

Young Africans create new roads for agriculture

By <u>Pius Sawa, Reuters</u> 28 Apr 2017

Jean Bosco Nzeyimana's company, Habona Ltd, employs 25 young people who collect garbage, separate out the plastic and metal, and use the organic waste to produce fuel briquettes for cooking. With the remains from the briquette process, they make organic fertiliser, which is sold to farmers. This according to Pius Sawa, Reuters.



Image Source: African Agri Council

Young Africans seeking to transform agriculture

"This is a very smart agricultural technology because this is the place where farmers can get compost that helps them restore the soil quality lost through applying chemical fertilisers," said Nzeyimana, adding that Habona is producing 50 tonnes of fuel a month. Managing the waste also reduces the greenhouse gasses that would be emitted into the atmosphere if the garbage were destroyed by burning it on an open fire, as often happens around markets.

The Rwandan entrepreneur is just one example of young Africans seeking to transform agriculture by using new technologies while contributing to food security and employment.

Their innovations were showcased at the MasterCard Foundation's Young Africa Works Summit 2017, held in Kigali in February, aimed at putting young people at the centre of a "green revolution" for Africa that can help equip agriculture to thrive amid climate change.

"The increasing severity of climate change is already amplifying existing stress on water availability and food security in many African countries," said Anne Miles, the foundation's director for youth livelihoods and financial inclusion. "A growing youth population means this group will be particularly vulnerable," she added. At the same time, young people are uniquely poised to understand the problem and to use new methods to make farming sustainable, efficient and profitable even as the planet warms, the foundation believes.

Help for women farmers

Pilirani Khoza founded the Bunda Female Students Organisation in 2014 to help pay fees for disadvantaged women students on science courses at Lilongwe University of Agriculture and Natural Resources in Malawi. In return, the sponsored students act as agricultural extension workers, training poor women farmers to survive harsh climatic conditions. The students are sent to rural counties, where they each train around 30 women farmers for a month.

They provide the farmers with the inputs and knowledge they need to implement relatively simple methods, such as using small plastic bottles filled with water and pierced at both ends which are tied onto the crop, irrigating it for six months.

So far the project has reached 360 rural farmers, who are making progress in planting trees, growing vegetables and crops that are tolerant of drought and floods, and conserving water in the soil, said Khoza.

In Kenya, meanwhile, 23-year-old Brian Bosire is the brain behind UjuziKilimo, which means "knowledge farming" in Swahili. Having seen farmers in his village suffer from poor yields due to droughts, floods, and erratic rains, Bosire developed a handheld electronic sensor that gathers data on soil quality and helps farmers decide what to grow. "My first dream was to have some device that any farmer – like my mother or a village woman – could just stick into the ground, and within a few minutes get the precise information about what kind of inputs they need, what kinds of crops will do well, and where can they get those inputs," he said.

The service is operated by extension agents who test the soil and send information and advice to farmers on their mobile phones, which they also use to pay for their subscription.

In 2015, Bosire's company won an award from the American Society of Mechanical Engineers, recognising its work in developing technology to improve the livelihoods and yields of small-scale farmers. "One of the 250 farmers who were getting 10 bags of maize from one acre is now earning \$300 per month from vegetable farming," said Bosire. "We are proud that at least the farmer is getting the right knowledge to drive him to profitability." In the next two years, the company aims to reach 200,000 Kenyan farmers, he added.

Ending hunger

Bosire said climate change is one of the biggest challenges facing Africa, because its agriculture is mainly rain-fed. One of the best ways to make farmers more resilient is to create solutions that are tailored to smallholders, he said.

Nzeyimana said climate change is "for real". "Young people, because of the skills they have, have to take a lead in trying to make sure that we mitigate the climate change risks before they hit us the hard way," he emphasised.

Currently, the fuel briquettes his company produces are sold only in southern Rwanda but it is planning to build a bigger plant to be able to supply the whole country. Khoza said young Africans are the drivers of agricultural transformation. "We give hope to other youth that without them, we cannot (meet) the Sustainable Development Goals of ending hunger and poverty," she told the Thomson Reuters Foundation.

New jobs

Richard Munang, regional climate change coordinator with the UN Environment Programme, said agriculture is key to tackling poverty in Africa. He cited World Bank figures showing that a 10 percent increase in agricultural productivity on

the continent translates into a seven percent reduction in poverty.

Agriculture has the potential to reduce African poverty two to four times faster than any other sector, he noted. That is because it employs nearly two-thirds of the population on average, with women producing up to 80 percent of the food. Through the agricultural value and supply chains, the sector interacts with technology, logistics, and energy – where it can create new income opportunities, Munang said by email. The best way to achieve this is to consider the full supply chain, not just on-farm production, he said. For example, information and communications technologies can be used to link producers with markets, and clean energy deployed to power food processing, adding value and employment on both sides.

"This is the sector youth need to engage in to create jobs for themselves and future generations," said Munang.

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