

# AGRICULTURAL BEET

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## Foresight is 2020

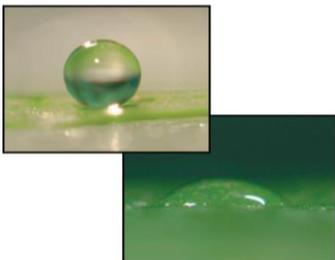
### **Adjuvant systems for your fungicide program: Not all are created equal - Buyer beware!!**

I am concerned about a number of calls I have received that relate to 2020 fungicide adjuvant planning. It appears that there may be a few products, suppliers, and vendors that are making “me-too” claims that their adjuvant product can deposit and/or stick and spread as well as established brands and at a lower price.

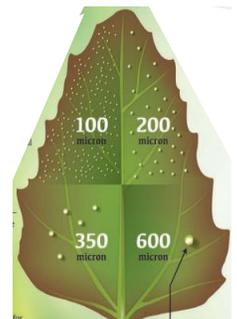
This requires calling out a stark reality of some spray adjuvants. The spray adjuvant industry lacks a strong regulatory entity and/or process. Thus, some products are produced and packaged in less than ideal facilities with less than judicious respect for performance. SMBSC cannot provide consumer watchdogging any more than anyone else and this can create a potentially dangerous marketplace. This is not new to adjuvants or to industry. *Caveat Emptor* is a quite old Latin term for Buyer Beware! Yet, the same warning still applies to our present market. There will, with much certainty, be certain adjuvant producers and suppliers that take offense to that statement and those that do may be providing the products that we should have greatest concern with.

**Leaves: the landing pad.** All factors considered, flying a small remotely operated UAV into the strong winds of the open sea would make reaching an aircraft carrier just as difficult as it could be in landing a large 747 onto that carrier. In both cases, the size and coverage matter. With fungicide spraying, beet leaves are the landing deck and our spray droplets are the aircraft. Producing ideal droplet size spectra is critical. Further, landing aircraft onto a carrier deck requires trained pilots and innate precision technology that spray droplets do not possess once released from a nozzle. Thus, an over- or under-sized droplet reaching and landing onto a leaf is just as difficult as an over- or undersized aircraft onto the deck of a carrier.

Some adjuvants influence the range of droplet size created by your nozzles to increase the volume of the spray that falls in an ideal range that are neither too small nor too large relating to the landing pad (see figure at right\*). These are called deposition agents.



However, effective fungicide adjuvants should possess both a **deposition aid** and a **surfactant**. Leaf stomata represent infection entry points for Cercospora Leafspot (CLS) spores and there are thousands found across an individual leaf that require protection. An average-sized droplet with a quality surfactant is capable of increasing leaf coverage by up to two-fold by reducing the surface tension of the droplet and increasing spread (see photos to the left\*).



**Bottom line:** 2020 shareholder field observations suggest that quality adjuvants that improve droplet size spectra and reduce droplet surface tension can improve fungicide control of CLS. However, most deposition aids possess surfactant but NOT all surfactants possess a deposition aid. Buyer Beware! Price shopping adjuvants makes no more sense than price shopping other inputs that impact the quality of your operation. Adjuvant decisions require data-based decisions or first-hand user testimonial.

Steve Roehl – Ag Strategy Manager.

\* Picture and graphics taken from “Adjuvants and the Power of the Spray Droplet.” Fred Whitford, Purdue Pesticide prgms., et. al.