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EFFECT OF FOLIAR APPLICATION OF MICRO NUTRIENTS ON THE LEAF CONCENTRATION OF MICRO NUTRIENTS OF SUGARCANE (PLANT CROP)

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ABSTRACT

Experiments were conducted on silt loam soil at SCRI Mardan, during 1989-1991, to assess the effect of foliar application of micro nutrients of leaf concentration and micro nutrient contents of sugarcane variety CP-65/357. The experiment was laid out in randomized complete block design with thirteen treatments, replicated three times. The treatments were zinc 1.50 kg/ha, 3.00 kg/ha, 4.50 kg/ha, copper 0.05 kg/ha and 0.75 kg/ha and manages 1.00 kg/ha, 2.00 kg/ha and 3.00 kg/ha respectively.

Data revealed that foliar application of micro nutrients increased the average leaf Zn, Cu, B and Mn concentration over control of both plant crop during 1989 – 1991 crop seasons. Among the micro nutrients application, the lowest rate of Zn and Cu B concentration. While the higher rates of Cu, resulted a greater Mn concentration and data indicated that higher rates of B and Mn resulted into greater leaf Zn, Cu, B and Mn concentration than lower rates. While leaf Mn concentration was directly proportional to the higher rates of Cu showing both synergistic and antagonistic interacion with leaf micro nutrient concentration.

INTRODUCTION

Sugarcane (Saccharum officinarum L.) is one of the most important cash and industrial crop of Pakistan and is a raw source to establish sugar industry of about 1200 metric tons and nutrients play a vital role in the growth and development of sugarcane plants. Micro nutrients Cu, Zn, B and Mn though required in lesser amount for plant growth but are as essential as N, P and K. The deficiency of micro nutrients in soil as well as in plants develop symptoms of crop malignancy (1). (19) reported that zinc deficiency in many plants when occurs the leaf concentration is less than 20 ppm in dry matter