



## RISKY ADJUVANT PRACTICES WITH GLYPHOSATE

Ammonium sulphate adjuvants have been used with glyphosate for 35 years and are still the most effective cation-neutralizing products.

During droplet drying, the sulphate anion binds to naturally occurring antagonistic cations like calcium, magnesium and sodium before these cations can bind to the glyphosate. The ammonium ion then aids in the glyphosate absorption process. It is a dual action process and this is why ammonium sulphate is such an effective adjuvant for glyphosate. Many other chemicals may assist with one of these processes but to date, no other product can do both as effectively.

Unfortunately, ammonium sulphate adjuvants are often replaced with other chemicals that do not have the same benefit. This could have a detrimental effect on weed control, especially under marginal weather conditions when any glyphosate weaknesses are exposed.

### Fertilizer-grade ammonium sulphate

Fertilizer-grade ammonium sulphate contains the same chemistry and is sometimes used by growers to save on costs. Please note that this is a practice that Villa does not endorse! The spray-grade ammonium sulphate that Villa uses in our adjuvants contains negligible impurities and is suitable for use with glyphosate. It is also tested for numerous other quality standards. It therefore has an L-number that proves that it is suitable to use as an adjuvant. Fertilizer-grade ammonium sulphate has a K-number, meaning it is suitable for use as a fertilizer. Fertilizers have totally different registration and quality requirements. They have therefore not been tested and

registered as adjuvants and may be totally unsuitable. Please don't try to save on costs by using fertilizer as an adjuvant. This is a very dangerous and unregistered practice!

### Other ammonium sulphate replacements

Ammonium sulphate is also sometimes replaced with various other chemicals because it is believed that these products have exactly the same function. These replacements include urea, various acids and other adjuvants. Some of these products are used at a fraction of the rate of ammonium sulphate, making them very attractive alternatives because of less transport and other costs. Please take note that Villa does not endorse the use of any replacement of our ammonium sulphate adjuvants. We have tested a wide range of candidate adjuvants and have found that spray-grade ammonium sulphate products are still the most effective.

### Villa's stance

Ammonium sulphate adjuvants have proved themselves over the past 35 years. They are still the most effective adjuvants for glyphosate and many other herbicides. The replacement of Villa's ammonium sulphate adjuvants with any other products could reduce efficacy, increase crop damage or cause physical incompatibility. Before using any other product, please first consult with your Villa Marketing Advisor for the best technical advice.

*Brian de Villiers*

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