



Position

Agriculture Research Officer

Institution

Tanzania Agricultural Research
Institute (TARI), Tanzania

Country

Tanzania

Education

MSc, Crop Science, Sokoine
University of Agriculture,
Tanzania

Mentor

Dr. Angela Mkindi, Assistant
Lecturer, Nelson Mandela
African Institution of Science and
Technology (NM-AIST), Tanzania

Research Area

Plant pathology.

Edith Laurence Kadege

2021 One Planet Laureate Candidate

As a researcher at the Tanzanian Agricultural Research Institute (TARI), Edith Laurence Kadege is a plant pathologist working on developing common bean varieties that are resistant to fungal diseases such as anthracnose (*collectotrichum lindemuthianum*).

She is currently enrolled in a PhD in sustainable agriculture focusing on molecular plant pathology and expects to finish in 2024.

“My interest in plant pathology began early,” she says. “After completing my BSc and MSc, I was working on a team to develop beans that are resistant to fungal disease, and we released about seven varieties.” In particular, she was looking for a disease called angular leaf spot.

Edith always planned to be a scientist “who makes a difference,” she says.

“I am happy to be working with common bean because it pays the farmers. My country—Tanzania—is leading in bean production in Africa, with a potential market of 10 countries. But productivity is low, and the reasons for low productivity, among other factors, include prevalent diseases. Therefore, we need to develop disease-resistant varieties to increase productivity and help farmers increase their incomes.”

She recalls her parents having trouble when she was a child. “It was hard for my mother because beans were drying out during heavy rains, and beans were the main dish of food at every meal, every day,” she recalls. “I wanted to do something to increase yields, so this was my motivation.”

Edith is currently involved in research related to weather in the northern part of Tanzania.

“Climate change is having an effect as we know, and this is creating problems with beans, affecting several varieties. I’m looking specifically to develop anthracnose-resistant bean varieties,” she says.

Another issue Edith is concerned about is that farmers are using industrial chemicals to control bean diseases to ensure that they get enough yield and a good price for their beans.

However, industrial chemicals are not good for the environment and are unhealthy to consumers. “I would like to develop a bio-pesticide, which would be much better,” she remarks.

Edith’s research involves farmers—men, women, and youth. “Currently, in Tanzania, we have released 43 varieties of common beans, but adoption is limited.

We are looking at how certain varieties are doing with the farmers under their field conditions. In Arusha, with my fellow research staff, I was able to coordinate bean research, including seed production and distribution. Currently, the bean yield with these varieties is three times higher.”

Diseases cause grain yield loss of between 300 and 400 kilograms per hectare each year, reducing nutrition by 0.5% and increasing poverty by 0.6%.

Edith first heard about the One Planet Fellowship from a colleague and says it has helped her a lot already, “especially with career development. I didn’t know this was available. Once I heard about it, I started planning and arranging while wondering how I could get there.” She is happy to be connected with her mentor. Once she completes her PhD she hopes to eventually be a Research Director at TARI.

Edith, a mother of two, says she can already see positive changes in herself. She is confident that the program will help her, especially in learning how to write grant-winning proposals. “Working together with my One Planet colleagues will certainly help me to reach my goals—even now, some people I am working with are asking me how they can join the program.”

Edith is working with smallholder farmers in northern Tanzania to develop anthracnose-resistant bean varieties to increase productivity and help the farmers grow their income.

Edith Laurence Kadege is one of the growing number of candidates selected to participate in the One Planet Fellowship. The One Planet Fellowship is a career development initiative that is building a robust pipeline of highly connected, inter-generational scientists equipped to use a gender lens to help Africa’s smallholder farmers cope with climate change. The One Planet Fellowship is funded by the Bill & Melinda Gates Foundation, the BNP Paribas Foundation, the European Union and Canada’s International Development Research Centre (IDRC). African Women in Agricultural Research and Development (AWARD) and Agropolis Fondation are jointly implementing the Fellowship.

Do you have any further questions? Send an email to : oneplanet.award@cgiar.org

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