

New species of nematode named in honor of IITA staff

Pratylenchus speijeri n. sp., a plant parasitic nematode recovered from the roots of plantain in Ghana, has just been described as a new species of lesion nematode. This species has been named after Paul Speijer, sadly killed in an air crash along with two IITA colleagues, in 2001.

Paul was the nematologist with IITA at the time of his death, and who in the late 1990s discovered this nematode causing severe damage on plantain in Ghana. It had looked very much like *Pratylenchus coffeae*, a major pest of banana. The nematode became the subject of an M.Sc. study for Francis Brentu, and subsequently a publication which illustrated the

devastating effects of this pest on plantain.

Earlier, Paul had sent off a sample of the nematode for further investigation. Over time and involving huge efforts by many, the nematode has now been established as different from *P. coffeae* and as constituting a new species.



P. speijeri has been named after Paul, its founder in many ways, which honors his commitment, dedication, and passion to the science of nematology and acts as a lasting memory and testament to his work. The manuscript detailing the description of the new species is due to be published in *Nematology* shortly.

De Luca, F., Troccoli, A., Dunca, L.W., Subbotin, S.A., Waeyenberge, L., Coyne, D.L., Brentu, F.C., and Inseerra, R.N. 2012. *Pratylenchus speijeri* n. sp., a new root-lesion nematode pest of plantain in West Africa. *Nematology* DOI:10.1163/156854112X638424.

MIRACLE helping mitigate impact of HIV and AIDS

One of the ways by which the IITA-led MIRACLE Project is effecting positive change in people's lives is by providing them with options that were not there – or at least unknown to them – before. Take the case of 41-year old Kosamu Njiwa, a smallholder farmer and father of six from the Dzuwa village in Lilongwe District of Malawi. He owns about 1.6 ha of land where he plants traditional crops such as maize, groundnuts, tobacco, tomatoes, and mustard. Apart from being a farmer, Kosamu is also a member of the local Dzuwa HIV/AIDS support group.

When MIRACLE first came to his village, Kosamu was very excited, particularly when he learned that the project will be encouraging the production and consumption of indigenous vegetables to improve the nutrition and health of family

members. Being both a vegetable grower and an HIV/AIDS support group member – and his boundless passion for learning and caring for others – MIRACLE identified him as a farmer-leader, a role that he keenly accepted. One of his primary functions is to demonstrate technologies that MIRACLE is promoting.

In Malawi, amaranths (*bonongwe* in local term) and Ethiopian rape (locally called *kamganje*) are normally available only during the rainy season when water is abundant. Learning that a section of Kosamu's farm has access to water for most part of the year, the MIRACLE-Malawi team challenged Kosamu to grow the nutritious vegetables for home consumption and for sale. Highly enthusiastic but unsure because he had never grown these vegetables before – much less during the dry season

when they do not usually grow – Kosamu cultivated 100 m² of his land to them. He planted in mid-May and harvested his first crop in July – a time when the vegetables are not normally found in markets. By mid-August, he's sold some 3,080 Malawian Kwacha (around US\$12) worth of the crops from the three harvests he'd had so far. He expects to reap and sell even more until October. For Kosamu, these vegetables provide additional income that he would not have otherwise realized if he had not taken up MIRACLE on its challenge.

"I am glad that I ventured into growing these crops," said Kosamu. "Now I have extra income especially during the dry season when we do not have much agricultural activity. This is, of course, on top of having greens for my family particularly at a time when there is not much vegetable in the market," he added. "And I thank MIRACLE for that," he beamed.

Growing these vegetables gave Kosamu earlier and quick source of cash compared to growing tomatoes and mustard. "I will continue growing these vegetables," said Kosamu, "and grow them on bigger area."

Kosamu has his plan well laid out. "During the rainy season, I will focus more on field crops such as soybean and groundnuts, of which MIRACLE is also helping me with. When the season becomes dry, I will then shift to growing indigenous vegetables. To keep things going, I will save some of the plants to produce seeds for the next planting cycle," he explained.

He hopes that other MIRACLE beneficiaries pick up on his experience. "I believe that people like me could achieve more. And with the motivation and guidance of MIRACLE, a brighter future is just around the corner," Kosamu concluded.



Kosamu (bent) and during vegetable production field monitoring by Extension Officer (standing).

IITA invited as key resource on e-Agriculture by Côte d'Ivoire

The Ivory Coast has set an ambitious goal: to be an emergent economy by 2020. It has renewed its resolve to base economic growth on the agricultural sector. To support rapid modernization an e-Agriculture project was initiated. IITA was a special invitee to the National e-Agriculture Strategy Validation Workshop held on 6 and 10 November in Grand-Bassam.

Rural sociologist Sander Muilerman, representing IITA, made a presentation on IITA's experiences on Agricultural Information Systems, real-time data solutions, and communication for development. A personal courtesy visit was granted with His Excellency Coulibaly Sangafowa, Minister of Agriculture, who was also present at the closing ceremony together with His Excellency Kone Nabagne Bruno, Minister of Post and ICT.



Rural sociologist Sander Muilerman (left) presents IITA's experiences on using ICT and new media for agricultural development in a national workshop on e-Agriculture, Côte d'Ivoire.

IITA's contributions to this process were highlighted by the organizers. An interview on the RT1 8 pm news was televised and the event was webcasted on www.abidjan.net.

IITA will continue to collaborate on e-Agriculture with key agricultural research and extension services as a member of the scientific committee.

Partner meeting for development of aflatoxin biocontrol in Africa: 2012

The inaugural workshop of the Aflatoxin Biocontrol Researchers in Africa was held at the University of Arizona, Tucson, USA in October. The Agriculture Research Service of the United States Department of Agriculture (USDA-ARS), University of Arizona, and IITA organized the workshop with funding from the Foreign Agriculture Service of USDA (USDA-FAS). Participants included scientists and students from Senegal, Burkina Faso, Ghana, Nigeria, Cameroon, Kenya, Tanzania and Zambia;

staff from USAID, USDA-FAS, and Doreo Partners (commercialization strategy development partner of aflasafe™); and the IITA aflasafe team in Nigeria, Kenya, Tanzania, and Zambia. It was led by Prof. Peter Cotty of USDA-ARS at the University of Arizona and Dr Ranajit Bandyopadhyay of IITA.

The workshop featured presentations on current research activities on biological control in Africa, Mexico, and the United States. Hands-on laboratory training was conducted with several sessions involving the use of microbiology and molecular tools for aflatoxin biological control research. According to the leaders of the team, it is important for the knowledge-sharing sessions and workshops to be conducted regularly so that members of the team can share ideas and interact to find solutions to aflatoxin problems using scientific, social, and strategic tools.

As part of the workshop, a visit was made to the Cotton Growers facility where a biological control product called AF 36 developed by USDA-ARS is produced on a commercial scale. IITA has developed a similar product called aflasafe™ which

has various country versions already deployed for field efficacy trials. IITA has also begun to set up a manufacturing facility within the IITA-Ibadan campus which will serve as a prototype for potential biological control manufacturers to replicate when the product eventually becomes commercialized in the various countries within Africa.

All workshop participants saw the transfer of technology from the research laboratory to farmers, as evidenced by the large-scale production facility in Phoenix, Arizona. The facility, which has been functional for more than 15 years, has continued to provide product material for treating thousands of hectares of cotton, maize, and pistachio fields in the US, particularly in Texas where the problem of aflatoxin contamination is significant. The cotton growers association owns and runs the AF 36 production facility with well-equipped laboratories that they use for quality control checks and to conduct trials. According to the Arizona Cotton Research and Protection Council (ACRPC), an organization run by the cotton growers, "AF 36 works; there's no doubt about it".



Resource person explaining AF36 biocontrol inoculum multiplication.

Welcome, Africa RISING staff

Dr Asamoah Larbi joined on 1 October as IITA's Country Representative in Ghana and a Farming Systems Agronomist for the USAID-funded project on 'Sustainable Intensification of Cereal-based Farming Systems in the Guinea Savannahs of West Africa', based in Tamale, northern Ghana. He holds a Ph.D. from the University of Florida, Gainesville (1989) with a major in forage agronomy and a minor in ruminant nutrition, M.Sc. in Animal Production and Forage Science (1982), and a B.Sc. in Agriculture, Animal Production (1979).

Asamoah has worked as a research scientist at the International Center for Agricultural Research in the Dry Areas (ICARDA), 2003



to 2011, and the International Livestock Research Institute (ILRI), then known as the International Livestock Centre for Africa (ILCA), 1989 to 2003. Earlier in his professional career, he was a Lecturer at the Animal Science Department, University of Ghana (1982-1986), and an Animal Husbandry Officer (1979-1980) with the Ghana Ministry of Agriculture.

Asamoah, a Ghanaian, is married to Charity and they have three children.

Dr Mateete Bekunda has assumed duty as a Farming Systems Agronomist for the USAID-funded project on 'Sustainable Intensification of Maize-based Farming Systems of East and Southern Africa', based in Arusha, Tanzania, on 1 October. Mateete obtained a Ph.D. in Soil Fertility (1988), M.Sc. Major in Soil and Plant Analysis (1981), and a B.Sc. in Agriculture (1978).

Mateete was a consultant systems agronomist for the Africa RISING Program

before this new appointment. He worked as an Interim General Manager at AGRIDEC Premier Seed (2012), a visiting scientist at the Tropical Soil Biology and Fertility Institute of CIAT, Nairobi and the Earth Institute of Columbia University in the US (2009-2010), a Professor of Soil Science and Dean of the Faculty of Agriculture at Makerere University (2003-2008), a regional research fellow at the African Highlands Initiative in Uganda (1999 - 2001), a research fellow at the International Atomic Energy Agency in Austria (1991), and an experimental scientist at CSIRO in Australia (1987 -1988).

Mateete, a Ugandan, is married to Magdalene and they have five children.

