

INFLUENCE OF DIFFERENT RATES OF NITROGEN FERTILIZER ON GROWING, DEVELOPMENT AND YIELD OF OM5451 RICE VARIETY IN WINTER-SPRING 2018-2019 AND AUTUMN-SUMMER 2019 IN MY THO, TIEN GIANG PROVINCE

Nguyen Tien Huyen

Summary

The study aimed at determining the appropriate amount of nitrogen to increase growth and yield of OM5451 rice and to introduce the fertilization technique to production. The study was conducted in winter-spring season 2018 (dry season) and summer-autumn season 2019 (wet season) in Tan My Chanh, My Tho, Tien Giang. The experiment conducted in the randomized complete block design (RCBD) with seven treatments (of different N rates) and three replications; area of each experimental plot was 30 m². OM5451 rice variety was directly seeded at the rate of 120 kg/ha. Basal fertilizers were applied at: 40 P₂O₅ + 30 kg K₂O (kg/ha) combined with different nitrogen levels: 0, 60, 75, 90, 105, 120 and 135 kg N/ha. Research results in the winter-spring season in 2018-2019 and summer-autumn season in 2019 showed that: different levels of nitrogen fertilizer affected the number of panicle heads per m² and the actual yield of OM5451 rice in both winter-spring season and summer-autumn season. In the winter-spring season the highest number of panicle heads/m² was observed in the treatment of 90 kg N/ha (423 panicle heads/m²); meanwhile, in the summer-autumn season at the treatment of 75 kg N/ha (431 panicle heads/m²). The highest yields were observed at the applications of 90 kg N/ha (5.27 tons/ha) and 75 kg/ha (4.67 tons/ha) in the winter-spring season and in the summer-autumn season, respectively.

Keywords: *OM5451 rice variety, nitrogen fertilizer rate, winter-spring, autumn-summer, yield.*