Effect of zinc seed treatments on the early growth of water seeded rice. (S04-dunn150708-Poster)

Authors:

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

Abstract:

Zinc (Zn) is an important plant nutrient in rice production. The role of Zn seed coatings in increasing Zn tissue levels and grain yields in drill seeded rice grown in Zn deficient soil has been studied. Little information about Zn seed coatings in water seeded rice production is available. The objective of this study was to determine if Zn seed treatment is an effective method of supplying Zn to rice plants in water seeded systems. A commercial Zn seed treatment was applied to rice seed at a rate of 2.6g actual Zn per kg of rice seed. Coated and uncoated seeds were soaked in distilled water for 24 hours then allowed to drain for 24 hours before planting in glass tanks filled 5 cm deep with masonry sand. Coated and uncoated seeds were tested for Zn content before and after soaking. Number of plants with leaves emerged above the water and plant height was measured weekly. At tillering plants from each tank was harvested, dry matter was determined and Zn tissue concentrations were measured. The untreated seed produced plants that contained 59 mg kg-1 Zn. Seed treatment produced plants that contained 212 mg kg-1 Zn. Zinc treatments had no effect on dry matter accumulations.

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

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