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FERTIRRIGATION WITH POTASSIUM ON CORN AND ITS CORRELATION WITH ELECTRICAL CONDUCTIVITY

**RODRIGO ANCHIETA LOPES DIAS¹; MARYZÉLIA FURTADO DE FARIAS²;
FRANCISCO BRUNO FERREIRA DE SOUSA³; GUILHERME LIMA DE ARAÚJO⁴;
ÉRICO TORRES URBANO⁵; ANALYA ROBERTA FERNANDES OLIVEIRA⁶;
HOSANA AGUIAR FREITAS DE ANDRADE⁷; NÍTALO ANDRÉ FARIAS
MACHADO⁸; MARILÉIA BARROS FURTADO⁹; KHALIL DE MENESES
RODRIGUES¹⁰**

^{1,2,3,4,5,6,7,9,10}Center of Agrarian Sciences and Environmental, Federal University of Maranhão, Chapadinha, Brazil.

⁸Exact and Technological Science Center, State University of Western Paraná, Cascavel, Brazil.

Abstract

Potassium is the second most required element in amount per plant. In corn, this nutrient is indispensable for good production in the most diverse regions of the country. With the indiscriminate use of this, an electrical conductivity of the soil (EC) is altered by means of a saline soil medium. The objective of this study was to investigate the effect of potassium (K^+) doses, via fertigation, on the production of irrigated corn, and its correlation with an electric conduction of soil saturation extract in the cerrado region. A randomized complete block design, consisting of 4 treatments: 0, 100, 150, 200 ($Kg\ ha^{-1}$) of K_2O and 5 replicates, using potassium chloride as the source. The experiment was conducted in the field of the Agricultural and Environmental Sciences Center (AESC), in Chapadinha town-MA, in the period from May to July, using cultivar BRS 5037 Cruzeta with a population of 10 plants m^{-2} . The evaluations were carried out before and after the 30, 45 and 60 days after an emergency, consisting of the removal of soil samples at depths of 0-20 and 20-40 cm for the determination of the electric conduction of the soil and plant sampling for dry matter determination. After a harvest with avalanches the variables: plant height, stalk diameter, dry matter, spike weight and without straw, grain weight, leaf area and yield. The use of K^+ in cover, using different doses, did not provide significant effects for the corn crop production. There was a significant increase in the values of electrical conductivity in the superficial layer of the soil. With ECes varying linearly as a function of the period of the applications, with a higher value at 60 DAE.

Keywords: *Zea mays* L., fertilization, conductivity, salinity.

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