

EcoFlora & EcoSil trial in bananas

Product: EcoFlora - EcoSil
Crop: Banana

Farm: Niñas – C.I PROBAN
Location: Turbo, Antioquia, Colombia

Treated Area: 4 half hectare plots
Control Area: 4 half hectare plots

Objective

Increase yield by edaphic applications of EcoFlora and EcoSil

Method of product application

Eight half hectare plots from an established plantation were used for this one year trial. EcoSil (200 ml) was diluted in 4 liters of water, left incubating for 2 hours, then, 5 liters of water and 500 grams of EcoFlora were stirred in the mixture. Next day, the solution was diluted to 200 liters with tap water and applied in four half hectare plots. This solution was applied to the roots of plants (50 to 60 cc per plant) once a month, for a total of ten applications. The trial started in September 2005 and was terminated in September 2006.

The main objectives of this trial were to determine the efficiency of root formation, development of new daughter plants, and weight of banana bunches under the EcoFlora-EcoSil treatment compared with control plants grown by conventional methods.

In order to determine the quantity of functional and non-functional roots, a 30x30x30 cm hole was excavated close to each plant, and functional and non-functional roots were separated, dried in an oven and weighted. Banana bunches were harvested and weighted in the processing plant.

Results

- Plants grown by conventional methods had more non-functional roots, whereas plants grown with EcoFlora-EcoSil had more functional roots.
- The growth of daughter plants was larger in EcoFlora-EcoSil treated plants than in control plants.
- Banana bunches harvested from EcoFlora-EcoSil treated plants weighed in average 2.6 kilograms more than the ones harvested from control plants

The following table shows the results of banana yield improvement, costs of the program, and net profit generated when using EcoSil and EcoFlora in a soil application program.

Parameter	Control	EcoFlora-EcoSil	Difference over control	% difference over control
Total weight of banana bunch (Kg)	23.57	26.19	+2.62	11%
Weight of banana bunch without stem	21.21	23.57	+2.36	11%
Planting density (plants/ha)	1,700	1,700	0	0%
Banana production (Kg/ha)	36,057	40,069	+4,012	11%
Number of boxes of 19 Kg	1,897	2,108	+211	11%
Revenue from boxes at \$4.70/box	\$8,916	\$9,908	+\$992	12%
Cost of EcoFlora-EcoSil		-\$257.30		
Cost of product applications		-\$43.64		
Total cost of product application		-\$300.94		
Net profit/hectare		+\$691		
Return over investment		+2.3 times		