



## Tip of the Month

November 2018

### **ADJUVANTS ARE NOT AN INSURANCE POLICY AGAINST UNREGISTERED PRACTICES!**

Adjuvants are products with no pesticidal activity, but they help the crop protection products (CPP) to reach more of their potential. However, adjuvants cannot be used as insurance against incorrect CPP use. Adjuvants are active at many levels, from when the CPP is added to the spray tank, until the final stages of absorption.

Adjuvants limit the effects of water quality, spray drift, droplet bounce, surface tension, relative humidity and absorption barriers on the leaf surface. However, adjuvants also have their limits and should be used wisely to get the full benefit.

#### **Efficacy-limiting factors**

It is quite amazing that CPP perform effectively, given the environmental conditions and other efficacy-limiting factors that they are exposed to.

The first efficacy-limiting factor that CPP must face is the carrier water that can result in salt antagonism and alkaline hydrolysis of certain products. Then there are the antagonistic tank-mix combinations that can result in physical and biological incompatibility.

When the product is applied, a large percentage of fine droplets never reach the target because of a lack of canopy penetration and drift. The droplets that do reach the leaf surface are subject to droplet bounce and a lack of spreading because of a high surface tension of the spray solution.

The absorption process can then be severely reduced by the waxy layers on the leaf surface that will inhibit both the absorption rate and amount.

To crown it all, the harsh South African climate plays a huge role to further limit CPP efficacy.

#### **Adjuvant use**

Fortunately, there are adjuvants that will address all of these efficacy-limiting factors. Despite this, adjuvants are not an insurance policy against the use of unsuitable muddy water, incorrect nozzle selection, driving too fast, extremely low spray volumes, spraying under very windy conditions, applying the CPP under low humidity conditions and various other poor application practices.

It is important to always apply the CPP as effectively as possible, and then to use adjuvants to further stabilize and increase efficacy.

#### **Villa's stance**

Villa believes in the use of the correct adjuvants to increase and stabilize CPP efficacy. We have seen numerous cases where adjuvants have drastically increased the efficacy and have been the difference between unacceptable and excellent efficacy.

However, adjuvants should never be expected to rectify poor application practices. Use adjuvants wisely and apply CPP responsibly to achieve the best possible efficacy.

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