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NOTE ON THE NITROGEN RESPONSE AND YIELD OF RICE (*Oryza sativa* Linn.) IN RELATION TO SUNSHINE

Rice yields increase with the increase in the amount of sunlight received during the reproductive phase of the plant. Moomaw *et al.* (1967) has shown that solar radiation may become the primary limiting factor in wet rice culture when soil fertility and weed and pest control are adequate. Studying the nitrogen response of dwarf *indica* varieties of rice over 8 seasons, ten Have (1971) showed that the dwarf varieties always exhibited a much better grain yield during *Rabi* and *Kharif* seasons and were closely related with nitrogen response.

A field expriment at varying levels of nitrogen and spacing was conducted at the Agricultural College, Vellayani during the late second crop season (November-February) 1970–71, using rice variety Culture–12035, (isolated from a cross between IR8 and Annapurna evolved at C. R. R. S., Pattambi). Treatments consisted of 4 levels of nitrogen (60, 80, 100 and 120 kg per ha) in combination with 3 spacings (10 x 10 cm, 10 x 15 cm, 15 x 15 cm). Each plot was separately harvested and threshed and weight was recorded.

The data on yield of grain showed that there was no significant increase in grain yield beyond 60 kg nitrogen per hectare. Ghildyal and Jana (1967) noted decline in yield of rice when average daily bright sunshine hours was less than 8.5 hours per day during the reproductive phase of the crop. In the present study the average sunshiue hours during the above period was only 5.86 hours per day. The lower number of sunshine hours may be one of the reasons for the lack of response of nitrogen for this variety.

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