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SOIL CHARACTERISTICS AND WHEAT YIELD IN THE IRRIGATION COMMAND OF GAJARGOLA DISTRIBUTORY.

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ABSTRACT

To study salinity distribution, soil characteristics and wheat yield relations, the Gajargola distributory was divided into head, middle and tail sections. In each section twelve outlets (Mogas) were marked for study. One farmer's wheat field and one tubewell at each outlet was also selected for sampling and to record wheat grain yield. The soil texture was variable ranging from sandy loam to sandy clay loam. On the basis of EC_e and ESP of the sampled wheat fields, 33.3, 50.0 and 66.6 percent of the soils were salt affected at head, middle and tail sections, respectively. The general survey conducted on the basis of gross area of the outlets, indicated that 24.1, 46.3 and 56.7 percent area was salt affected at head, middle and tail of the distributory. At head, middle and tail sections about, 16.6, 41.6 and 58.3 percent (respectively) tubewells were pumping unfit water. The EC_e (r=- 0.11), ESP(r= -0.25), soil P(r=0.20) and K (r=0.01) were not significantly correlated with grain yield, which was reasonably good (2205 - 2650 kg ha^{-1}) at all sections of the distributory. The relative increase in salinity at tail may be attributed to the inequitable water distribution. The tubewells (installed to make the water deficit) pumping inferior water quality also play an additive role to build up soil salinity at the tail end of the distributory.