

# 1 Introduction

Achhalia is situated in the tribal area of Bharuch district near Umalla village, 38 km away from Ankleswar on Ankleswar- Rajpipla state highway no. 64. Geographically it is 73.18 on East longitude and 21.97 on North latitude and has altitude of about 38.0 meter above MSL. The region of this sub station comes under the agro ecological situation I of South Gujarat agro climatic zone II. The area represented by this situation includes Dediapada, Nandod, Sagabara, Western portion of Valia and Jhagadia of Bharuch district and Mandvi, Mangrol, Nizer and Uchhal talukas of Surat districts. The total geographical area of this situation is 5.17 lacs ha. That is 47.8 % of this zone. Out of total area 42.3 % is the gross cropped area. The area under double cropping is mere 2.26 %. The soil of this situation is undulating, shallow to medium in depth and fine in texture; medium in available nitrogen and phosphorus and rich in potash. Most of the area i.e. 92 % in this situation is rainfed having cotton, sorghum, pigeon pea etc as major crops. Climate of this region is sub-humid monsoon type characterized by three well defined season viz. monsoon, winter and hot weather. The summer season is fair hot. The region received the average annual rainfall of 1150 mm.

## **Soil and climatic characteristics of the region:**

1. Agro-climatic Zone : South Gujarat Zone-II
2. Rainfall : 1150 mm (Average of 10 years)
3. Temperature : Maximum –46.8 °C, Minimum – 11.0 °C
4. Soil properties :
- a. Soil type : Medium black sandy-clay, medium in nitrogen and phosphorous, and rich in potash
- b. Carbon : 0.29-0.48 %
- c. Soil pH : > 8.0
- d. Available Nitrogen : 156-210 kg/ha
- e. Available Phosphorous : 16-42 kg/ha
- f. Available Potash : 140-402 kg/ha
- g. E.C. : 0.8-0.17 dsm

Research work at Achhalia was initiated in 1964 with State Govt. Research Farm “Cotton Research Sub-station”. In 1989 Gujarat Agricultural University established new research farm with NARP Phase-II project (Soil & Water Management). Subsequently Taluka Seed Farm, Uchchhab was also included under this station in 2005.

Previously the center was under the control of Campus Director, Navsari, Gujarat Agriculture University, Dantiwada. But presently the station is working under the jurisdiction of Director of Research, Navsari Agricultural University as Navsari campus gained the status of a separate agricultural university with effect from May 1, 2004.