

Response of Aerobic Rice to Nitrogen Doses and Weed Management Practices

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ABSTRACT

A field experiment was conducted during *kharif*, 2011 in sandy loam soils of Regional Agricultural Research Station, Warangal to find out the optimum dose of nitrogen and best weed management practice for aerobic rice. The experiment was laid out in randomised block design in factorial concept with three doses of nitrogen and four weed management treatments, replicated thrice. Among the nitrogen doses, application of 240 kg N ha⁻¹ was significantly superior to 120 kg N ha⁻¹ with respect to the number of tillers m⁻² yield attributes and yield of aerobic rice, but it was at par with 180 kg N ha⁻¹. However, nitrogen uptake by the crop, net returns and returns per rupee invested were higher with 240 kg N ha⁻¹ than the other two doses of nitrogen. Pre-emergence application of pendimethalin @ 1.2 kg a.i. ha⁻¹ + post-emergence application of pyrazosulfuron ethyl @ 30 g a.i. ha⁻¹ at 25 DAS significantly reduced the density and dry weight of weeds over weedy check and mechanical weeding twice at 20 and 45 DAS which led to higher weed control efficiency, lower weed index and nitrogen removal by the weeds. The grain yield, net returns and returns per rupee invested were also higher with the application of herbicides than the mechanical weeding.

Key words : Aerobic rice, Pendimethalin, Pyrazosulfuron ethyl, Nitrogen, Weed index.