

STUDY ON RESPONSE OF RICE VARIETIES TO DIFFERENT NITROGEN FERTILIZER LEVELS

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By
**HATHGAMPALA VIDANALAGE CHAMILA
PRIYADARSHANEE**

**Export Agriculture Degree Programme
Faculty of Animal Science and Export Agriculture
Uva Wellassa University of Sri Lanka**

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ABSTRACT

Nitrogen is an important nutrient in rice cultivation. Therefore, this research was conducted to study on response of rice varieties to different nitrogen fertilizer levels to the measures for efficient utilization of nitrogen levels in rice cultivation. The experiment was comprised with sixteen treatments. Nitrogen fertilizer was applied as 0 kg N ha⁻¹, 50 kg N ha⁻¹, 100 kg N ha⁻¹ and 150 kg N ha⁻¹. Four rice varieties used were Bg 1350, Bg 997, Bg 379-2 and Bg 450. Plant height, number of tillers per hill, plant greenness, number of days for 100 % flowering of rice varieties, dry weight of shoot parts, nitrogen content of shoot parts, number of panicles per hill and grain yield were measured against the different nitrogen levels. The results revealed that all the responses responded positively with the increment of nitrogen fertilizer as to measure the effect of nitrogen fertilizer. The rice variety Bg 997 responds positively and shows the highest performance for the dry weight of shoot parts, nitrogen content of shoot parts and number of tillers per hill against the increment of nitrogen fertilizer. The rice variety Bg 450 responds positively and shows the highest performance for the number of days for 100 % flowering of rice variety and grain yield against the increment of nitrogen fertilizer. The rice variety Bg 1350 responds positively and show the highest performance for the plant height against the increment of nitrogen fertilizer as the effect of nitrogen fertilizer. The rice variety Bg 379-2 responds positively and shows the highest performance for the plant greenness against the increment of nitrogen fertilizer. Thus, all responses measured to the application of nitrogen fertilizer vary among the rice varieties.

Key Words: Nitrogen fertilizer, Rice variety