



Tip of the Month

February 2020

VILLA HERBICIDES AND SALT ADJUVANTS

Salt adjuvants are used predominantly with Villa herbicides that are antagonized by dissolved cations in spray water. These herbicides include glyphosate, glufosinate, clethodim, halosulfuron, etc.

Villa has made it clear that we only endorse certain ammonium sulphate products for this purpose. We have done extensive research and found that these products are the most effective to neutralize antagonistic cations and to increase herbicidal activity.

Some reasons for our standpoint will be discussed briefly.

Salt adjuvants are diverse

Although many commercial salt adjuvants contain ammonium sulphate, there are still major differences between the products.

Firstly, the amount of ammonium sulphate in the formulation differs between products. Two salt adjuvants could therefore have totally different outcomes on weed control, especially when the water quality is poor.

Secondly, some ammonium sulphate adjuvants also contain other ingredients like acids, surfactants and humectants. Research has shown that not all acids, surfactants and humectants are equally effective with all herbicides. This is the reason why Villa only uses specific ingredients in our ammonium sulphate products that also contain surfactants and humectants.

Thirdly, these additional ingredients may also have an influence on other components in the spray mixture. Make sure that these ingredients are beneficial or neutral to the rest of the tank mixture and that they don't cause antagonism or incompatible spray mixtures.

Other benefits of ammonium sulphate

The main role of ammonium sulphate is to negate the antagonism from cations in spray water. The ammonium sulphate does its job at droplet level and complexes all the most prevalent antagonistic cations. However, improved control of herbicides is often also achieved with ammonium sulphate in low salt content water. This has been confirmed where the efficacy of certain herbicides has been enhanced in trials, even when using distilled water. The reason for this is still disputed, but it shows the importance of using ammonium sulphate adjuvants with these herbicides as a standard practice.

When using other salt adjuvants that contain less or no ammonium sulphate, there is a possibility that this additional enhancement of ammonium sulphate may not occur. The most effective product for Villa's herbicides that recommend a salt adjuvant, is a pure spray grade ammonium sulphate adjuvant at the correct rate. This is contained in all the Villa ammonium sulphate products.

Villa's stance

Villa only recommends certain ammonium sulphate adjuvants with these herbicides. The reasons for this are numerous, but we hope that this discussion has briefly explained our position on this. Ammonium sulphate should be used as a standard practice with herbicides where the label recommends it. If these Villa herbicides are not applied with the correct adjuvant, there is a distinct possibility of poor weed control or incompatible spray mixtures.

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