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Nigeria Agriculture Policy Activity

July 2021

NAPA Highlights #5

SPI Rating in Benue State-A Student's Report

I am Maryann Nwagu a 500 level Soil Science student of Joshua Sarwuan Tarka University Makurdi, (JOSTUM), Nigeria. Although I was not part of the field team that collected the soil samples I assisted in taking bulk density readings at the soil science laboratory at JOSTUM. After going through the posts of my level mates documenting their experiences on the field on social media and reviewing their pictures, I was impressed and motivated to join them on the SPI rating project. Apparently, Dr. (Mrs.) B. I. Agada, had been wanting to improve gender balance of the team, and welcomed me to join the team after I approached her.

The one-day training on proper soil sampling and analysis was conducted by Dr. Agada on 28th July 2021. The training was organized by the USAID funded Feed the Future Nigeria Agriculture Policy Activity (NAPA). Over eight hundred (800) student participants attended. The participants included 300 level, 400 level (on their Students Industrial Work Experience Schemes (SIWES) program), 500 level and post graduate students. The SIWES coordinator Dr. J. Okoh gave an opening remark and enlightened the students about the essence of the training centered on proper soil fertility management.

The students were grouped by colleges and departments. Dr. Agada treated topics including the physical and chemical properties of the soil and their impact on soil fertility. Physical soil properties discussed included soil structure, texture, color, porosity, and bulk density. Some chemical properties were measured with the sensor machine while others had to be tested in the laboratory. Demonstrations on how to carry out proper soil sampling using methods such as random and grid sampling techniques were given and participants were supported to practice using

these sampling methods. Getting a representative sample and the need to take cognizance of topography were emphasized by the trainer.



DR. J. OKOH (SIWES) COORDINATOR WITH DR. AGADA AND SOME TRF TECHNICAL STAFF ADDRESSING THE STUDENTS

Samples were collected at different depths using the sensor machine, soil auger and core sampler. Parameters of interest included bulk density, clay content, silt content, sand content, moisture content, pH and cation exchange capacity (CEC), carbon, as well as percentage of nitrogen, phosphorus, and potassium in the soil.

The training ended on a good note as all students were excited about the knowledge acquired and the light refreshments served.

As plans to analyze the soil samples evolved, I was among the seven (7) students selected to learn how to prepare and test collected soil samples. This 6-day training activity was done at the Soil Science Laboratory of the University of Nigeria Nsukka (UNN). Samples were air dried, pounded, sieved (using a 2mm sieve), properly labelled and analyzed.



FELLOW TEAMMATES AND I AIR DRY THE SAMPLES IN AN OLD UNN SCREEN HOUSE



STEPHEN AND I PREPARE REAGENTS FOR TOTAL CARBON TEST.

I rated this training exercise exceptional as it gave me a perfect understanding and good practice of contents taught on sampling collection and analysis of soil properties in our soil physics classes. This for me, is bridges the gap between theory and practice.

Now that it is all over, I am overwhelmed with joy to have been a part of the activity. To Dr. Agada I promise that I won't let you down Ma. To the organizers of this project, I say many thanks and may the good Lord reward us all.

By Iorchir Iorember Christian

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