Fresh leaf yield and flowering responses of Brassica juncea varieties to varying nitrogen levels

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Abstract
An experiment was undertaken to evaluate fresh leaf yield and flowering responses of two Brassica juncea varieties (Paida and ZGS) to varying rates of nitrogen fertilizer ammonium nitrate (0; 100; 200 and 300 kg ha⁻¹) during winter of 2007 under irrigation. The experiment was arranged as a 2×4 factorial treatment structure, laid in a randomized complete block design (RCBD) with three replications. Fresh leaf yield and days to 50% flowering were measured during the course of the experiment. There was significant difference (p<0.001) in fresh leaf yield of the varieties. Fresh leaf yield was significantly increased to 37.3 t ha⁻¹ when 300 kg ha⁻¹ of NH₄NO₃ was applied as compared to control plots (0 kg ha⁻¹) which gave a yield of 32 t ha⁻¹. There was no significant difference (p>0.05) in days to 50% flowering due to different N treatments. There was significant difference (p<0.05) in days to 50% flowering of the two varieties, with Paida flowering 24 days later than the ZGS mustard. N level had significant effect only on fresh leaf yield whilst variety had significant effect on both fresh leaf yield and days to 50% flowering. The N rate of 300 kg NH₄NO₃ ha⁻¹ was considered as the optimal dosage and Paida the best variety.