B-101 Influence of different methods of nitrogen fertilizer management on weeds in wet-seeded rice

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An experiment was conducted during Maha 1992/93 and Yala 1993 seasons at Maha Illuppalama to determine the effect of different levels and time of nitrogen (N) fertilizer application and weeding methods on weed population and yield of rice on a low humic gley soil. Four methods of nitrogen management: i.e (a) Zero nitrogen; (b) 30 kg N/ha at sowing and 70 kg N/ha at 10 weeks after sowing (10 WAS); (c) 25 kg N/ha at sowing, 25 kg N/ha at 6 WAS and 50 kg N/ha at 10 WAS; (d) 5.6 kg N/ha at sowing, 28.45 kg N/ha at 2 WAS, 28.45 kg N/ha at 6 WAS, 37.5 kg N/ha at 10 WAS and 2 weeding methods (with and without weeding) were used as treatments. A 2 factor factorial arrangement in RCB design with 4 replicates was used to test the treatments. In weeding, 3,4 DPA was sprayed at 12 days after sowing (DAS), followed by MCPA 40% at 21 DAS. Rice variety BG 400-1 was used as the test crop. Weed counts were taken at 10,21,35 and 56 DAS. Dry weight of weeds was also taken at 56 DAS. In addition, grain yield of rice was recorded at harvest.

Results showed that increasing number of N splits increased weed growth only at latter stage of the rice crop in both seasons irrespective of weeding methods. Maximum grain yield of rice was also obtained from the treatment with 4 N splits. N application to wet seeded rice with 4 splits has increased rice yields but not affected the weed growth at the early stage of the rice crop.