

229. Grewal, S.S. 1986. Minimal irrigation stabilise rainfed gram yield. *Indian Fmg.* 35(3): 9-12.

An experiment was conducted at Chandigarh for 3 seasons (1978-1981) to evaluate the quantitative effects of minimal irrigation on rainfed gram yield and pattern of profile water use. It was observed that gram yields could be increased by 23% with 5 cm of pre-sowing irrigation and by about 43% with two irrigations of 5 cm each when applied at pre-sowing and flowering stage. The minimal irrigation encouraged deep rooting which ensured optimum use of profile stored moisture in deeper soil layers. With one and two irrigations, the profile water use increased by 2.6 and 3.3 cm when rainfall was high and 6.0 and 7.5 cm when it was low. The pattern of profile water use indicated that gram roots used water from all the layers upto a depth of 150 cm. Such an extraction was more when rainfall was low. Minimal irrigation facilitated such an extraction of water and helped in stabilising gram yield.