

## **Abstract**

Affecting factors to identification of crop production in drought conditions is essential due to limited water resources. In order to investigate the effect of silicon acid and drought stress in sweet corn as randomized complete block design with split plot 3 replications. Treatments include: (I1) irrigation 50% of field capacity (severe stress), (I2) irrigation 65% of field capacity (medium stress), (I3) irrigation 80% of field capacity (weak), and (I4) irrigation 95% capacity farm (control samples) as the main reason for doing this was to use the device humidity meter And foliar application of silicon acid at three levels: non-application of silicon acid (control), 1 and 1/5 Spraying important loss in subplots. The results showed the negative impact of drought stress on quantitative and qualitative characteristics of corn plants Based on the most chlorophyll, protein, yield, biological yield and harvest index was full irrigation. Plant height and weight were also affected by irrigation. Irrigation, plant height and grain weight to irrigate 50% of field capacity, respectively, 8 and 10 percent. Apply silicon nano mitigate tension in the amount of maize. The treatments contain 1.5 Spraying silicon nano-silicon application was not superior to treatment. The results indicate a significant impact in terms of silicon to corn was dry.

**Keywords:** silicon acid, sweet corn, drought, quantity, quality



University of Zabol  
Department of Agronomy

**Thesis Submitted in Partial Fulfillment of the  
Requirement for the Degree of Master of Science M.Sc in  
Agronomy**

**Effect of silicon acid and drought stress on yield  
and quality of sweet corn (*Zea mays* L. Var  
Sacharata) in Sistan**

**Supervisor:**

Dr. S. M. Moussavi nik

**Advisor:**

Dr. M. R. Asgharipour

**By:**

N. Akbari nia

June 2015