

The examination of interaction between nitrogen and nitroxine levels on performance and performance components in Rice (*Oryza sativa* var Ali Kazemi)

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Abstract In order to examine the interaction between nitrogen and nitroxine levels on yield and yield components, a factorial experiment based on randomized block design was conducted in sangar district, rasht city, in 2013. It consisted of two factors: nitrogen fertilizer levels at four levels (0, 20, 40 and 60 g) and the method of applying nitroxine fertilizer (control, seed inoculation, inoculate the rice plantlet root in bed, seed inoculation and inoculate the rice plantlet root in bed). The results of variance analysis showed that there was a significant difference between the blocks in rough rice length, stamina leaf width, bush height, cluster length, and cluster number per bush. The results revealed a significant difference between four levels of nitrogen fertilizer (0, 20, 40 and 60 g/m²) except for internode of main stem and the distance between two internodes. There was a significant difference between four methods of applying nitroxine fertilizer (control, seed inoculation, inoculate the rice plantlet root in bed, seed inoculation and inoculate the rice plantlet root in bed) in all attributes but grain number per bush, main stem internode, and the distance between two internodes. The results also showed. That the interactive effects of N fertilizer levels and the method of applying nitroxine fertilizer were not significant but cluster length, i.e. these two factors have no interactive effects and are able to act independently. The results of comparing the means by using LSD test revealed that for cluster length, the greatest mean was observed for the treatment containing 20 kg of N-nitroxine fertilizer and the method of seed inoculation and inoculate the rice plantlet root in bed (30.55 cm) and the smallest mean was found for the treatment containing 20 kg of N fertilizer as control (23.33 cm).

Keywords : Nitrogen Nitroxin Rice Ali Kazemi Levels

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