

Silwet L-77* Ag

Spray Adjuvant use for Insect Control on Cotton Crops



Application

Cotton is a natural and one of the oldest fibers harvested from the cotton plant. Cotton is cultivated with the aid of many insecticides protecting this crop from harmful pests such as boll weevil, bugs, stink bugs, aphids and most notably the larvae of moths and butterflies. The five leading cotton producers are the United States, India, Uzbekistan, Brazil and Pakistan.

Momentive's **Silwet L-77 AG** spray adjuvant is a superspreading silicone surfactant, which typically lowers the surface tension of spray solutions beyond what is achievable with conventional adjuvants. To demonstrate its specific benefits, Silwet L-77 AG spray adjuvant was trialed in a standard spray treatment with Bifenthrin and *Bacillus thuringiensis* (Bt) insecticides on cotton.

Field Trials

Location	Brazil		
Crop	Cotton		
Pesticides	Bifenthrin (100g/l) + Bacillus thuringiensis (540g/kg): Rates: 550 ml/ha + 500 ml/ha		
Pests	<i>Spodoptera</i> and <i>Plusias</i>		
Adjuvants	Silwet L-77 AG (40ml/100 liters) and Mineral Oil (500ml/100 liters)		
Application	Tank-mix (Spray Rate: 150 liters/ha)		
Field data		Spodoptera Control (%)	Plusias Control (%)
	Check (no treatment)	33.3	17
	BB ⁽¹⁾ + Silwet L-77	97	75.5
	BB ⁽¹⁾ + Mineral Oil	76	65

Note: Test data. Actual results may vary.

BB⁽¹⁾ = Bifenthrin + (Bt)

Results

Field trials demonstrated the following benefits resulting from the addition of Silwet L-77 AG spray adjuvant to Bifenthrin and *Bacillus thuringiensis* insecticides applied on cotton crops:

- 21% and 11% higher control of *Spodoptera* and *Plusias*, relative to mineral oil treatment
- 12 times less adjuvant per 100 liter treatment (40ml Silwet L-77 AG spray adjuvant versus 500 ml Oil)
- Similar low spray volume treatments (150 liters/ha)

*Silwet L-77 is a trademark of Momentive Performance Materials Inc.

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