

247. **Hanumanathappa, B., Chittaranjan, S., Arjun Prasad and Sam, M.J. 1980.** Surface irrigation methods for *bajra* in Vertisols. Abst. 87, National Symp. on "Soil Conservation and Water Management in 1980's", Dehradun, March 12-13, 1980: 59.

Vertisols of Bellary possess low infiltration rates. To study the efficient method of application of water, three methods of irrigation were evaluated in a randomised block design replicated 8 times with a plot size of 48 m x 3.6 m during 1976-77 and 1977-78. Results indicate that with ridge furrow irrigation, *bajra* recorded 3601 kg/ha which has 182 kg and 274 kg more than with flat bed irrigation and alternate furrow irrigation. However, water use efficiency was highest with alternate furrow irrigation (186 kg/ha/cm of water), while it was lowest (120 kg) with flat bed irrigation. There is a saving of 38.2% of water with alternate furrow irrigation (18.1 cm) in comparison to flat bed irrigation (29.3 cm). With the quantity of water used for flat bed irrigation (29.3 cm) as much as 5386 kg/ha of *bajra* grain could be realised by adopting alternate furrow irrigation in as much as 1.6 ha.