



Access and Use of Agricultural Equipment in Uganda: What are the Hindering Factors?

Overview

The Government of Uganda (GoU), through the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) is aiming at commercializing the agriculture sector by 2020 through agricultural mechanization and modernization at farm level.

A key intervention area is in increasing farmers' access to agricultural equipment such as tractors, bulldozers, graders, combine harvesters, forklifts, agro-processing machinery, farm tools, straw choppers, excavators, bowsers, transformers, among other equipment.

The GoU is promoting the use of cost-effective farm equipment to improve farmers' mindsets and farming methods to enhance production and productivity at farm level. The Government has over the last 15 years procured and distributed various equipment to farmers to meet the sector objectives. However, despite the deliberate efforts for agricultural mechanization, a number of factors hinder access and use of the equipment by farmers in Uganda.

This policy brief highlights findings on access and use of agricultural equipment delivered to farmers by Government from FY2010/11 to FY2016/17 and the key constraining factors, using a sample of the nine selected projects.

The analysis is based on field findings collected by the Budget Monitoring and Accountability Unit (BMAU).

Key Issues

- Poor access to information by farmers on the availability of equipment.
- Inadequate complementary infrastructure for using agricultural equipment.
- Delayed initiation of procurement processes.
- Inadequacy and inappropriateness of some supplied equipment.

Introduction

Agricultural production is mainly dominated by smallholder farmers engaged in food and cash crops, horticulture, fishing and livestock farming (*National Development Plan II*). Most farmers in Uganda use rudimentary tools in farming. For instance, out of the 3.6 million respondents from a study conducted by the Uganda Bureau of Standards (UBOS), 95.8% used hoes (UBOS, 2010).

Farmers that are categorized as subsistence are estimated to deliver between 75–80% of the total agricultural output and marketed agricultural produce. Smallholder enterprises, commercial farmers and estate operators are about 15%, 3% and 0.5% of the farming community in Uganda, respectively.

Distributed Equipment

Table 1 shows some of the agricultural equipment that was delivered to farmers by MAAIF and agencies over the past six financial years under nine selected programmes/projects.



Table 1: Agricultural Equipment Provided from FY2010/11-FY2016/17 mid-year

Project /Programme	Agricultural Equipment	Beneficiaries and their location
Labour Saving Technology and Mechanization for Agriculture Productivity and Enhancement	Excavators, bulldozers, water bowsers, wheel loaders, graders, compactors, dump trucks, tractors, vibrating rollers, and dump trucks.	The equipment was received by traders and cattle keepers; 162 were in central region, 2 in eastern, 1 in northern and 78 from the western region.
Agriculture/Improved Rice Production (NERICA Project)	Farm tools and post-harvest equipment (hoes, pangas, shovels, ox-ploughs, sickles, jab planters, rice threshers, chisel, weighing scales, spades, rice mills, and wheelbarrows.	A total of 72 farmer groups comprising of 2,160 farmers benefited in the districts of Gulu, Kitgum, Lamwo, Pader, Lira, Oyam, Amorator and Dokolo.
Agricultural Credit Facility (ACF)	Agro-processing machinery (wheat, tea, rice, maize, milk, cotton) tractors, ploughs, boom sprayers, planters, rakes, and farm tools.	The beneficiaries were mainly farmers' engaged in agricultural mechanization and value addition; 138 were in the central region, 23 in the north, 25 in eastern and 59 from western region.
Uganda China South to South	Tractors, combined harvesters, feed mixer, forage cutter, forklifts, agro-machinery, and straw choppers.	A feed mixer and forage cutter were set up and three demonstration sites on good agronomic practices established in Mbarara Hub in FY2016/17.
Uganda Cotton Development Organization (UCDO)	Tractor hire service, ox-ploughs and spray pumps, motorized sprayers.	A total of 933 ox-ploughs were distributed to 933 cotton farmers and 5,435 acres of land were opened up using tractors in five cotton growing regions in FY2015/16.
National Agricultural Advisory Services/Operation Wealth Creation (NAADS/OWC)	Rice threshers, milk coolers, mobile milking machines, juice processing equipment, tractors, seed drills, maize millings, grinding mills, hullers, hoes, spades, wheelbarrows, and pangas, oxen, ploughs, rakes and motorized knapsack sprayers, and motorized pumps.	In FY2010/11, selected food security farmers and market oriented farmers in selected 114 Local Governments(LGs), benefited from agricultural equipment for value addition and In FY2015/16, 3 maize hullers, 3 maize mills, 1 milk cooler and 12 motorized pumps were distributed to selected individuals and famer groups in selected LGs. In FY2011/12, 20 milk coolers, 25 mobile milking machines and juice processing equipment and in FY2012/13, 15 tractors drawn planters were procured under delegated procurement in selected LGs.
Diary Development Authority (DDA)	Yoghurt making and cup filing machines, processors, chuff cutters, milk cans, processing equipment (mini diary), milk coolers, portable milking machines, and strainers.	In FY2015/16, one unit yoghurt semi-automatic cup filling machine was procured for the dairy training school in Entebbe –Wakiso district. In FY2013/14, various milk handling equipment was distributed to selected cooperatives and associations for quality assurance including 700 stainless buckets, 700 strainers and scoops and 10 portable milking machines in the cattle corridor.
Commercialization of Agriculture in Northern Uganda Project	Walking tractors, power tillers, ripper planters, digital weighing scales, moisture meters, rice threshers and rice harvesters.	In FY2015/16, 6 power tillers, 50 ripper planters, 10 pieces of digital weighing scale, 10 pieces of moisture mature and 12 motorized rice thrashers were distributed to selected farmer organizations in Acholi and Lango sub-regions.
Uganda Coffee Development Authority (UCDA)	Water tanks, saw blades, pangas, slashers, secateurs, equipment for control of BCTB, drying trays, motorized sprayer kits and chain saws, motorised pumps.	In FY2015/16, 12 sets of protective equipment and 30 motorized pumps were procured and distributed to selected farmers in selected coffee growing regions.

Source: BMAU Reports FY2010/11-FY2016/17



Access and Use of Agricultural Equipment

Farmers accessed agricultural equipment through different programmes/projects, which are funded by GoU, donors or on credit. The equipment was distributed to farmers either free of charge or at subsidized prices. For projects like ACF, Labour Saving technology and UCDO, farmers were given/bought or hired agricultural equipment at a subsidized price compared to the market rate.

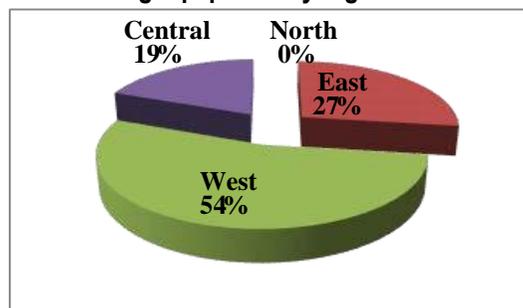
The equipment accessed by the farmers were mainly used for opening up land for bumper production, clearing thickets to allow green pasture growth, opening up new roads to access the markets, di-silting/excavating valley dams/tanks for water harvesting irrigation and preparation for dry spell, spraying, drying, value addition and planting. The provision of this equipment has helped farmers to increase production, reduce the costs of production through modern production methods, increase market access, control pests and diseases, harvest good quality agricultural products, and timely implementation of planned activities resulting into increased output.

Despite the provision of equipment to boost agricultural production, a number of factors have hindered the effective access and use of equipment in agricultural production.

Key Factors Hindering Access and Use of Agricultural Equipment

1. Poor access to information about the availability of the equipment: Some farmers in remote areas have minimal or no access to information about the MAAIF projects that provide agricultural equipment. For instance, in FY 2014/15, there were no beneficiaries of the MAAIF heavy earthmoving equipment under the Labour Saving and Mechanization Project in the northern region (Figure 1). This was mainly attributed to low sensitization and awareness of the project in the region.

Figure 1: Proportion of farmers who accessed MAAIF earthmoving equipment by region in FY2014/15



Source: BoU Financial Data

2. Inadequate complementary infrastructure for using agricultural equipment: This includes housing structure for machinery, industrial power lines, and road networks among others. For instance, in FY 2012/13 Global Traders Limited located in Pece Pawel Village in Gulu Municipality and dealing in commercial production of maize, soya bean, rice and sunflower, through the Agricultural Credit Facility (ACF) loan acquired oil processing machinery that could crush 15 tonnes of oil seeds per day. By 10th July 2015, the machine had not been installed due to lack of appropriate housing structure for it. Additionally, the existing transformer did not have adequate capacity to operationalize the equipment and the proprietor had applied for a power line and 200kVA transformer from Umeme and Rural Electrification Agency in May 2014 which had not been availed a year later.

3. Delayed initiation of procurement process: Late release of funds has led to delayed procurement of agricultural equipment. For example, the MAAIF commenced the process for purchasing 20 tractors in FY2012/13 to be distributed to farmer groups. However, the procurement process was not concluded and was rolled over to FY 2013/14. By 30th June 2014, the tractors had not been purchased.

4. Inadequacy and inappropriateness of some supplied equipment: In 2011 in Abuge village Dokolo Sub-County, Dokolo District, Alenga Rice Growers under



the New Rice for Africa (NERICA) Project abandoned the entire enterprise because of inappropriate equipment supplied by MAAIF, among other factors. Furthermore BMAU found evidence of silos, jab planters and line markers having not been used by the farmers as they were considered inappropriate for the farming terrain. Similarly, Iguli United Farmers Group located in Uguli Village, Amwoma Sub-County in Koboko district was given inadequate equipment by MAAIF/Food and Agricultural Organisation. It was not possible to share among the many farmers, the few oxen for opening land, and there was need to further share the equipment when the district split.

5. Absence of some spare parts: Some agricultural equipment, mainly procured on behalf of farmers under ACF and NAADS had no spare parts in some parts of the country. In FY2010/11, the best farmer, who supplied cassava cuttings to the whole village in Dokolo Sub-County and district, received a donation of a grinding mill and a huller from NAADS Secretariat. The mill however broke down in March 2011 and could not be repaired due to lack of spare parts. The mill has since been abandoned.



Abandoned grinding mill in Apaala Village, Dokolo district

6. High poverty levels: This was attributed to low income status due to relatively fewer income generating activities. The BMAU established that by 31st December, 2016, out of the 21 districts that benefited from the Improving Access and Use of Agricultural Equipment Project, access was low in Northern (4%) and Eastern regions (9%) as the farmers could not afford the cost of leasing and fuelling the machines as a measure to improve production due to poverty.

Conclusion

The government has supplied equipment to farmers through projects such as NAADS, ACF, Labour Saving and Mechanization, and NERICA among others. Although the equipment such as farm tools and post-harvest equipment has been accessed and used with ease, farmers have encountered some challenges in its access and use due to, constant breakdown yet some spare part are not locally available, inadequate complimentary infrastructure and poor access to information. These, if not addressed shall hinder improvement in agriculture production and productivity.

Recommendations

- The MAAIF should scale up the awareness campaign in LGs about the availability of the equipment and the implementation guidelines.
- The MAAIF should put in place sustainability plans to provide appropriate infrastructure for equipment assembling and storage to farmers.
- The MAAIF should ensure timely initiation and execution of the procurement processes and delivery of equipment to farmers.
- The MAAIF should revise the implementation guidelines to provide affirmative action to poor farmers/communities in accessing the equipment.

References

- BMAU Monitoring Reports FY 2010/2011 – FY 2016/2017.
- Second National Development Plan (NDP II) 2015/16-2019/20 National Planning Authority.
- Background to the Budget for Various Years
- Agriculture Sector Strategic Plan (2015/16-2019/20)

Budget Monitoring and Accountability Unit (BMAU)
Ministry of Finance, Planning and Economic
Development (MFPED)
P.O Box 8147, Kampala
www.finance.go.ug