

Foliar Speedfol® Kali SP increased cotton Lint Yield (+28%) and net income (+157%) in Mexico

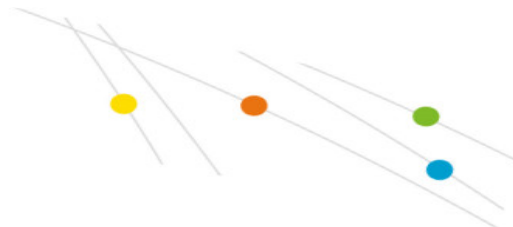
To assess the response of cotton to foliar fertilizations with Speedfol® Kali SP (12,2% N-NO<sub>3</sub><sup>-</sup>, 42,5% K<sub>2</sub>O, 0,9% B) a field test was held in order to evaluate the effect of three doses of Speedfol™ Kali SP on cotton yields. The test was performed in Block 1401 of the locality Valle del Yaqui, Sonora State, Mexico. The tested cotton cultivar was Stonville, sown on 15/03/2011.

The irrigations, moments of fertilization and applied quantities of fertilizers were similar for all treatments (Table 1). To assess the soil characteristics, a soil fertility analysis was performed before sowing (Table 2). The actual treatments and the application dates are described in Table 3.

Table 1. Irrigations and applied fertilisers to the cotton crop.

Irrigation Riego	WS* (cm) LR* (cm)	Growth Stage Etapa Cultivo	Fertiliser Fertilizante	Dose (kg/ha) Dosis (kg/há)	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
1	10	Plant with 9 to 10 nodes Planta con 9 a 10 nudos	0	0	0	0	0
2	15	First bloom Inicio floración	Ammonia (gas) Amoniaco (gas)	100	82	0	0
3	15	Maximum bloom Máxima floración	Ammonia (gas) Amoniaco (gas)	150	123	0	0
4	15	End of squaring Fin cuadro	Ammonia (gas) Amoniaco (gas)	100	82	0	0
5	15	Formation of the first bolls Formación de primeros capullos	0	0	0	0	0
*WS: water sheet - LR: laminar de riego				Totals - To- tales	287	0	0

Table 2. Soil fertility analysis (0-30 cm).



Parameter Parámetro	Unit Unidad	Value Valor
Texture - Textura		Clay loam Franco-arcillosa
CEC - CIC	meq/100 g	42,14
Organic matter - Materia orgánica	%	1,6
pH - pH		7,67
EC - CE	mS/cm	2,05
Nitrates - Nitratos	ppm	36
Olsen phosphorus - Fósforo Olsen	ppm	8,4
Calcium - Calcio	meq/100 g	30,44
Potassium - Potasio	meq/100 g	2,4
Magnesium - Magnesio	meq/100 g	7,81
Sodium - Sodio	meq/100 g	1,48
Iron - Hierro	ppm	4,6
Zinc - Zinc	ppm	1,2
Copper - Cobre	ppm	6,6
Manganese - Manganeso	ppm	5,1
Boron - Boro	ppm	0,41

Table 3. Treatments and application dates.

Application date Fecha de aplicación	Moment of application (Days) Momento de aplicación (Días)	Speedfol™ Kali SP (kg/spray/ha - kg/aplic./há)			
		T0	T1	T2	T3
25/06/2011	0	0,0	12,5	18,8	25,0
02/07/2011	7	0,0	12,5	18,8	25,0
09/07/2011	14	0,0	12,5	18,8	25,0
16/07/2011	21	0,0	12,5	18,8	25,0

The studied foliar fertilization variants consisted of 4 treatments arranged in a completely randomized block design with 5 replications. The plots were 5 meters long



by 0.9 meters wide. The treatments were manually applied with a knapsack sprayer with a capacity of 15 liters. The applications of the treatments started at first bloom with an interval of approximately 7 days, and ended at the formation of the first bolls growth stage. Manual harvesting of the test field took place on 07/09/2011 after applying the desiccant to the crop.

Agronomic analysis and economic results:

ANOVA statistically significantly showed an increase of the cotton lint yield ( $P = 0.01$ ) as a result of foliar treatments with Speedfol™ Kali SP as compared to the control treatment.

The regression formula in Figure 1 clearly shows that the maximum cotton lint yield of 1.357 kg/ha was obtained by applying 15 kg of Speedfol™ Kali SP/ha. On average, the non-treated plots generated 1.062 kg/ha; the difference between the maximum yield and the non-treated plot being 295 kg/ha (28% more lint yield).