



2013 AWARD Fellow  
**Jean Rubakuba**

<b>Position</b>	Researcher, Microbiology
<b>Institution</b>	Uganda Industrial Research Institute (UIRI)
<b>Country</b>	Uganda
<b>BSc</b>	Biology and Chemistry, Mbarara University of Science and Technology, 2002
<b>Mentor</b>	Sylvia Ruhweza Magezi Project Coordinator and Nutrition Specialist, HarvestPlus Project, National Agricultural Research Laboratories

*Research area: Optimization of environmental growth conditions for production of Spirulina platensis in the areas surrounding the Great Rift Valley Lakes of western Uganda.*

Jean Rubakuba is convinced that *Spirulina platensis*, a simple one-celled form of blue-green algae that thrives in warm, alkaline bodies of water, is the “food of the future.”

“The name ‘spirulina’ is derived from the Latin word for ‘helix’ or ‘spiral’, which denotes the physical configuration of the organism,” Rubakuba explains. “Spirulina has been found to be very high in protein—at over 70 percent as compared to the 22 percent in beef. It contains anti-oxidants, and is very nutritious.” Spirulina is also a major source of vitamin B12—a teaspoon supplies two and a half times the recommended daily allowance—and it contains over twice the amount of B12 found in an equivalent serving of liver. It is a 65 to 71 percent complete protein, with all essential amino acids in perfect balance.

Rubakuba has found that spirulina can be processed into powder form, which can be easily added to juices or other liquids. It has a very mild taste, and the best thing is that it grows in water—no land is required, just a small pool or tank. Spirulina is being developed as the “food of the future”, says Rubakuba, because of its amazing ability to synthesize high-quality concentrated food more efficiently than any other plant.

The first stage of Rubakuba’s research has been lab work to find the optimal conditions for spirulina, including Ph and oxygen levels. “Next we will try to find out how to make suitable cultivation formats,” she notes. “The plan is to start with two villages in the Rift Valley. It grows naturally there, so I will pilot it in this area, looking at environmental conditions, among other things.”

Rubakuba’s long-term goal is to be the CEO of a facility that manufactures spirulina products. “I want to support people to grow spirulina, and buy from farmers who have been trained do value addition,” she says. “There are so many options that will help improve people’s livelihoods, such as selling spirulina as powder or capsules, as is common in Mali.”

Rubakuba views the AWARD Fellowship as a valuable opportunity to help focus her ambitions and ideas. “The concept of mentorship is amazing,” she says. “I have already learned so much, such as articulating

my career path. Never before have I had conscious steps and actions to follow." Since her major goal is to improve nutrition among smallholder farmers in Uganda, she is pleased to have a nutrition specialist as her mentor.

Rubakuba also expects to sharpen her science skills in order to publish her work in journals, and hopes to overcome her natural timidity through the AWARD Leadership Skills Course. She credits her supervisor at UIRI as pushing her to apply for an AWARD Fellowship. "She gave me two days to complete my application," she laughs.

Seeing the results of her work and witnessing improvements in people's lives is very satisfying to Rubakuba. "I aim to become a leader and inspire other people in my field," she concludes. "I believe the AWARD Fellowship will equip me with the skills I need to this end."

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*Rubakuba is one of a growing number of African women agricultural scientists who have won an AWARD Fellowship. AWARD is a career-development program that equips top women agricultural scientists across sub-Saharan Africa to accelerate agricultural gains by strengthening their research and leadership skills through tailored fellowships. AWARD is a catalyst for innovations with high potential to contribute to the prosperity and well-being of African smallholder farmers, most of whom are women.*

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