

## Effects of Molybdenum on Phosphorus Concentration in Rice (*Oryza sativa* L.)

**Authors :** Hamed Zakikhani, Mohd Khanif Yusop, Amin Soltangheisi

**Abstract :** A hydroponic trial was carried out to investigate the effect of molybdenum (Mo) on uptake of phosphorus (P) in different rice cultivars. The experiment was conducted using a randomized complete-block design, with a split-plot arrangement of treatments and three replications. Four rates of Mo (0, 0.01, 0.1 and 1 mg L<sup>-1</sup>) and five cultivars (MR219, HASHEMI, MR232, FAJRE and MR253) provided the main and sub-plots, respectively. Interaction of molybdenum×variety was significant on shoot phosphorus uptake ( $p \leq 0.01$ ). Highest and lowest shoot phosphorus uptake were seen in Mo3V3 (0.6% plant-1) and Mo0V3 (0.14% plant-1) treatments, respectively. Molybdenum did not have a significant effect on root phosphorus content. According to results, application of molybdenum has a synergistic effect on uptake of phosphorus by rice plants.

**Keywords :** molybdenum, phosphorus, uptake, rice,

**Conference Title :** ICABE 2014 : International Conference on Agricultural and Biological Engineering

**Conference Location :** Zurich, Switzerland

**Conference Dates :** July 30-31, 2014