EFFECT OF IRRIGATION INTERVAL ON THE GRAIN YIELD OF BG 250 AND BG 94-1 GROWN IN AMPARA DISTRICT SRI LANKA

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Irrigation plays a vital role in paddy production in Ampara district. Major, medium, minor and seasonal irrigation projects have been implemented for developing the paddy sector in the district. Irrigation interval has an influence on the growth and the yield of the rice crop. During *"Yala"* season, the Irrigation Department provides limited water whenever available for the irrigation of the paddy fields in Ampara district. Field trials were conducted at Rice Research Station, Sammanthurai during *"Yala"* season 2017 to evaluate the effects of irrigation intervals (7, 10 and 14 days) on growth and yield parameters of rice varieties Bg 250 (80 days-Short duration) and Bg 94.1 (105 days-Long duration) in order to cope with drought situation in the study area. The trial was performed as a factorial experiment in randomized complete blocks design with six treatments and three replicates. The results showed that the Bg 250 produced a grain yield of 2967.30 ± 90.92 kg/ha which is 27% higher yield than Bg 94-1 with the application of water at 7 days irrigation interval. The Bg 250 produced 2589.50 ± 350.83 kg/ha (18% higher yield) grain yield with the application of water at 10 days irrigation interval. Cost of irrigation for the Bg 250 was 17.6 % and 16.7% lower than the cost of Bg 94-1 when water was applied at 7 days and 10 days irrigation intervals respectively. The grain yield was significantly different ($P<0.05$) between the rice varieties Bg 250 and Bg 94-1 where the Bg 250 produced higher grain yield in all three irrigation intervals. However the yield of the 14 day irrigation interval was lower than 7 days and 10 days of irrigation interval even though the irrigation cost was the lowest. Therefore Bg 250 is suitable for "*Yala*" season in Ampara District with the application of water at irrigation intervals of 7 days and 10 days to deal with the shortage in water that is being faced by farmers in Ampara district now and in the foreseeable future.

Keywords**:** Cost of irrigation, Drought, Irrigation interval, Rice

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