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Effect of Nitrogen Levels, Cultivars and Weed Control Treatments on Smothering Potential of Canola Gobhi Sarson (*Brassica napus* L.)

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Abstract: The field experiment was conducted during the *rabi* season of 2008-09 to study the effect of various nitrogen levels, cultivars and weed control treatments on smothering potential of canola gobhi sarson (*Brassica napus* L.). The crop registered significantly higher value of seed yield (19.29 q ha^{-1}) with the application of 125 kg N ha^{-1}, with further increase in nitrogen up to 150 and 175 kg N ha^{-1}, the increase was non-significant. The weed population and dry matter accumulation data revealed decreasing trend with increasing level of nitrogen. Among the cultivars, the differences in weed population and dry matter accumulation were non-significant. There was no difference in competitive ability of both cultivars. Hyola PAC 401 yielded higher (20.21 q ha^{-1}) because of its higher yield potential than GSC 6 (18.87 q ha^{-1}). Hand weeding registered higher values of yield attributes viz. plant height, dry matter, LAI, primary and secondary branches $plant^{-1}$, number of siliquae $plant^{-1}$ which resulted in higher seed yield (20.67 q ha^{-1}) as compared to unweeded control.

Key Words: Smothering potential, *Brassica napus*, Canola, Gobhi sarson, Weed, Nitrogen