

# AGRICULTURAL BEET

July 12th, 2019  
Cercospora Leafspot  
Recommendation Update

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## 2019 CLS Inputs: Balancing potential upside benefits with downside risk

Your Shareholder Innovation Committee (SIC) has met regularly since late winter to discuss CLS disease control. A major objective of the last meeting was to reach agreement on practices and suggestions that could still have beneficial impact on your program this season while giving significant consideration to minimizing shareholder economic and agronomic risk. History tells us that our activities over this next month or so will go a long way toward spelling out the success of your program and your crop. Keep fighting the good fight.

**Spray pH:** Try to familiarize yourself with your final spray mixture pH's. The half-life of many CLS fungicides are diminished as the pH of the spray mixture increases above 7.0 to 7.5 which could likely influence efficacy.

- Since SMBSC groundwater pH is commonly around 7.0 - 7.5, try to mix and spray out fungicide mixtures immediately and never leave a tank sit overnight or risk losing significant activity.
- Generally DO NOT make additions to your spray mix that possess the potential to raise pH further.

**Nozzles:** Based upon limited wind tunnel data, nozzle choice relies upon your specific objectives & preference.

- Hollow cones provide good droplet formation but are limited to 80° spray angle that requires higher nozzle height and droplet release over the canopy to achieve adequate overlap which in turn increases risk of droplet loss and spray skips.
- Flat fan nozzles provide fairly consistent droplet formation with fewer ultra fines and coarse droplets but are not rated for pressures above 60 psi which may or may not affect performance.
- TwinJets provide two directional fan patterns for coverage but like flat fan cousins are pressure limited and have smaller orifices to achieve desired flow rate possibly making them susceptible to plugging. If using TwinJet nozzles take care to pre-slurry hard-to-mix products and adhere to proper mixing order.
- Air induction nozzle specs suggest that other nozzles may be better equipped for contact fungicides.

**Pressure:** Wind tunnel data suggests a downward trend to spray pressures but the SIC is reluctant to make this a general recommendation due to a lack of information tying the impact of lower pressure on droplet spectra to the ultimate CLS fungicide program success. However, a 90 psi cap would likely be an appropriate compromise since spray nozzle catalog specs generally do not suggest pressures in excess of 90 psi.

**Adjuvants:** Data suggest that deposition adjuvants influence droplet spectra and to varying degrees based upon the adjuvant. Further, some fungicide labels mention the use of spreader – sticker adjuvants to reduce loss of product to wash. Stickers are not the same as deposition aids. Stickers by definition have a tacky nature which necessitates diligent sprayer mixing order and hygiene. Be certain you know the difference between a sticker and a deposition aid and base your additive decision upon trustworthy data or source.