



## RESEARCH PAPER

# Growth and instability of area under drip method of irrigation in south Gujarat- A district-wise analysis

Deepa B. Hiremath\* and J.J. Makadia<sup>1</sup>

Department of Agricultural Economics, College of Agriculture, Navsari Agricultural University,  
Bharuch (Gujarat) India (Email: [dbhiremath@nau.in](mailto:dbhiremath@nau.in))

**Abstract :** The competition among the various sectors of the economy particularly agriculture for the scarce water is becoming intense as the demand for available water resources is fast exceeding the economic supply. Many farmers still adopt conventional methods of irrigation which not only results in severe wastage of water but reduces crop production and also cause ecological hazards like water logging and soil salinity. The mounting water scarcity in Gujarat state validates the adoption of water efficient technologies like drip irrigation. The present study for undertaken to examine the current status and growth performance of area under drip method of irrigation for various districts of South Gujarat using compound growth rates. Instability analysis was carried out using the formula given by Cuddy and Della to know the variation in area under drip irrigation in over the years. The findings of the study suggested that during the period 2005-06 to 2019-20, the area under drip method of irrigation in case of loanee respondents declined significantly over the years. This could be probably attributed to the excessive documentation and other procedural formalities which were discouraging for the less educated and illiterate farmers. It also led to increase in the transaction cost. On the contrary, the growth in non- loanee area was found to be positive and significant in majority of the districts of South Gujarat. Moreover, the variability in loanee and non-loanee area was recorded to be high *i.e.* that the area under drip in all the districts of South Gujarat region demonstrated to be unstable during the period of study.

**Key Words :** Growth, Instability, Area under drip method, Irrigation

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\* Author for correspondence :

<sup>1</sup>N.M.C.A, Navsari Agriculture University, Navsari (Gujarat) India