Effect of boron fertilization on rice grain yields. (804dunn145955-Oral)

Authors:

- D.J.Dunn University of Missouri-Delta Center
- W.E.Stevens University of Missouri-Delta Center
- A.Kendig University of Missouri-Delta Center

Abstract:

Rice fields in Southeast Missouri testing less than 0.20 mg-kg-1 B were used to conduct a three-year evaluation. The objective of this experiment was to determine if soil and foliar applications of B could significantly increase rice grain yields. Four boron application rates, 0.28, 0.56, 0.84, and 1.12 kg-ha-1, were compared to an untreated check. Two application methods, pre-plant soil and pre-flood foliar, were evaluated at each B rate. Soil samples were collected before flooding from each plot receiving pre-plant B. These soil samples were tested for water-soluble B. Soil test B was highly correlated to fertilizer application rate (R2 = 0.97). All boron applications significantly increased rice grain yields over the untreated check. In 1999 and 2001 the soil and foliar treatments produced statistically equivalent yields. In 2000 the soil applications produced significantly greater yields. The average for all foliar treatments in 2000 was 8316 kg-ha-1 compared to 8971 kg-ha-1 for soil treatments.

Corresponding Author Information:

David Dunn University of Missouri P.O. Box 160 Portageville, MO 63873 phone: 573 379 5431 fax: 573 379 5875 e-mail: dunnd@missouri.edu

Presentation Information:

Presentation Date: Tuesday, November 12, 2002 Presentation Time: 3:15 pm

Keywords:

Rice, Boron