



Tip of the Month

August 2020

GLYPHOSATE AND CLETHODIM ADJUVANT REQUIREMENTS

Adjuvants are often incorrectly recommended with specific crop protection product (CPP) groups, namely herbicides, insecticides or fungicides. It is sometimes assumed that a specific adjuvant type can be applied with any CPP in that particular group. Therefore one adjuvant for herbicides, another adjuvant for fungicides and a third type for insecticides. This is an extremely dangerous way of positioning adjuvants and can have disastrous results!

Glyphosate and clethodim will be discussed below to show that even CPP in the same group, may have different adjuvant requirements.

Glyphosate & clethodim adjuvant requirements

Glyphosate is a water-soluble herbicide that is antagonized by various dissolved cations in spray water. These antagonistic cations include calcium, magnesium, sodium, iron etc. Therefore, it is of the utmost importance to use ammonium sulphate with glyphosate. When a spreading type adjuvant is used, glyphosate is more effective with certain water-soluble surfactants than with oil adjuvants. Many oils are antagonistic to glyphosate and it is important to consult the glyphosate registration holder to confirm if the oil adjuvant is suitable.

Just as with glyphosate, clethodim is also antagonized by certain cations in spray water, and sodium is probably the most important antagonistic cation. Therefore the use of an ammonium sulphate adjuvant with clethodim is equally important. However, where glyphosate does well with certain water-soluble surfactants, clethodim is more effective with oil-containing adjuvants. This is the direct opposite of glyphosate!

Glyphosate plus clethodim requirements

When glyphosate and clethodim are applied in tank mixtures, it is important that a quality

ammonium sulphate adjuvant should be used because both herbicides are antagonized by certain cations in spray water. The problem arises when a surfactant or oil is selected. Clethodim prefers oils and may be less effective with surfactants. Glyphosate prefers surfactants and may be antagonized by certain oils. Fortunately there is a solution to this conundrum in the form of High Surfactant Oil Concentrate (HSOC) adjuvants. These are oil-containing adjuvants, but with a high surfactant load. This makes them compatible with both glyphosate and clethodim, provided that the correct surfactant and oil are included.

Villa's glyphosate and clethodim products should always be used with a suitable adjuvant. When they are applied in mixtures, the adjuvant selection becomes even more critical. Please consult your Villa Marketing Advisor for an adjuvant recommendation for these products alone and in mixtures.

Villa's stance

There are basic principles when it comes to adjuvant selection with these two herbicides alone and in combinations. Adjuvant positioning is critical to ensure effective weed control.

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