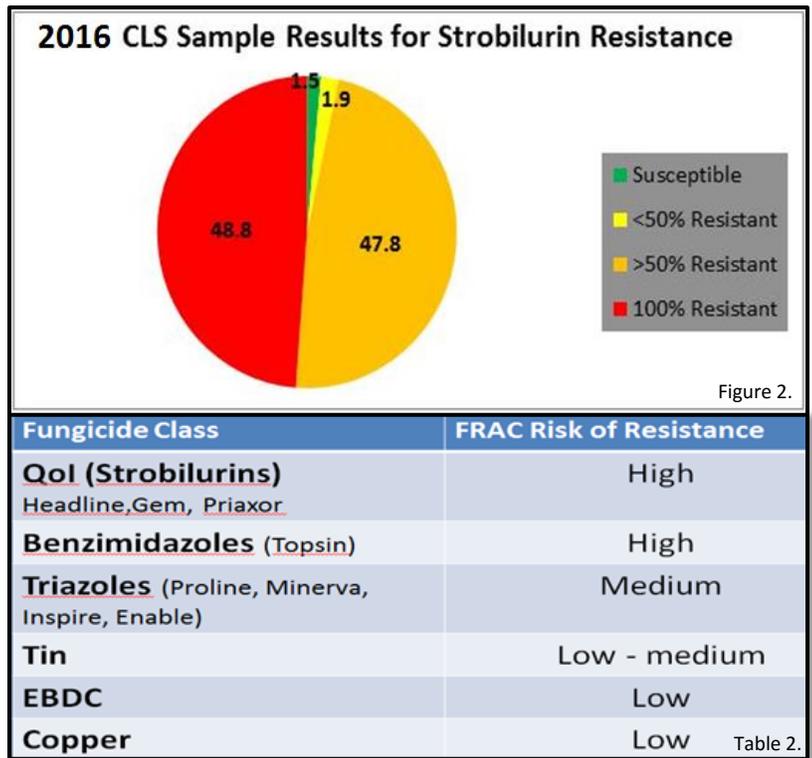
2017 CLS Fungicide Program:

1. Tin + Topsin
2. Triazole + Copper
3. Tin + EBDC
4. Triazole + EBDC
5. Tin + Copper
6. Triazole + EBDC

The Cost of Not Tank Mixing:

With the loss of strobilurins and the resulting increased application of triazoles and tin, the risk of resistance developing to these remaining fungicide families will only increase (Table 2). Tank mix partners (Coppers, EBDCs, and Topsin) significantly increase CLS control when applied with a main chemistry. Research with other

pesticides has shown that tank-mixing two effective pesticides can reduce the chances of resistance developing. We cannot afford to lose the triazole or the tin products to resistance developing in the CLS population! Tank-mixing will provide better season-long control and will decrease the risk of CLS developing resistance to these fungicides. The benefits of tank-mixing outweigh the cost of poor control (**\$250-300 per acre**) and losing another important fungicide to resistance (Table 3).



Other Things to Remember When Spraying:

- All fungicide applications should be made on a 10-12 day spray interval.
- **Always** alternate between tin and triazole applications.
- It is important that all applications be a tank mix of two fungicide families.
- Use the highest labeled rate of EBDC and Topsin tank mix partners and use the medium labeled rate of copper tank mix partners.
- Specific brands or formulations used are at the discretion of the grower.
- Add an early border spray along common lines to 2016 sugarbeet fields to reduce early season pressure.

Application	Products	Approximate Cost/Acre
1	Tin + <u>Topsin</u>	\$12
2	<u>Triazole</u> + Copper	\$22 - \$30
3	Tin + EBDC	\$13 - \$18
4	<u>Triazole</u> + EBDC	\$20 - \$33
5	Tin + Copper	\$15 - \$18
6	<u>Triazole</u> + EBDC	\$20 - \$33
Total		\$102 - \$144 / Acre

Table 3.

Information Credit:

Mark Bloomquist – Director of Research
Cody Groen – Production Agronomist

