



# Microorganism diversity crucial to climate change adaptation and mitigation



Dr Fen Beed, IITA Plant Pathologist, speaking before delegates to the Special Information Seminar organized by the FAO ahead of its 13th Regular Session.

Resources for Food and Agriculture ahead of its 13th Regular Session. The special seminar tackled issues regarding plant, animal, aquatic, forest, invertebrate, and microorganism genetic resources.

Beed, who was talking on microorganisms, highlighted findings of the study which was undertaken in collaboration with Thomas Dubois, IITA Seed Systems Specialist based in Uganda, and selected international experts in the field.

The study also concluded that it is vital to develop and implement global policies and appropriate access and benefit sharing regimes to coordinate the conservation and use of microorganism genetic resources.

Delegates at the 13th Regular Session made references to the seminar, specifically on access and benefit sharing, microorganisms and invertebrates, as well as the State of the World Biodiversity for Food and Agriculture.

The session delegates recommended that FAO develop a "roadmap" to guide its Commission on Genetic Resources for Agriculture in its future work in this area.

This roadmap, according to the FAO, will seek to "understand the roles and values of genetic resources for food and agriculture in achieving food and nutritional security, and enable countries to plan and implement adaptation and mitigation strategies related to climate change and its anticipated impacts on food and agricultural production, now and in future".

As the global community seeks ways to cope with the negative impact of climate change, an FAO-commissioned research showed that the abundance and diversity of microorganisms play a vital role in maintaining productivity of crops and the resilience of ecosystems.

In "Climate change and microorganism genetic resources for food and agriculture: state of knowledge, risks and opportunities" (<http://www.fao.org/docrep/meeting/022/mb392e.pdf>), it was shown that microorganisms are responsible for soil formation, nutrient capture/cycling/storage, bioremediation of polluted soil, pest suppression (biological control and endophytes), and in the processing

and conservation of food.

Fen Beed, IITA Plant Pathologist based in Tanzania and leader of the research, states that improved and sustainable agricultural production would only be possible if the synergistic – and antagonistic – interactions between microorganisms and crop genetic resources are recognized and respected.

He adds that in order to realize this, mechanisms that increase research and characterization of microorganism taxonomy, diversity, function, and influence of interactions with other organisms must be put in place.

Beed was speaking at a Special Information Seminar organised by the FAO Commission on Genetic

# AGRA head calls for closer ties with IITA

“IITA is an important institution in Africa that has done a lot, through its research, to reduce suffering in many parts of the continent from food shortages and the Alliance for a Green Revolution in Africa (AGRA) is happy to work with it to upscale its technologies and ensure they are put into use”, says Namanga Ngongi, president of AGRA, during his courtesy visit to the institute’s East and Central Africa hub in Dar es Salaam on 16 August.

For example, Ngongi cited that material from IITA had led to the development and subsequent release of six improved cassava varieties with tolerance to both the Cassava Brown Streak and Cassava Mosaic diseases in Kenya, which are changing the agricultural landscape in terms of poverty and malnutrition alleviation with their high yields of over 40 tons per hectare versus the 8-10 tons per hectare yield that farmers were accustomed to.

“We work with national research institutions to carry out adaptive research to add value to IITA’s research work”, the AGRA president said.

He also explained briefly the bread-basket approach that AGRA was espousing, saying it was a move away from the traditional integrated rural development



(At left) IITA’s Edward Kanju, Danny Coyne, and Victor Manyong listening to AGRA president Namanga Ngongi (second from right). Next to him is AGRA country manager for Tanzania Fred Muhhuku.

approach and instead follows an area and crop-based approach.

“The approach identifies a crop in a defined geographical area and develops it along its value chain. This holds great potential to develop the agricultural sector”, he added.

He thanked IITA-Tanzania for agreeing to host AGRA in the country and warmly welcoming its posted staff.

Welcoming him, Victor Manyong, R4D Director for Eastern and Central Africa, said the institute is honored to host AGRA and is looking forward to strengthening working relationship not only in Tanzania but in the region.

He said that similar to AGRA’s

approach, IITA also works along the value chain in all its research crops.

“To us, a farmer is an investor and not merely someone who needs help from the government and donors. We work with them as private entrepreneurs to minimize risks that could be harmful to their investments in agriculture. We work to help them succeed,” emphasized Manyong.

Also present at the meeting were Fred Muhhuku, AGRA’s country representative; Ann Mureithi, executive assistant to the communications director; and IITA scientists based at the hub who briefed the visitors about their respective activities.

## Obituary

### Octave Sidi, IITA alumnus, passes on

Octave Sidi, a former IITA staff, has passed on. Sidi had a long career with the Food and Agriculture Organization, and was invited by Dr Hartmans, former IITA Director General, in 1984 to manage the institute’s substation in Cotonou – a post he dutifully served very successfully for many years.

Sidi died on 27 July in Rome and was buried on 1 August at the Flaminio Cemetery in Rome based on Jewish tradition.

In an email to families and friends, Sidi’s daughter, Caroline says the family is saddened by the death of their father. “We will really miss him,” Caroline says.

IITA management and alumni have expressed sympathy over the passing of Sidi. Staff and colleagues may get in touch with Sidi’s family through the following:

- Caroline ([cdsidi@yahoo.com](mailto:cdsidi@yahoo.com), Tel: +39 366 164 1140)
- Alan ([alansidi@gmail.com](mailto:alansidi@gmail.com), Tel: +39065138240)
- Claude ([claudesidi@sbcglobal.net](mailto:claudesidi@sbcglobal.net), Tel: 415 824 8179)

## Help conserve electricity!

Before leaving the workplace at the day’s end, make sure that you have:

- (1) Powered off all unnecessary electrical office/lab equipment;
- (2) Turned off air conditioners; and
- (3) Switched off all lights.

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