



G H Patel College of Engineering & Technology, V. V Nagar

Department of Civil Engineering



Report on

**Visit to “Department of Agricultural Meteorology, Anand Agricultural University, Anand”**

Department of Civil Engineering, GCET had organized one day Educational visit to “Department of Agricultural Meteorology, Anand Agricultural University, Anand” on August 06<sup>th</sup>, 2018. 64 students, 2 faculty members had visited the Department of Agricultural Meteorology, Museum in Department of Agricultural Meteorology, Field Observatory & Crop Museum in Anand Agricultural University, Anand.

**About Department of Agricultural Meteorology:**

BansilalAmrutlal College of Agriculture established in 1947 with the tireless efforts by SardarVallabhbbhai Patel-the Ironman of India, learned Shree KanaiyalalManeklalMunshi and Agricultural scientist Dr. M. D. Patel since its inception, has been significantly contributing to agricultural development and research as well in the state of Gujarat and nation at large. A huge workforce of trained teachers and scientists has been working for the tremendous activities in education, research and extension education. There are 18 departments working on crop-breeding, crop-production, crop-protection and Social Sciences and thereby carrying out various activities of education, research and extension education. The Department of Agricultural Meteorology is one of them.

Department of Agricultural Meteorology is one of the pioneer departments in the country for starting concurrent academic and research programme leading to M.Sc. and Ph.D. degree in Agricultural Meteorology since 1964. In 1983 the full-fledged department came in to existence.UG and PG teaching in the discipline of Agricultural Meteorology, Agricultural Engineering and Applied Mathematics and Physics is being undertaken in the department.The research programmes are carried out mainly by All India Coordinated Research Project on Agrometeorology and also by PG and departmental research programmes.The research works are also carried out through adhoc projects funded by ICAR/DST /ISRO/IMD and other agencies etc.

The extension services are provided through project on weather based agro-advisory of IMD which was initiated in 1991, which is now extended for all the districts. The agro-advisory bulletins are prepared for disseminated through various mass media for the farmers of middle Gujarat. Anandcentre work as Principal Nodal Centre for providing such service in Gujarat. Department is also maintaining agro-meteorological observatories at different research stations and maintaining Agromet data banks and provide the data to various user communities.

Various instruments like Leaf area meter, Canopy Analyzer, Pocket Weather Meter, GPS, Spectro radiometer, Infrared Thermometer, Line Quantum sensor, Ozonometer,

Sunphotometer and high volume samplers and remote sensing & GIS softwares are available for carrying out research work.

The visit was commenced at 9:15 am from GCET campus to AAU (Anand Agricultural University), Anand. After reaching, the students were first taken to Department of Agricultural Meteorology where an expert talk was organized by **Dr. Manjusha Kulshreshtha**, Head, Department of Agricultural Meteorology on “*Prediction of Weather Parameters using Modern Techniques*”. Under this talk she discussed about different weather parameters and its importance and how modern techniques such as Artificial Neural Network (ANN) etc. can help in predicting those parameters accurately. She has given brief idea about ANN and its methodology. Also, she discussed about other crop modeling techniques as well. At the end of the talk she introduced the department staff members. Among them, **Dr. B. I. Karande** was there, who took a small introductory talk on “*Crop Modelling*”.

Then students were taken to a museum in department in two different groups headed by Dr. B. I. Karande along with other faculty member **Dr. S. B. Yadav**. Students have observed various instruments like Automatic Rain gauge, Sunshine Recorder, Wind Vane, Cup counter Anemometer, Soil Thermometer etc. for the measurement of various meteorological parameters. After visiting the museum, students were headed to “*Field Observatory*” where all those instruments were placed and actual measurement was going on. The faculty experts have explained all instruments with its procedure like measurement of sunshine hours, measurement of rainfall, measurement of evaporation, measurement of soil temperature etc. Also, in the field observatory the Automatic Weather Station (AWS) was there installed by Indian Meteorological Department (IMD) in which all the meteorological parameters were measured and the recorded data then sent to computer or TV screen for monitoring and record purpose.

Finally, after competing lunch, students were taken to “*Crop Museum*” where all different crops were grown, different methods of irrigation were set up, simple watershed management model was prepared and different methods for measuring flow in channel was set up in field.

With all the knowledge and information students have gained; the return journey was started towards GCET campus back and reached at 3:30 pm in noon.

#### **Aim of Visit:**

The main aim of visit was to make students aware and to teach them about the various weather parameters (Rainfall, Temperature, Evaporation, Sunshine Hours etc.) their importance and significance, their measurement and various advanced methods for the prediction of same as they are studying the part of it in subject called “*Hydrology & Water Resources Engineering*”.