

EFFECT OF POTASSIUM FERTILIZER AMOUNT ON TOLERANCE ABILITY AND RICE YIELD IN SALINE SOIL AT QUANG NAM PROVINCE

Trinh Thi Sen, Tran Van Ty

Summary

The field experiment was carried out with 5 different potassium levels (0, 30, 60, 90 và 120 kg K₂O/ha) on 2 salty tolerance rice varieties, namely OM8104 and MNR3, arranged in split plot design (K in the sub plot and variety in main plot) with three replicates in winter-spring 2012 - 2013 and summer-autumn 2013 seasons on saline soil of Duy Xuyen district, Quang Nam province. Objectives of this study were to determine the potassium amount for the best tolerance ability with pests, salinity and high yield as well. Research results indicated that different potassium rates had effect on tolerance ability with the small leaf rolling worm, K₂O amount and rice yield but hevan't effect on leaf drying level, pests tolerance ability and Na₂O amount in plant of varieties. The amount of 60 kg K₂O/ha increased K⁺ absorption ability of both varieties. The highest yield attain at the amount of 60 kg K₂O/ha on both varieties based on 100 kg N + 60 kg P₂O₅ + 8 tons/ha of FYM. The yield of OM8104 and MNR3 varieties at the amount of 60 kg K₂O/ha in winter-spring 2012 -2013 and summer-autumn 2013 seasons were 7.57 and 5.25 tons/ha, 7.35 and 5.18 tons/ha, respectively. Based on the results, we suggest to apply 60 kg K₂O/ha for OM8104 and MNR3 varieties in saline soil of Quang Nam province, that increased tolerance ability with the small leaf rolling worm and K⁺ absorption ability, obtained the highest rice yiel as well.

Keywords: *Tolerance, saline soil, potassium amount, yiel, Quang Nam.*