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OIL PALM

AGRO-INDUSTRIALISATION

The role of Public Private Producer Partnerships in fostering Agricultural value chains in Uganda: The case of Oil palm

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Executive summary

Attempts have been made by government to boost vegetable oil production in Uganda. Notable among these is the Public, Private, and Producer Partnerships (PPPPs) in oil palm production. PPPPs have enhanced increased collaboration between stakeholders' involved, improved access to finance, extension, pre-determined prices, and ready market for fresh fruit oil palm bunches. However, challenges such as limited access to land, weak linkages between private players and research and development, inadequate extension have emerged which could affect the effectiveness of the targeted oil palm programme. In order to ensure the sustainable manufacture of palm oil, there is need to identify land owners with large tracts of land that are willing to enter into partnerships with private players, strengthen research and development, and build capacity of extension workers within the mainstream extension service to ensure timely delivery of services.

Introduction

In an attempt to increase Uganda's production of vegetable oil to meet domestic demand, the oil palm project was initiated in 2003 under a Public Private Producer Partnership (PPPP) arrangement between the government of Uganda (public), Oil Palm Uganda Limited-OPUL (private) and producers. Public support is channeled through Vegetable Oil Development Project (VODP) with funding from the International Fund for Agricultural Development (IFAD). It is implemented through a value chain approach, addressing the challenges encountered by different players along the value chain, with clear roles and responsibilities for all the partners involved. This case study provides key insights into the role of PPPPs in fostering agricultural value chains using the example of oil palm. In addition, it examines the suitability of the proposed agro-manufacturer led model by the Economic Policy Research Centre (EPRC) through a report titled—*Fostering a sustainable Agro-Industrialisation Agenda in Uganda.*



Fresh fruit bunches being ferried from the field

Collaboration between multiple stakeholders

Under PPPP arrangement, each of the partners has distinct roles to play to ensure sustainable production of oil palm (Figure 1);

(i) **OPUL** is a consortium of five organisations ie. Archer Daniels Midland (ADM), Josovina (commodities of Singapore), Wilmar (group of Malaysia), BIDCO and GoU. OPUL is responsible for: management of nucleus plantations; provision of an unconditional market to Oil palm smallholder famers; provision of quality seedlings, fertilisers and tools to smallholder farmers; and production of crude oil that is sold to BIDCO for refinery.

(ii) **The government** is responsible for: provision of financial support to smallholder farmers; provision of land to OPUL; construction of farm roads; negotiation of appropriate pricing mechanism, technical advisory and capacity building services. To ensure effective credit management and close supervision, the government formed Kalangala Oil Palm growers trust (KOPGT) as an intermediary institution between Government, OPUL, and smallholder famers.

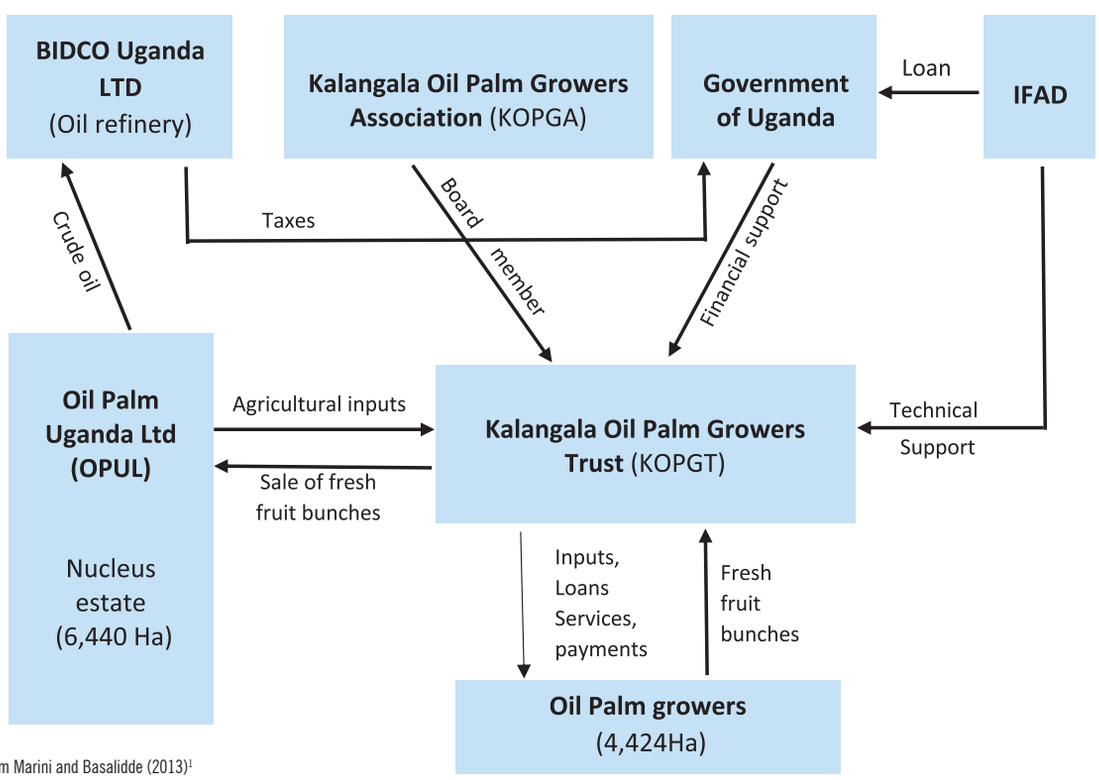
(iii) **KOPGT** on behalf of government administers the IFAD loan and facilitates oil palm farmers to start and sustain oil palm production. Its key roles are: provision of loans to farmers; supply and delivery of all the agro-inputs including seedlings needed by the palm oil growers; transportation of fresh fruit bunch collected from the farmers to the OPUL mill for oil extraction; provision of on-farm technical support.

(iv) **Smallholder farmers** are organized under Kalangala Oil Plam growers Association (KOPGA). KOPGA members are organized in 23 different production "units". Each unit is comprised of about 100 farmers. Four units form a production "block". There are currently 7 blocks. KOPGA is responsible for mobilization of members; organizing collective activities, supervising the loan payments, and disseminating information.

Integrated production system for sustainable oil palm production

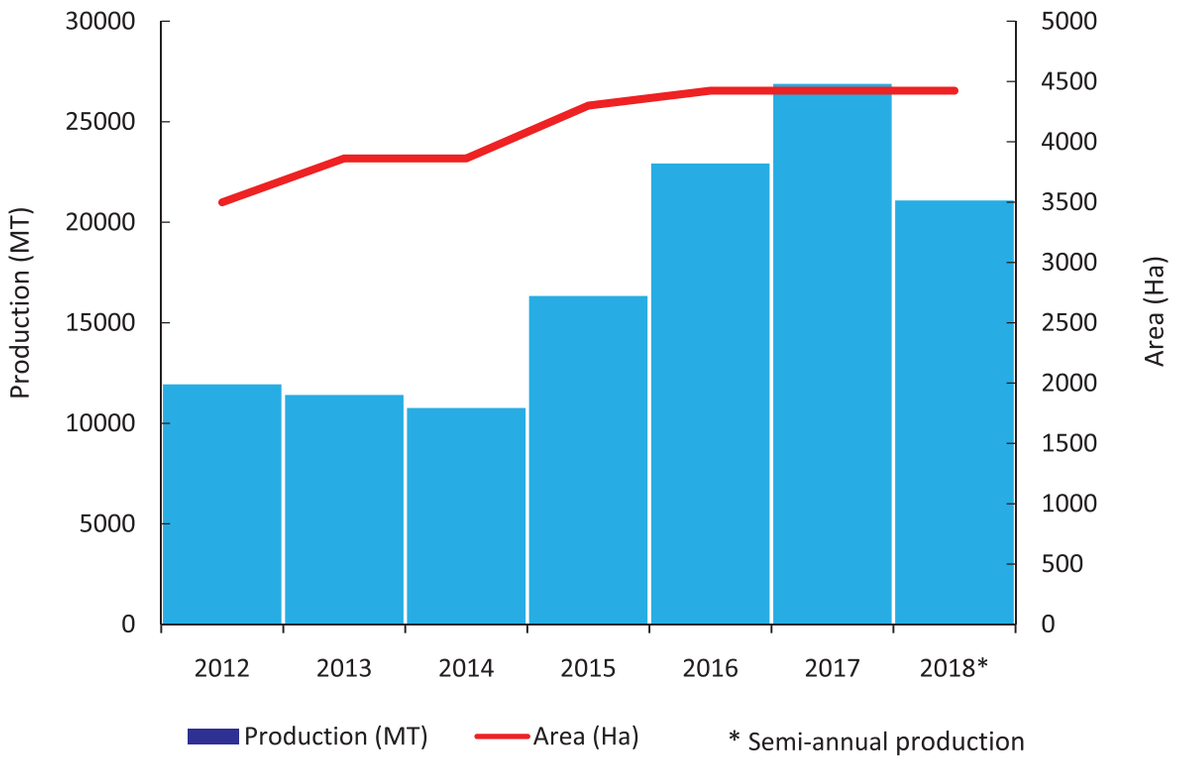
Three integrated forms of oil palm production are undertaken to ensure sustainable supply of fresh oil palm fruits to the milling plants. First, there is a nucleus estate where OPUL

Figure 1: Institutional set up and roles of partners



Source: Adapted from Marini and Basalidde (2013)[1]

Figure 2: Progress in oil palm production under the smallholder out-growers scheme (2012-2018)



Source: KOPGT, 2018

operates over 6,440 Ha (including nurseries, demonstrations and farms). Second is the out-grower model- with over 1,810 smallholder farmers operating a total of 4,424 Ha. Figure 2 shows increasing trends in hectares planted with oil palm by out-grower farmers in Kalangala between 2010 and April 2018. The total area planted has also increased from the 3,498 hectares in 2012 to 4,424 hectares in 2018. Finally, there is also use of spontaneous arrangement where farmers from the districts of Mayuge, Rakai, Masaka and Mukono transport oil palm fruits to processing plants in Kalangala.

Lessons from the oil palm project for fostering commodity value chains

a) Pre-financing for plantation set up

Agricultural production has been perceived by financial service providers as a risky undertaking prone to weather vagaries, and therefore less likely to be financed. However, under the oil palm project, farmers are pre-financed (land opening, seedlings, and fertilizers) to start plantations for the first four years before harvesting. When harvesting begins, the loans (issued at 10 percent annual interest) are recovered through deductions made by KOPGT from OPUL payments to farmers. Repayment periods vary between 8 and 10 years, depending on soil type and level of maintenance (which determine yields). This helps farmers to access critical inputs required for production. Over the years, about UGX 52 Billion have been disbursed by government to KOPGT for farmer loans and about 15.3 Billion had been recovered as of May 2018.[1]

b) Oil palm tailored agricultural extension services

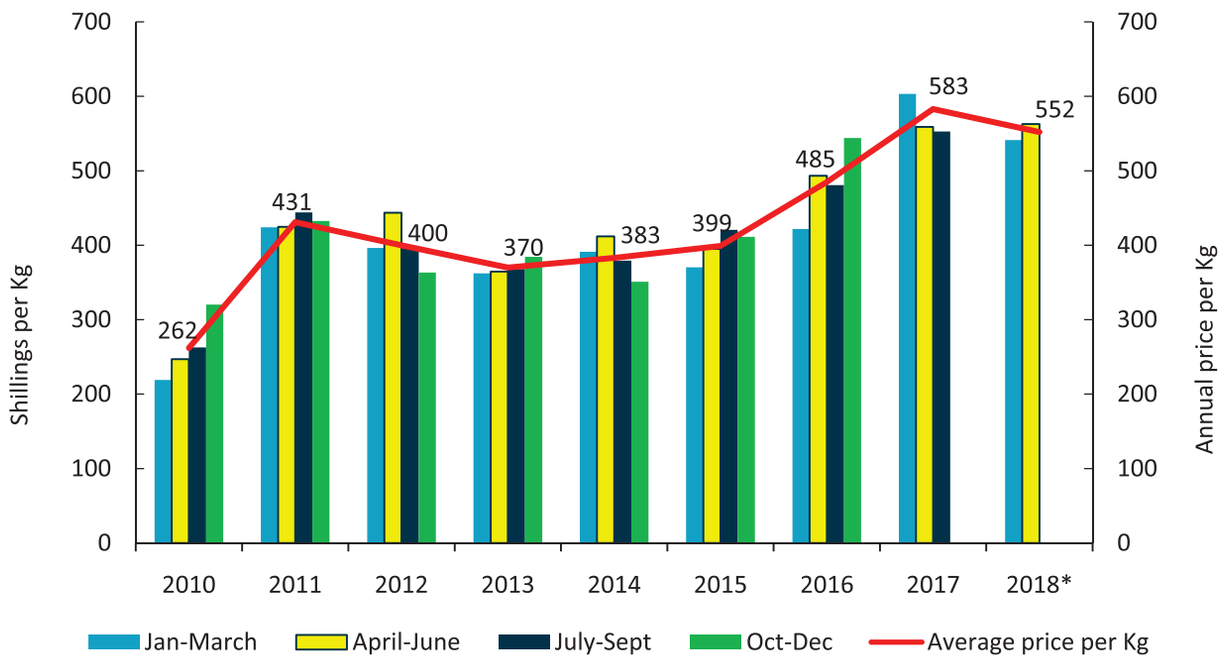
Farmers need on-farm technical support, guidance, and supervision and extension services (to train farmers on better agronomic practices such as land preparation, planting, maintenance) in order to maximize yields. To this effect, one extension agent per block is mandated to offer oil palm tailored extension services to farmers. The extension agents conduct soil analysis before recommending which type of fertilizer to be applied. It is upon this that OPUL orders for blended fertilisers that suite farmers farms.

c) Pre-determined prices for fresh fruit oil palm bunches

The prices that farmers receive for fresh fruit bunches are determined by the pricing committee (composed of

1 Key informant interview with KOPGT.

Figure 3: Trends in price for fresh fruit oil palm bunches (2010-2018)



Source: Pricing committee reports

representatives from KOPGT, OPUL, MAAIF and VODP) on a monthly basis. The committee uses a pre-determined transparent formula that attaches the price paid to smallholders to crude palm oil value on the world market.[2] This implies that the Fresh Fruit Bunch (FFB) prices change on a monthly basis based on the prevailing world market prices for palm oil. Key impact of this has been increasing trends in prices received by farmers over time (Figure 3). Year 2017 had the highest average price (UGX 583) per kg of FFB while Year 2010 had the lowest average price (UGX 262) per kg of FFB.

d) Ready market for produce

In an environment of oil prices, farmers would face a risk of failing to market produce. For the processing factories, they would face risks of side selling due to the presence of other markets for farmers to sell in. However under the PPPP arrangement, OPUL committed to buy all farmers FFBs at pre-established price. To this effect, FFBs are ferried by KOPGT trucks from the farms to the oil palm mills which are located on the nucleus farms in Kalangala. Since 2010, a total of 121,329 MT of FFB has been harvested by 1810 farmers, worth UGX 58 Billion shillings.[3]



KOPGT truck transporting fresh fruit bunches to processing mill

2 FFB Monthly Price = (H/J) * K where H is Price of crude palm oil ex-mill; K is Oil extraction rate per ton; J is Constant of 1.2.

3 KOPGT FFB inbound reports and Pricing chart.

e) Processing mills for value addition

It is important to note that under the PPPP arrangement, there are no small-scale or cottage industries processing (refining) oil palm. Therefore, the value addition process in Uganda starts with the oil mills that extract the crude oil from the FFBs, which crude oil feeds into the BIDCO Uganda Limited refinery at Jinja (the refinery also utilizes imported crude). OPUL operates two mills on Bugala Island for crashing oil palm into crude oil and other products. After extraction, two products are produced: (1) crude oil which is sold to BIDCO in Jinja for refinery; and (2) kernel nuts, which are dried and sold to BIDCO in Jinja; and empty bunches are used as fertilizers. From the fibre, OPUL generates electricity which is used by the processing mills. Therefore, at OPUL the product space for oil palm is: crude oil, and kernel nuts; mulches that is used to fertilise plantations; and fibre which is used for power generation. However, oil palm production in Kalangala has had limited impact on oil refinery in Jinja. Kalangala's one month production is used in three days by BIDCO.[4]

Challenges of PPPPs, the case of oil palm commodity

While PPPPs have provided numerous support services to foster oil palm value chain, there are a number of challenges that may slow down the programme:

a) Limited supply of land for oil palm growing

According to the contractual agreement, the Government of Uganda is responsible for providing 40,000 ha of land to OPUL and out growers. However, only 10,000 ha have been raised leaving a land deficit of 30,000 ha. This has presented a challenge of limited production and hence under capacity utilization of the two mills in Kalangala. That is why BIDCO still imports over 80 percent of the needed crude oil from Malaysia, Indonesia and Singapore; because the locally generated crude cannot meet BIDCO refinery demands.

b) Weak linkages between OPUL, research and development

Critical research and development is inefficient due to very weak linkages between OPUL and NARO. For example NARO has not managed to generate pre-germinated seedlings to be raised in nurseries for distribution. These are still being imported from Malaysia and Indonesia. In addition, foliar analysis is still being done outside Uganda (Malaysia and Indonesia) despite the presence of National Agricultural Research Laboratories (NARL) at Kawanda. The foresaid processes are quite expensive in a sector-agriculture that is resource constrained.

c) Inadequate extension provision to support oil palm production

There is inadequate extension as evidenced by fact that 1 extension worker is mandated to offer services to one block of over 500-700 farmers. Yet, on average each farmer has over 7 acres of oil palm. Partly due to limited access to extension services, OPUL nucleus oil palm plantation looked better (more green, bigger bunches, and weed free) compared to those owned by smallholder farmers.

d) Limited access to required inputs

Oil palms take about 4 years before the first harvest. This period requires continuous field maintenance which includes weed and disease management, and application of fertilizers. To this effect, KOPGT conducts soil analysis before recommending which type of fertilizer to be applied. It is upon this that OPUL orders for blended fertilisers that suite farmers farms. However, it is not readily available as "farmers get it late". When fertiliser application is delayed, it impacts on yield are severe given that oil palm is a very sensitive crop. This could partly explain the observed yield gap of 7.42 tons per Ha and 12.78 tons per Ha on smallholder and nucleus farms respectively.[2]

Emerging issues for policy consideration

It is envisaged that at least fourteen districts in Uganda will introduce oil palm growing in addition to existing districts during the roll out of oil palm programme. In order to achieve the intended programme goals, it's pertinent that;

a) Additional land for both nucleus estate and integration of smallholders targeting large-scale production in Buvuma and other potential new districts should be identified to achieve the targeted 40,000 Ha. This can be done by sensitizing farmers about oil palm and identifying owners of large tracts of land that are willing to enter into partnerships with private players such as OPUL.

b) Strengthen research and technological innovation in: a) breeding resistant varieties suitable for Uganda conditions; b) pests and diseases surveillances given the mono-cropping nature of oil palm plantation practices; c) improved agronomic practices based on optimal use of fertilisers (types and quantities, soil mapping).

4 Key informant interview with general manger, OPUL.

c) Increase the number of extension workers within the mainstream extension service delivery system to ensure timely delivery of services. For the agricultural officers to be able to deliver to their mandate, they will need to be trained in oil palm agronomy and commercial plantation development.

d) Support towards ensuring that the required inputs are available on time to boost uptake in the identified potential areas.

End notes

1 Marini, A and Basalidde, N. 2013. Public-private-producers partnerships for efficient and inclusive value-chain investment: The case of oil-palm in Uganda. FAO-TCI Investment Days, 17-18 December 2013.

2 Republic of Uganda (2016). Vegetable Oil Development Project – Phase 2 (VODP2), Supervision report-Mission dates: 9-20 May 2016.

Oil palm

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Economic Policy Research Centre

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