

## **Future Programmers:**

Apart from ongoing experiments as under in the Department some of the Future Programs under different projects and other activities of this Department are given as under:

### **Project for research in Agricultural Chemistry and Soil Science**

1. Finding out nutrient requirements of various crops as well as increase the efficiency of various agricultural inputs and resources like, soil, water, plant, fertilizer and manures for improving crop yield and maintenance of soil health under South Gujarat condition.
2. Solving out various problems as would be encountered by farmers / organizations in relation to crop production when various natural resources and inputs like, soil, water, plant, fertilizer and manures are being utilized (on charge basis).
3. Determining the suitability and quality of prevailing irrigation water samples for their utilization in agricultural crop production (on charge basis).
4. Developing skill and technical know-how of farmers / extension workers / gram sevak / officers relating to soil, water, crop production system through imparting them as required from time to time.
5. Short and longer time build-up of carbon in soil organic matter; carbon sequestration in agricultural soils under various crops.
6. Characterization of the "locked-up N pool" in soils of this zone, its release dynamics and management option

7. Evolving appropriate soil / crop management strategies to maintain plant available nutrient pools in soil (viz. K, P, S) at an optimum level between release and fixation threshold value for corresponding nutrients.

### **Establishment of central instrumentation laboratory**

1. Providing analytical and advance research facilities to all PG students as well as research staff of this university in future course of time for analyzing various samples as per requirement under different ongoing research projects running at NAU.
2. Exposing PG students in teaching- cum -learning programs on various modern and sophisticated instruments under this laboratory.
3. Extending the analytical facilities to farming community and other agencies in order to analyze their samples for various parameters as would be available in the laboratory and also advisory services will be provided.
4. Organization of training program from time to time as per demand in future.

### **Establishment of Leaf/Tissue and soil nutrient diagnosis laboratory for banana and papaya grown in South Gujarat**

1. The adequacy of fertilization / nutrient management practices in the plantation crop of Banana and Papaya of farmers will be determined (on charge basis) as per demand of farmers. Subsequently fertilization / nutrient management practices will be tailored accordingly for these crops (on charge basis).

## Ongoing experiments:

1.	Characterization of Biochar prepared from different plant residues and its enrichment with organic sources
2.	Effect of different organic inputs in Banana
3.	Effect of pinching and foliar application of nutrients on growth, quality and yield of African marigold ( <i>Tagetes erecta</i> L.) var. Punjab Gaiinda – 1.
4.	Calibration and validation of DSSAT-CROPGRO model for mungbean crop under South Gujarat region
5.	Monitoring and assessment of soil pH, salinity, and soil chemical properties in agricultural land of Navsari district using remote sensing and GIS based machine learning technique
6.	Optimization of micronutrient doses for aster
7.	Effect of nutrient management on sugarcane planted through single eye budded settling under south Gujarat condition
8.	Residue management of plant sugarcane and their effect on ratoon sugarcane under different fertilizer levels