



## **Influence of Silicon and Phosphorus on Growth, Yield and Nutrient Uptake by Maize (*Zea Mays L.*) in *Typic Ustochrepts* Soils**

**O. P. Meena, K. C. Patel and J. K. Malav**

*Department of Agricultural Chemistry and Soil Science, Anand Agricultural University, Anand-388 110, India*  
*E-mail: jugalmalav966@gmail.com*

---

**Abstract:** Application of Si @ 300 mg Si kg<sup>-1</sup> soil along with P @ 40 mg P kg soil<sup>-1</sup> recorded significantly highest green and dry shoot yield (93.03 g pot<sup>-1</sup>, 52.25 g pot<sup>-1</sup>, respectively) of maize in loamy sandy and silty loam soils, whereas, the highest root yield (13.39 g pot<sup>-1</sup>) was also recorded under the same treatment in silty loam soil. The highest chlorophyll content in maize leaf (22.05 cci) was noted with the application of Si @ 400 mg Si kg<sup>-1</sup> soil along with P @ 40 mg P kg soil<sup>-1</sup> in both the soils. Results of investigation indicated that application of silicon @ 300 mg kg<sup>-1</sup> and phosphorus at 40 mg P<sub>2</sub>O<sub>5</sub> kg<sup>-1</sup> gave maximum maize yield under P stress condition and also improved silicon, phosphorus and micronutrients utilization by maize plants.

**Key Words:** Growth, Maize, Nutrient uptake, Phosphorus, Silicon, Yield

---