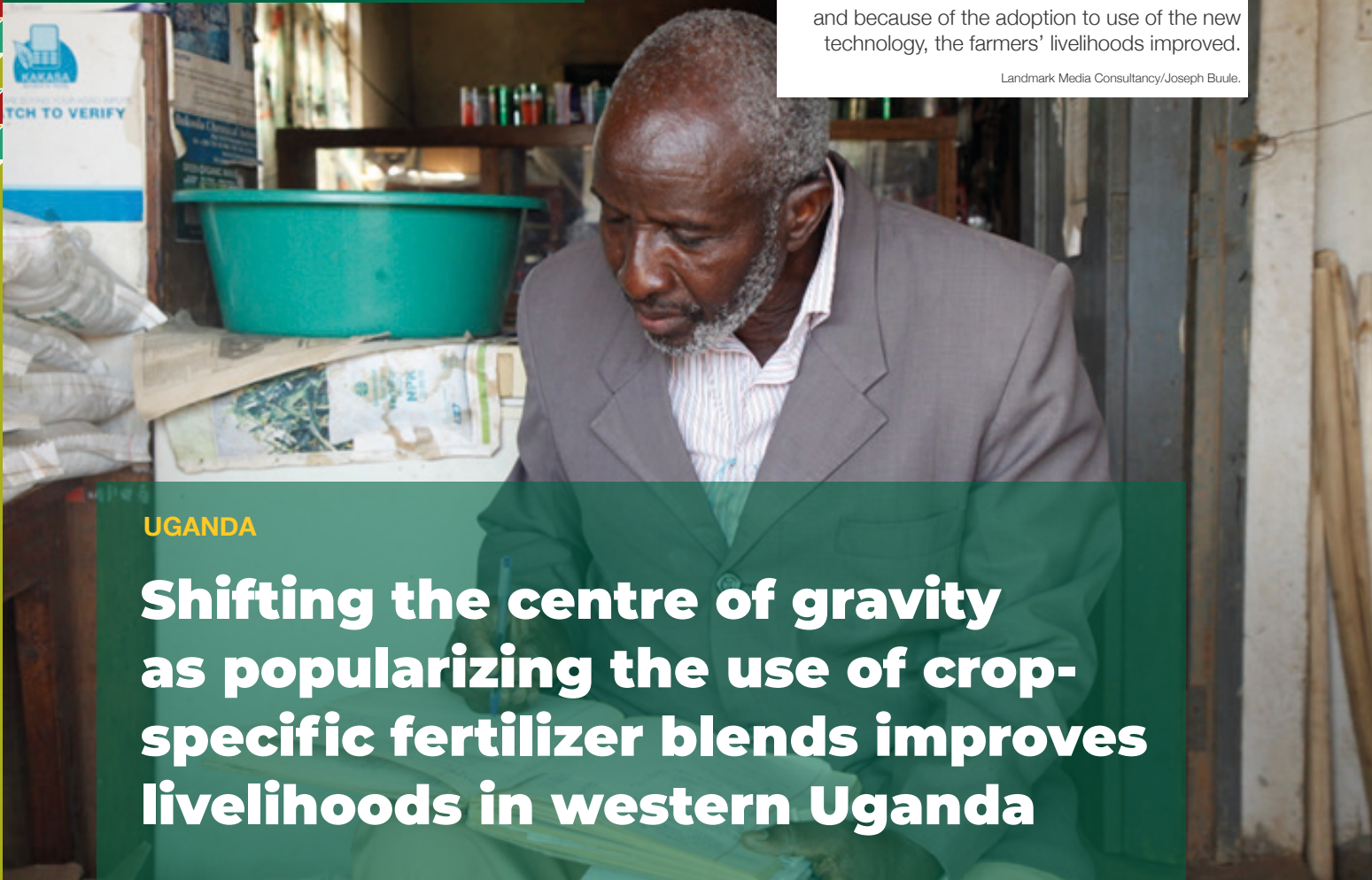


## AGRA Impact Series



Kezron explaining his relationship with the project. He was able to mobilize farmers in the area and because of the adoption to use of the new technology, the farmers' livelihoods improved.

Landmark Media Consultancy/Joseph Buule.

### UGANDA

# Shifting the centre of gravity as popularizing the use of crop-specific fertilizer blends improves livelihoods in western Uganda

**Through support from AGRA, a number of beneficiaries have reaped from the promotion of use of crop-specific fertilizers in Ntungamo district located in western Uganda. The investment has increased people's livelihoods.**

Because of the increasing human population, the agricultural sector is continuously facing a manifold of challenges tailored to satisfying the ever increasing demand for food. With the meagre knowledge in soil management and conservation, a number of arable lands in Uganda can no longer support crop growth to the satisfaction of the acclaimed productivity. More so, Uganda is ranked among those countries with the least fertilizer use rate in the world, which is partly caused by the subsistence nature of agriculture. Such farming with a poor culture of investment, for example in inputs like

improved seed and fertilizers, has kept a vast number of small-scale farmers poor and hungry with a non-imaginable hope of commercializing the venture. It was on this basis that the Alliance for a Green Revolution in Africa (AGRA) invested (US\$130,000) in Grainpulse limited (GPL), a fertilizer blending company to promote and popularize the use of crop-specific fertilizer blends through training various stakeholders along the fertilizer value chain.

According to Dr. Kaizzi C. Kayuki, a senior soil scientist at the National Agricultural Research



A beneficiary farmer standing in his tomato garden. Because of applying tomato specific fertilizer, he expects to earn more than UGX: 2,000,000 (US\$571). Landmark Media Consultancy/Joseph Buule.

Laboratories at Kawanda, which is about 12 Km north of Kampala city and a technical consultant who was hired by AGRA to train the various stakeholders in fertilizer use and fertilizer optimization practices, “the market was dominated by conventional fertilizers like Urea, DAP, TSP and NPK blends that were imported for palm, sugar cane and tea plantations. Whatever was surplus ended up in the agro-input shops thus supplying them to the farmers growing staple food crops. Because the plants extract minerals at different levels and times, the crops need to be supplied the minerals at right quantities and time. So, crop-specific fertilizer blends are a solution to increasing the crops’ performance to a level that would uplift the farmers’ expectation,” he explains. Dr. Kaizzi further notes that a one-year project aimed at developing and promoting use of crop-specific fertilizer blends for beans, maize and rice in 14 districts. “In addition to development of blends, a number of stakeholders like extension agents, agro-input dealers and farmers were equipped with knowledge in good agronomic practices, fertilizer use practices as well as post-harvesting handling practices,” adds Dr. Kaizzi.

Close to 350 KM west of Kampala City is Nyamunuka town council in Ntungamo district,

which is one of the beneficiary districts for a US\$130,000 grant AGRA invested in GPL in 2018. Kezron Turyahikayo is an agro-input dealer and owns a well-established input-shop in the centre of the town, the shop he has operated for nearly two decades. According to Kezron, he started a small shop selling general merchandise goods in the 1980s when Nyamunuka was still a small trading centre. But, as settlement increased consequently increasing the population, the demand for agricultural inputs increased. “During the early 2020s, I realised a growing need for agro-inputs due to the growing number of people engaging in crop agriculture. So, I started selling seeds, fertilizers, pesticides, herbicides and equipment needed in the farming communities,” he explains.

Even though Kezron’s interest in agribusiness had grown as the demand for inputs increased, his knowledgeable in agriculture and use of the related inputs like chemicals was still wanting. The input distribution channels in the area was weak as well. Over time, him and his clients were constrained by sourcing the inputs from the nearby township located as far as 80 KM in the current Mbarara city. However, through his friend, he was introduced to Uganda National Agro-dealer’s Association. “I was nominated for

a training workshop. Thereafter, I established a well-organised agro-input shop in 2005. But marketing the various inputs was a challenge as farmers were accustomed to using recycled seed as well as having a low motivation to use crop fertilizers. They were not aware of the innovations that would uplift crop performance yields to satisfactory yields simply because there was a knowledge niche in use of agro-inputs such as improved seed, fertilizers, pesticides and other chemicals, he narrates.

The year 2018 became a turning point for Kezron and the farmers in Nyamunuka area at large. "With support from AGRA, I was nominated for another training by the Uganda National Agro-dealer's Association. Dr. Kaizzi and agronomists from GPL were brought aboard to teach us. Together with other traders from western Uganda, we were trained in various aspects that included agribusiness skills as well as fertilizer trade and use. Dr. Kaizzi encouraged us to adopt to modern farming technologies like use of crop-specific fertilizers. I learnt a lot of things from him, for example, the agricultural economics of managing an agro-input shop and farming. I also obtained several contacts from agro-dealers and prominent farmers within in the

region. At the end of the training I was awarded a certificate of operation," as said by Kezron.<sup>4</sup>

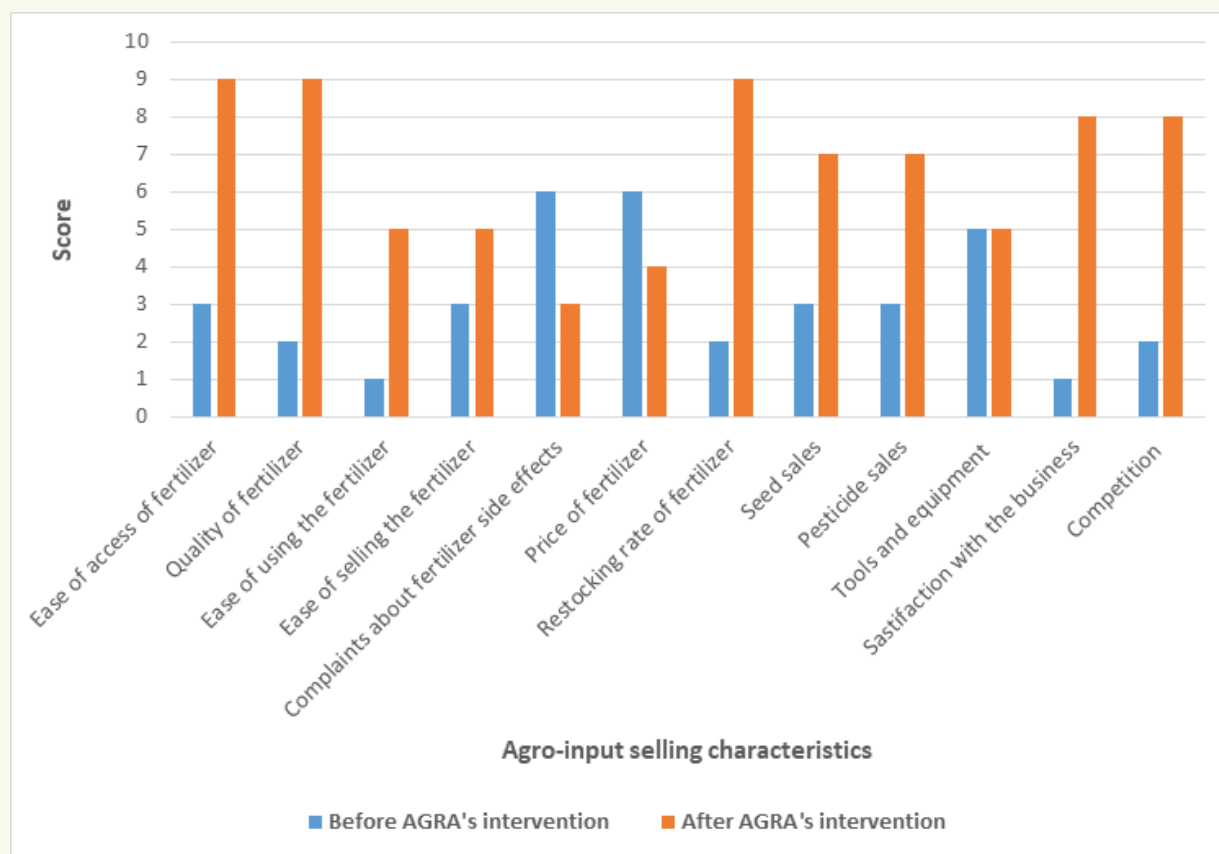
The relationship between Kezron and the AGRA consultant did not stop at the training workshop as Dr, Kaizzi extended the training to the Nyamunuka farming community. "Although farmers had a lot of challenges, the consultant helped to solve many. Because farmers were using the conventional fertilizers, DAP and NPK (17:17:17), they were informed that the mineral concentrations such as nitrogen in such fertilizers were not meant for the staple crops. To show that the beans and maize required unique fertilizer blends, a demonstration garden was set-up. The new fertilizer blends were tested against the conventional types," says Kezron. He adds that the farmers appreciated the results. "The yield from the plots where the blends were applied was superior," he notes.

Not only that Kezron became more confident in advising his clients at the shop, but also the sales at the shop increased. "I started encouraging my clients to adopt to the innovation. In so doing, I promoted the fertilizer blends. Because I was connected to GPL, it was easy to satisfy the increasing demand of the blends as the fertilizers were



Janet Kembambazi, a 45 year-old a member of Nyamunuka II Farmers Association, one of the beneficiary groups that participated in the establishment of the demonstration attending to her bean plantation for which she applies Grainpulse fertilizers. Landmark Media Consultancy/Joseph Buule.

**Figure 2: Achievements in Agro-input business as a result of AGRA's support**



easily delivered. This was unique because it was a different scenario before. The previous suppliers were less accessible and inconsistent in supplying the inputs,” he says. According to him, prior to the training, farmers used to grow beans at subsistence level, however the situation changed. “They started investing in their gardens. They buy the fertilizer along with other inputs like seeds, pesticides as well as farmer tools and equipment like hoes and spray pumps. Per season, the fertilizer sales increased to 180 MT from the 2.0 MT two years ago. Because of the booming business, four other input shops have been established in the township,” he adds.

As summarised in Figure 2, Kezron ascribes much of the successes in his business to AGRA's support. For his future prospects, Kezron aims at expanding the business as well as expanding his coffee plantation. “I am thankful to the support from AGRA. It has increased my capacity to support my family. Of recent, three of my children graduated from

university. I can easily support the others who are still in secondary school. I have been able to establish 12 acres of coffee, from which I expect to obtain good yields because of the coffee fertilizer blend,” he says. Because he a bee keeper, Kezron has been able to expand his apiary from 20 to 80 bee hives. “We have gained knowledge in supplying agro-inputs. My wife and two daughters are operating the shop and they have gained more knowledge to an extent that they can start their independent shops. This makes a proud husband and father. I am currently the chairperson of the district agro-dealers’ association, which became an opportunity to identify and solve farmers’ problems. As agro-dealers, we started a credit facility for which the loan is payed within two months,” he asserts.

To attest to AGRA's investment is Janet Kembambazi, a 45 year-old a member of Nyamunuka II Farmers Association, one of the beneficiary groups that participated in the establishment of the demonstration. The

group has a total of 35 farmers (16 females) who mainly grow beans and maize. “I started farming more than 20 years ago but the fields were not productive. When GPL came in 2018, we were invited by Kezron for a training. We were trained in several aspects like, use fertilizer, their dosage and safe use of the chemicals. In addition, we learnt use of high yielding seed varieties, how to prepare gardens early to catch the early rains, proper harvesting and post-harvesting practices as well as farm budgeting. Thereafter, we participated in the establishment of the bean and maize demonstration gardens. For each crop, the gardens were split in to three plots. Whereas the first plot had no fertilizer applied, DAP fertilizer and Grainpulse fertilizers were applied in the second and third plots, respectively. The performance was way better in plots fertilized by the specific fertilizers. Then, we were given 2.5 of maize seeds and 10 of fertilizer to try the innovations at home. I harvested 377kg (1.5MT/acre) of maize from a 0.25 acres,” she notes.

After learning the new technology, Janet applied the knowledge in subsequent seasons. “I grew beans in the following seasons using the bean fertilizer blends. I was surprised by the high yields as I harvested on average 0.95 MT (1.9MT/acre) of pulses from half an acre, which was much higher than what I used to get. Prior to the innovation, I used to get 0.05 – 0.2 MT

(0.1 – 0.4MT/acre),” she explains. With vast experience in use of fertilizer blends, Janet decided to disseminate the good news to the neighbourhoods. “I trained fellow farmers in the group plus the neighbours. Because of using the specific fertilizers, the farming community is happy with the harvests. In fact, it is impossible to locate vacant land in the area. Farmers have started to hire farming land in the nearby villages,” she states.

Janet is so grateful for the investment. “I thank GPL for the fertilizer and training. Ever since their existence, I have grown healthy as I put on more weight. I also grow more food and there no more starvation in the family. As well, there are no more conflicts at home because I rarely demand necessities from my husband because I can solve part of the financial constraints at home,” she notes. In a special way, Janet appreciates the agro-input dealer who introduced them to the innovation. “I have been able to save money to buy other food items like rice and beef to diversify the diet. I can easily pay school and medical fees for the children. I also bought 6 goats from the accrued savings worth UGX: 600,000 (US\$171),” she adds.

Just about 3 KM from Janet’s farm is Ibrahim Karyarugokwe, aged 60 years. As a beneficiary farmer, Ibrahim notes that he first associated with GPL in 2018 through an agro-dealer.



Janet planting beans in the prepared field. She hopes to continue using bean specific fertilizers to multiply her success in farming. Landmark Media Consultancy/Joseph Buule.



One of the daughters to Janet preparing a bean garden. She is in senior three. Her mother is able to pay the school dues because of the increased yield after adopting to the innovation. Landmark Media Consultancy/Joseph Buule.

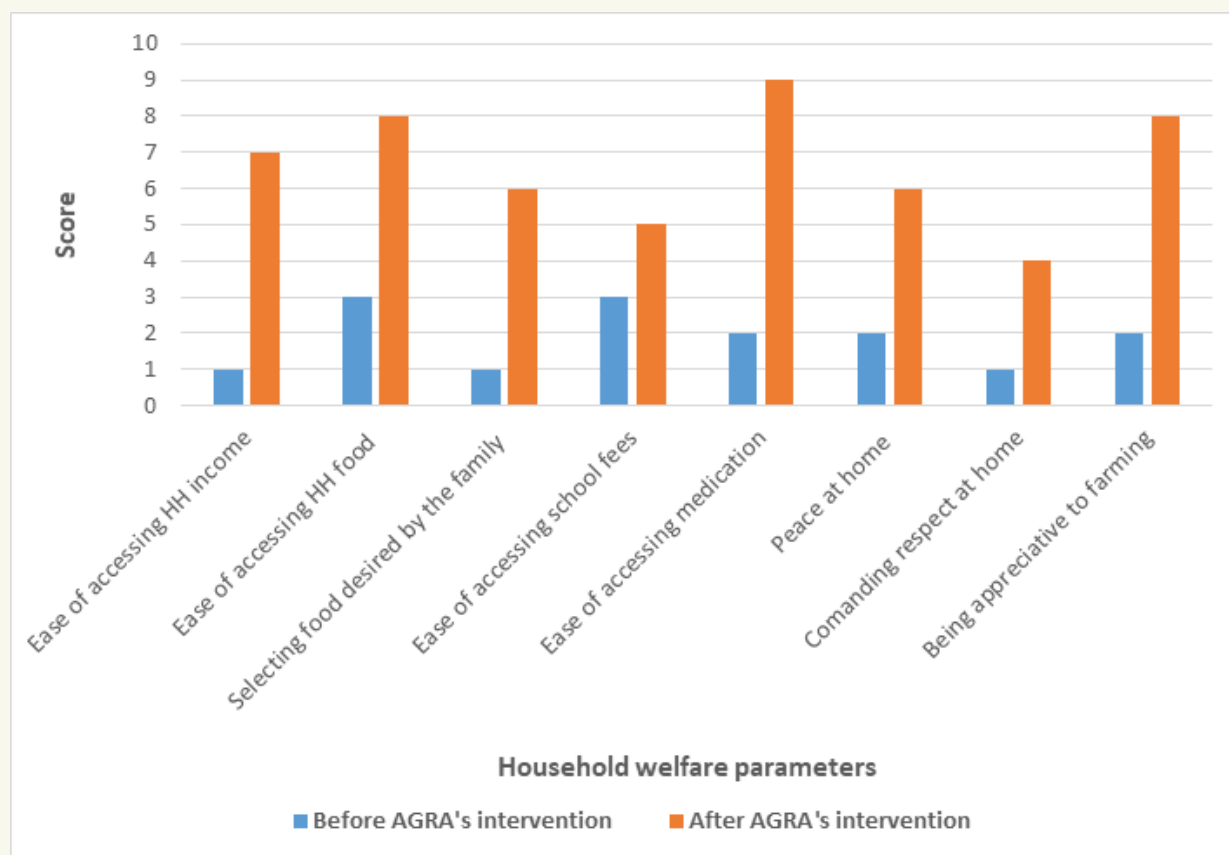


Ibrahim, one of the beneficiary farmers. He has improved his livelihood as a result of the training. Landmark Media Consultancy/Joseph Buule.

“Kezron invited us for a training at his shop. We were taught various aspects such as line planting to ease other agronomic practices like weeding, planting, fertilizer application, seeding rate, post harvesting practices like drying beans and maize on tumplines as this would increase the quality. We were also advised to store the

bagged crops on wooden pallets to keep away moisture,” he clarifies. After the training, Ibrahim and other trainees were given free inputs that included improved bean seed varieties and bean fertilizer blends. He asserts that the training was so helpful at increasing yields at his farm.

**Figure 3: Achievements as a result of adopting to use of crop-specific fertilizers**



As shown in Figure 3, Ibrahim gives a score of the several achievements obtained as a result of adopting to use of the fertilizer blends. For example, “the expenses on school fees, medical bills and food are no longer challenging than before. I have been able to venture in broiler

production, rearing 200 chickens per batch. From the current batch, I expect to sell each bird at UGX 10,000 (US\$2.9). I have bought good bedding for myself and the family. Although I am an elderly man, I feed, drink and sleep well. This is because of the support from AGRA,” he says.