

## Behavior of the first sugar cane ratoon fertilized with growing potassium rates after mechanized harvest

Prado, R.M.<sup>1</sup>; Pancelli, M.A.<sup>1</sup>; Flores, R.A.<sup>1</sup>; Almeida, H.J.<sup>1</sup>  
<sup>1</sup> – Universidade Estadual Paulista, Brasil

Most part of researches related to potassium on sugar cane is restricted to manual harvesting system, but the harvest is changing to mechanized system. Thus, the objective of this work was to evaluate the effect of potassium on its absorption by plants, on stem yield, and technological quality of the first ratoon sugar cane, in harvesting system without straw removal by burning. The experiment was carried out with the variety RB 86-7515, at Pitangueiras-SP, on an Oxisol (pH: 5.0; K: 1.1 mmol<sub>c</sub> dm<sup>-3</sup>; V: 58%), and soil surface covered with 11.3 t ha<sup>-1</sup> (17% moisture) straw. The treatments were composed by five potassium rates: 0, 32.5, 65.0, 130.0, 195.0 kg ha<sup>-1</sup> K<sub>2</sub>O as potassium chloride, and arranged in five randomized blocks. The fertilizer was applied along with the side of ratoon rows, without incorporation. Each experimental unit was composed by five rows of 10m length (1.5 m spacing between rows), and the three central lines were considered for samplings. At the harvest time were evaluated the stem yield and its technological quality (Pol, Pol cane, total recoverable sugar, reducing sugars, fiber, Brix and Purity), and the accumulation of potassium in leaves and stems. It was observed that the application of potassium promoted greater absorption of this nutrient by the plant, with a linear increasing in the stem ( $y = 0.381x + 67.65$ ,  $F = 19.40^{**}$ ,  $R^2 = 0.92$ ) and leaf ( $y = 0.282x + 57.04$ ,  $F = 9.48^{**}$ ,  $R^2 = 0.86$ ) concentration and, also, a linear response of stem production ( $y = 0.028x + 39.19$ ;  $F = 9.55^*$ ,  $R^2 = 0.74$ ), reaching 124 t ha<sup>-1</sup> at the higher level studied. The potassium fertilization did not affect the technological quality of the first ratoon of sugar cane.

*Supported by "FAPESP"*

This document was created with Win2PDF available at <http://www.win2pdf.com>.  
The unregistered version of Win2PDF is for evaluation or non-commercial use only.  
This page will not be added after purchasing Win2PDF.