



Tip of the Month

August 2018

THE MOST UNDERESTIMATED PROPERTY OF ADJUVANTS

We so often hear about adjuvant properties and why these functions are so important to pesticide activity. Properties like salt neutralization, buffering, deposition, wetting/spreading, humectancy and sticking, are often associated with adjuvants.

However, one of the most important properties, namely absorption, is often not considered when adjuvants are selected. This could have disastrous consequences in the form of either inefficacy or crop damage.

Limited absorption

Adjuvants like surfactants, oils, and certain other types, often have a very important absorption function. They can hydrate the waxy layers on leaf surfaces, or form complexes with certain pesticides, to enhance the absorption quantity. The problem is that pesticide absorption is often reliant on the physical properties of the spray droplet deposit, after the water has evaporated from the droplet. This was proved in research that was done with glyphosate. Factors like deposit moisture content, contact with the leaf surface and deposit thickness, were all vitally important to glyphosate absorption.

This means that the incorrect adjuvant choice could limit absorption, resulting in poor weed control. This is obviously also true for many other pesticides. The replacement of one adjuvant with a product that is just a little bit different, could mean the difference between acceptable and unacceptable control.

Delayed absorption

One might think that delayed absorption is

not a big problem, because the pesticide is ultimately absorbed. However, delayed absorption can be a huge problem when environmental conditions become adverse and the pesticide deposit is exposed on the leaf surface.

Furthermore, pesticide droplet deposits that stay on the leaf surface for an extended period, may cause leaf scorch. Just a simple incorrect adjuvant choice can cause delayed absorption. One could get away with the incorrect adjuvant for a few seasons, but ultimately there will be a season where this mistake is exposed by delayed absorption and inefficacy or crop damage.

Villa's stance

Adjuvant choice is crucial for optimal absorption and pest control. Incorrect adjuvant choice could limit absorption amount and rate and could ultimately lead to inefficacy or crop damage.

At Villa we do all our research and registrations with the utmost care and planning and we take all of these factors into account when developing adjuvants. We are firm believers in the merits of quality adjuvants. However, we have seen many instances where pesticide absorption has been negatively impacted by the incorrect adjuvant choice.

Please use adjuvants wisely to improve absorption and to avoid any negative issues with pesticides.

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