

OsiryI®, an efficient biostimulant for sugarcane

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Abstract

Benefiting from optimum production resources like water and nutrients is crucial in sustainable agriculture, both from environmental and economical perspectives. In Reunion, where arable lands are pressured by insularity and an increasing population, ensuring a sufficient supply of sugarcane for the two mills depends markedly on an increase in productivity.

OsiryI®, a biostimulant which promotes root growth by slowing down auxin degradation, was evaluated in two field trials in a strip plot design with three replicates. Three rates of biostimulant, 10, 15 and 20L/ha, were sprayed at the base of ratooning cane, targeting both cane foliage and trash blanket. Ratoons were sprayed two to three month after harvest and over two consecutive years. Treatments were compared to a control without OsiryI®, which reflected grower's normal practice. Mineral fertiliser applied was identical on all plots.

The 2-year average yield for both trials showed that OsiryI® had no impact on the CCS and that the three treatments with the biostimulant were more productive than the untreated control, both in cane and sugar yield. Differences were statistically significant for rates of 15 and 20 l/ha ($p < 0.0001$) with respectively + 10.2 and 18.0 t cane/ha and + 2.0 and + 2.7 t sugar/ha (GML in Minitab). The average yield of the untreated control was 94.1 t cane/ha, equivalent to 13.8 t sugar/ha.

Keywords: sugarcane, biostimulant, yield, sustainability