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FEATURE



**SASA ANNUAL
GENERAL MEETING**

**Research on
Creeping Grasses**

**Mpumalanga
Grower Day**

BLADBUFF

Water Quality: The most important component of a spray application

Plaaskem

THE EFFICACY OF MOST AGRICULTURAL REMEDIES IS DEPENDANT, TO A VERY LARGE EXTENT, ON THE QUALITY OF THE WATER USED IN THE SPRAY TANK. THE ACTIVE INGREDIENT OF AN AGRICULTURAL REMEDY IS SUBJECTED TO AN ENTIRELY DIFFERENT CHEMICAL ENVIRONMENT ONCE IT IS MIXED WITH WATER AND, IN MANY CASES, OTHER CHEMICALS IN THE SPRAY TANK.

Research has shown that by decreasing the pH of the spray mixture, the "life" of most active ingredients is increased dramatically. If the spray mixture can be acidified therefore, the "life" of an active ingredient can be manipulated. If the harmful salts in spray water can be "bound", the efficacy of the active ingredient will also be improved. Bladbuff 5, one of Plaaskem's internationally patented adjuvants, performs a number of vital functions in the spray tank.

- The first action is the binding of harmful salts of the spray water.
- Secondly, the pH of the spray mixture is decreased to around 4.5 to 5. At this pH, the life of most active ingredients is dramatically.
- Bladbuff 5 has a built-in colour indicator which enables the farmer to determine precisely how much to add to the spray tank.
- Bladbuff 5 has wetting and spreading agents, which also increase efficacy of the product.

Other adjuvants on the market only perform one or other of the functions of Bladbuff 5.

Figure 1 depicts Bladbuff 5 tested against three Acetic Acid buffers. Hard water was used and the buffers were added. Bladbuff 5 is the only treatment where the electrical conductivity (EC) DECREASED, indicating that salts in the water were being bound. In the other treatments, an INCREASE in EC is observed. The differences became even more apparent where hard water is used.

Comparative acidification studies reveal that Bladbuff 5 is able to decrease the pH to the preferred 4.5 - 5.0 level with both tap and hard waters. Acetic acid based buffers can not reach these pH levels when added at the fixed label rates. Bladbuff 5 does not have a fixed label rate, as the amount of product added is determined by the quality of the spray water. ☺

Figure 1. Influence of different adjuvants on the electrical conductivity (EC) of hard water. (Added at recommended label rates, BB5 added to colour change.)

