

FSSA/SASRI Symposium – 25 February 2005

Role of micro nutrients in sugarcane

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Abstract

Whilst much is known about the requirements for major nutrients, relatively little information is available on the micronutrient requirements of sugarcane. This is despite the fact that a number of studies have been conducted in various parts of the industry. Of the 16 elements that are known to be essential for plant growth, six are micronutrients: iron, copper, manganese, zinc, molybdenum and boron. For sugarcane grown in South Africa, iron, zinc, manganese and copper deficiencies have all been detected in certain parts of the industry. Boron deficiency has been identified at Dwangwa Estate in Malawi, but molybdenum deficiency in sugarcane has yet to be observed in Africa. Although there is no justification for suspecting widespread micronutrient deficiencies in the South African sugar industry, iron and zinc deficiencies are economically important growth limiting factors in certain areas. Other problem areas do exist, and for these it may be worthwhile for growers to consider regular application of micronutrients. Green cane harvesting and the increased use of organic manures and green manuring will assist in reducing micronutrient deficiency problems in the future. Growers should be encouraged to use foliar analysis for the diagnosis of any suspected micronutrient deficiencies.