Laeveld Agrochem
Farming together for success
Nov 2020

COVERAGE IS ONLY A PART OF THE PROCESS

There is a perception that if there is sufficient coverage on the target, that surfactants are not needed. This perception is that products that wet and spread then cause run-off because of their spreading properties. This is contrary to labels of many crop protection products (CPP) that specifically recommend adjuvants.

Although coverage is vitally important to the efficacy of CPP, and excessive adjuvant rates can cause run-off, this perception does not take into account what the other benefits of these adjuvants are. In the discussion below we will discuss some other important properties of these adjuvants.

Absorption

Although coverage is extremely important, it is only one part of the efficacy story. After the CPP has been delivered in sufficient quantities to the weed or crop, systemic products must still go through the tedious absorption process.

Without surfactants the spray droplets may not spread sufficiently, therefore there will be very little contact between the droplet and the leaf surface. The absorption process is then further limited by various obstacles in the leaf structure. Adjuvants are designed to aid in the absorption process, especially through the waxy layers on the leaf surface. The exclusion of adjuvants because of sufficient coverage could therefore be counter-productive as the absorption process may be severely compromised.

Droplet deposit

Once the excess water has evaporated from the spray droplet, the adjuvant may still be present for some time, creating an environment that enhances the CPP efficacy. This could be due to the humectant properties of the adjuvant that may be important to certain systemic and contact CPP.

If adjuvants are totally eliminated, there will be rapid evaporation of the droplet, leaving the CPP prone to the harsh environment. Adjuvants are therefore registered with certain CPP to protect them against these environmental conditions.

Villa's stance

Coverage is an integral part of CPP efficacy. However, it is only a part of the process. It is extremely important to use adjuvants when they are recommended as they often play a role after the droplet has been delivered to the target.

Sometimes when applying tank mixtures, two or more of the CPP in the mixture may be registered with similar adjuvants. Under these circumstances it may be necessary to choose one of the adjuvants. However, please don't just assume that if coverage is sufficient, that adjuvants play no further role. Adjuvants also play an important role on the plant surface and in the absorption process.

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