

**Nigerian University Research Ties with C G Bhakta Institute of Biotechnology on Indian and Nigerian Bajra and Napier Elephant Grass**

Nigerian University Professor to work with Biotechnology Institute of Maliba Campus, Uka Tarsadia University (UTU) for Ph. D.

University of Ilorin (Unilorin), Nigeria is in collaboration with C G Bhakta Institute of Biotechnology (CGBIBT) by signing an MoU on 19<sup>th</sup> March, 2013. Prof. Dr. R. Krishnamurthy, Director, CGBIBT and Dean Faculty of Science (UTU), was present in Ilorin in March 2013 while executing the MoU and also in November 2013 to initiate joint venture collaboration of Tissue Culture Research Project.

As further move on research collaboration, Mr. David Adedayo Animasaun, Asst. Professor at Unilorin, Nigeria is currently working with the Biotechnology Institute of Maliba Campus. He is working on Indian and Nigerian Accessions of Bajra (Pearl Millets, Botanical name: *Pennisetum glaucum*) and Napier Grass (known as Elephant Grass, Botanical name: *Pennisetum purpureum*) for his Ph. D. research work and also registered for his Ph. D. with University of Ilorin under joint guidance of Nigerian counterpart (Prof. Morakinyo Joseph Akintade) and Indian Counterpart (Prof. Dr. R. Krishnamurthy of Uka Tarsadia University).

Both in India and Nigeria, the Bajra is used for making food items like Bajre Roti in North/Western India; Adha, Kali and koozhu in Southern parts of India; Millet Beverage (Kunu, Brukutu – Fermented drink), Millet pancakes (Mansa), Millet Porridge (Tuwo-ngeru), Pap (Ogi, akamu, Koko – Millet paste for breakfast and late dinner), Malt production, Beer Brewing (Langer Beer), Millet flour and Millet bread in Nigeria.

In contrast to Bajra, elephant grass is recommended as one of the most nutritious cattle feeds (12% Protein, 2% Fat, 34% Fibre, 8.5% Minerals, 0.7% Calcium and 0.3% Phosphorus) in both Nigeria and India. The grass is reported to produce 400 tonnes/ha green fodder yield/year, in seven cuttings.

Scientists strongly believe that both Bajra and Elephant Grass originated from common ancestors during the progressive evolution of living system on the Earth.

Scientists are still having an opinion that both Bajra and Elephant Grass are domesticated in India from African Regions and therefore, there are possibilities that there could be strong genomic relationship between Indian and Nigerian accessions of these two plant species.

The project is funded by Uka Tarsadia University and in this collaborative Ph. D. project Mr. David Animasaun has got clearance from Nigerian Quarantine Dept, Ibadan to conduct research on Pearl Millet and Napier Grass (Elephant Grass) at Uka Tarsadia University, India.

As an ambitious project objective, Mr. David Adedayo is studying genomic characterization and relationship between Indian and Nigerian plant species.

The Indian Accessions of Pearl Millet are procured from ICRISAT (International Crops Research Institute for the Semi Arid Tropics, Dr. Hari D Upadhyaya, Principal Scientist & Head of Gene Bank, Hyderabad) and Napier-Elephant Grass from Tamilnadu Agricultural University (Prof. Dr. A. Kalamani, Head of Dept of Forage crops) and NBPGR (National Bureau of Plant Genetic Resources, Dr. Anitha Pedapati, Scientist) for conducting Tissue Culture, Green House and field Experimentation at the Maliba Campus.

It is expected that Asst. Prof. David Adedayo, with the support of CGBIBT scientists, will be able to establish the genomic relationship between Indian and Nigerian Plants, which will be largely useful for breeding and developing of new varieties of Bajra and Napier-Elephant Grass both in India and Nigeria,

- Reported by the Indian Collaborator Prof. Dr. R. Krishnamurthy, Director-CGBIBT, Uka Tarsadia University.





Mr. David Adedayo Animasaun, Prof. Azeez Musibau Adewuyi and Dr. R. Krishnamurthy interactive project meeting with students of Biotechnology, Uka Tarsadia University.





Experimentation in Tissue culture Laboratory.





Working at Green and Net House.