OnePlanet FELLOWSHIP

Building a robust pipeline of scientists leading climate change research in Africa

Candidate Profile

Michael Malandula Chipeta

2020 One Planet Laureate Candidate

Position

Lecturer

Institution

Lilongwe University of Agriculture and Natural Resources

Country

Malawi

Education

PhD, Plant Breeding, University of Kwazulu-Natal, South Africa

Mentor

Dr. Keston Oliver Willard Njira, Senior Lecturer , Lilongwe University of Agriculture and Natural Resources , Malawi

Research Area

Selection and development of varieties for improved yield, climate-resilient and nutritional security in Malawi.

Michael Malandula Chipeta has several career accolades to his name despite a relatively short career span. He is a fellow of the African Science Leadership Programme affiliated to the African Academy of Sciences, a scholar of the African Plant Breeding Academy, and a 2018 Norman E. Borlaug International Agricultural Science and Technology Program fellow. These achievements point to his determination to excel despite the harsh conditions he had to contend with growing up in rural northern Malawi.

Like many children born to smallholder farming families, he focused on household chores instead of schoolwork. Escaping that life and the desire to help his community are the foundation of Michael's passion for schooling. "The tough life in the village and its difficulties made me the person I am today because they implanted in me the desire to change my life and uplift others."

Michael's youthful dream was to be a lawyer. However, the only option he had for his undergraduate degree was horticulture, which he took at Bunda College of Agriculture in Malawi. While studying for his master's degree in plant breeding, he realized that his research area jelled well with his personality: "I discovered that in plant breeding I could find a way of doing what I had always wanted to do, and that is to help my community, especially the smallholder farmers, to resolve crop productivity problems associated with pests and diseases and climate-related changes." He specialized in plant breeding for his Ph.D. as well.

Michael is currently managing Bambara groundnut and cowpea breeding research at the Lilongwe University of Agriculture and Natural Resources in Malawi. He was drawn to these crops since they are neglected in research, yet many Malawian farmers grow them amidst many challenges.

Michael is delighted about the recognition his work has earned. He received a one million USD grant from Feed the Future Innovation Lab for Crop Improvement for his cowpea program. The program has since expanded to cover Malawi, Mozambique, and Tanzania. He notes, "what excites me is that now I have the resources to do the actual work that will help farmers and impact not only Malawi but also Eastern and Southern Africa."

The research's main objective is to develop highly nutritious, stable, and climate-resilient improved crop varieties for food, income, and nutritional security. Community involvement in this kind of research is crucial. Although Michael's breeding work is in its infancy, he requires farmer participation, which involves using their input to define desirable qualities

for the cowpeas. After the varieties are developed, farmers will be engaged in testing them on their farms.

Michael's long-term career goal is to be a renowned researcher and professor of plant breeding. "I don't see myself leaving academia because that is where I can impart knowledge and skills and assist communities through developing crop varieties suitable to their circumstances. For me, there is no greater satisfaction than in doing these two." He aspires to develop varieties that positively change smallholder farmers' lives in the next five years.

With the One Planet Fellowship, Michael is well-positioned to achieve his goal. Besides building his knowledge and interpersonal and leadership skills, the Fellowship will expose him to opportunities for networking and collaboration with experts in his field across the world. He believes this is the kind of exposure needed to understand and keep up to date with developments in his research area.

The Fellowship's focus on climate change will allow him to take proactive action to advise farmers on coping strategies and appropriate crop varieties. He will use his new mentoring skills to help younger scientists and lobby his institution to create mentoring structures. He knows first-hand how the lack of mentoring can affect a beginning scientist, as that affected him directly when he first joined his institution: "One of the things I didn't like was the lack of a mentor. I felt helpless."

He adds that mentoring can help upcoming scientists become established in their careers, mainly if the approach facilitates consistent and enriched engagement with the mentor, which is prominent in the One Planet Fellowship.

Michael's research focuses on plant breeding, specifically, cow pea breeding, with the aim of developing highly nutritious, stable, and climate-resilient improved crop varieties for food, income, and nutritional security in Malawi.

Conducting scientific research in African institutions has its unique challenges, including the need to stay current with developments in research since they manifest almost daily. One needs to adapt to the changes and to update their skills to deal with technological advancements. But opportunities to acquire these skills are rare.

For example, in plant breeding, new methods and tools are in use, such as molecular markers, which reduce the variety release period from 11 years with traditional instruments to about four years. The lack of such technology means that farmers will have moved on by the time your varieties are released. Michael collaborates with better-equipped institutions such as Feed the Future Innovation Labs and other partners to address the technological problems.

Michael Malandula Chipeta 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.