



# Enabling social capital formation

## Upscaling bulking arrangements in the Ugandan oilseed sector

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# 1 Abstract

Uganda has many small producers that can benefit from the expanding sunflower production. Collecting scattered produce in remote areas is expensive. For efficient transport and processing, these small quantities have to be bulked in one place. In Uganda, three types of bulking arrangements exist: trader-led, processor-led and farmer-led. In each type, targeted investment policies and innovative financial institutions can increase the performance of the arrangements. Combining support for storage infrastructure with increased access to trade finance and strengthened governance structures will provide the room for upscaling thereby linking large numbers of poor households to growing markets. These interventions need target to groups that managed to build a minimum capacity in resolving problems around collective action and opportunistic behaviour. Previous experience with saving and credit schemes prove to form the basis for most of the successful bulking groups.

# 2 Introduction

The sunflower sector is a rapidly growing agricultural sector in Uganda. Most of the sunflower is produced by smallholders that live in the former war zone in the north. Oilseeds have become a prime cash crop and is instrumental for poverty reduction. It is estimated that 145,000ha are planted annually.<sup>i</sup> There are ample growth possibilities for oilseed production in Uganda, as most of the vegetable oil is still made from imported palm oil. Sunflower producers are concentrated around the city of Lira. Smallholders in more remote areas can benefit from the growth potential when they have access to seeds and output markets.

To maximise the opportunities for a remunerative inclusion, these new entrants must be attractive enough for traders and processors to source their products. Only sporadically, individual farmers sell directly to the processor. Sourcing from places and persons that have accumulated oilseeds under some sort of bulking arrangement is required, as a steady flow of oil seed is needed for processors to use their plants cost-efficiently.

In bulking arrangements, several transactions take place. All transactions imply a negotiation between buyer and seller on the terms of trade. Disagreements about measures, quality and price at the moment of exchanging goods are possible in each of these transactions. To avoid or resolve disagreement and conflict, a bulking arrangement needs a governance structure.<sup>iii</sup> Trust is necessary for cost-efficient trade.

In this research we explored the logistic functions and trust building mechanisms that characterise the different oilseeds bulking arrangements in Uganda.<sup>iv</sup>

*How are the bulking arrangements organised, and what are entrance points for support policies enabling the upscaling of these arrangements?*

First, we describe the three typical bulking arrangements that exist in the Uganda sunflower sector and indicate the key functions and trust building mechanisms that sustain their operation. Second, we indicate the key bottle-necks that constrain upscaling and possible entrance points to resolve them. In the conclusion, we stress the importance of considering bulking nodes as form of social capital in the value chain and as leverage point for public policy.

### **3 The national oilseed sub-sector platform OSSUP**

Since 2005, the Ugandan oilseed sector established a coordination platform, called OSSUP (OilSeed Subsector Platform) with representatives of oil processing companies, farmers organisations, research institutes, government programmes, financial institutions and development organisations. OSSUP headed an action-research pilot in the DGIS-Wageningen UR 'Value Chain Development for Pro-Poor Development', financed by DGIS and executed by Wageningen UR.

Between the different companies and farmer organisations in OSSUP there existed important differences in opinion on what would be the most effective policy to increase the efficiency and equity in the oil seed value chain. We wanted to add to a common strategy towards government and donors by conducting action-research. To do so, the research highlighted the common elements of these apparently different bulking arrangements, especially their need to balance the logistic activities of bulking with trust and compliance between transacting partners. The research was a major input for the discussion on bulking and financial services during the OSSUP strategic conference 10 September 2009 in Kampala, financed by SCAPEMA. Results have been incorporated in the action plan for a new phase of the IFAD-supported Vegetable Oil Development Project.

### **4 Bulking arrangements in oilseeds**

There is a range of different bulking arrangements in the Uganda oilseed sector. Traditionally, farm products are collected and bulked by fellow farmers and middle-men in the village. There are also alternative bulking arrangements, both as farmer-led initiatives of collective marketing, and as part of processor-led arrangements, like contract farming. We will describe these three types of arrangements and focus on their need for logistic infrastructure, working capital and effective governance and trust.

#### **4.1 Trader-led bulking arrangements**

##### *Bulking and storage infrastructure*

Typically, within rural societies, the key agent that realises bulking of scattered produce from individual smallholders is the village-based farmer-trader who works as an agent for an urban based merchant or processor. Often the chain is rather long with many sub-agents. The logistics of storage is individual responsibility of each person in this chain of intermediation. The village-based agent uses his house, often in the village trading centre, to store. Some village-based traders hire an additional place when bulking volumes that exceed the physical capacity of their house. Generally they manage to hire within the same trading centre from fellow middle-men. The traders interviewed in Lira use to hire a store on the Grain Street and use it for the products they want to sell immediately.

##### *Trust in the trader-agent network*

The trader's biggest asset is the network of agents he or she can mobilise in the villages. Some agents are travelling agents who visit a certain area, other agents are based in the trading centre. In these arrangement, the trader or processor provides working capital and a market outlets to the agents. This commercial relation between traders and agents is secured by a set of mechanisms and rules to control for opportunistic default, like compromising collaboration in the future or by affecting the credibility/reputation towards others traders and processors. Most of

these governance structures are based on informal rules and regulations, using legal course only as a threat not as a real mechanisms for dispute resolution.<sup>v</sup>

'I sell to the loaders and buy through agents [...]. You have two types of agents. Some of my agents go on their bicycle to the villages. They visit the villages three or four days a week. I advance money to improve their business. They pay back in the evening [...]. But, most of my agents are farmers living in the trading centres and own the sub-stores [...]. I do not use signed contracts with them. Often we only call by telephone. Transport takes some 50 Sh/kg and we give him something extra [...]. If a sub-agent diverts money, the local authorities are called in and try to solve it. If the problem remains unsolved the police can come in [...]. You are dealing with trust.'

(Trader 1, Grain Street Lira, interviewed in April 2008)

#### *Advancing work capital*

Traders may lend part of their capital from banks or other traders. As turnover in trade is high, money borrowed for one month that circulates several times a week can generate good profit with a modest margin per kilo. The high interest rates for commercial lending are not the major problem for traders; the issue of collaterals is mentioned more often, and seems particularly manifest when the traders work with several banks at the same time.

'I work with the bank at 22%. Not bad. Even though I need to pay some extras for processing the request and to give to the loan officer. To get the loan you always have to give him something [...]. As guarantee the bank accepts a land title, your house or a 'lease offer', e.g. renting your motorcycle.'

(Trader 3, Grain Street Lira, interviewed April 2008)

#### *Agents set farm-gate price*

Traders use a reference price and leave a margin to their agents. The agent is free in lowering the price to the farmer when procuring the grains. The bargaining power of the agent is strong, especially in more remote areas. Markets for oilseed in the cities are open and competitive, and therefore markets near the cities tend to reflect price fluctuations in the market. In remote areas where transport is monopolised the choice for market outlets by the producing farmers is more limited and the bargaining power of the agent higher. Prices in these remote markets tend to be lower and less responsive to price fluctuation in destination markets.

## **4.2 Processor-led bulking arrangements**

#### *Embedded services to farmers*

Increasingly, processors try to get replace traders or agents when procuring oilseeds. In some areas, bulking is realised through contractual arrangements between supplying farmers and procurement agents in which the farmer promises to sell his product in exchange for some services provided by the buyer. The scope of the services to be provided to the farmer can vary a lot. It can be based on advancing money, resolving the cash constraints of farmers during the planting season, or the provision of technical assistance to production.

#### *Coping with opportunistic behaviour*

In oil-seeds the availability of quality seed is key constraint. Therefore, most contract relations include seed provisioning as their prime service, be it on credit or paid cash at the start of the

growing season. But the provisioning of this service is expensive and risky. Contract farming will have to respond to two fundamental challenges related with opportunistic behaviour: how to get compliance to the agreements by the farmers (considering opportunistic behaviour of farmers); and, how can we safeguard our investment in the scheme (coping with free-riding by competing buyers).

#### *Corporate contract farming scheme*

The most important processor-led arrangement, involving 40,000 smallholders, was established by the Uganda oil processing industry Mukwano Industries Ltd. The company, with support of USAID-APEP, managed to establish a contract scheme with impressive growth in sunflower seeds procured from 2005 onwards. Bulking is done by a site-coordinator who works exclusively for the company and provides the embedded services to the farmer. According to a study by UPTOP-EU (2007)<sup>vi</sup>, around half of the farmers working with Mukwano indicated that they participate in some farmer groups, against only 10% of the non-contracted sunflower producers. (The site-coordinators have competitive advantage above the traditional agents because they benefit from the easy flow of work capital that the company can invest in the transactions in the bulking arrangement.

'I pay them cash on delivery using the advance payments given by the company. When the store is full, we contact the procurement officer responsible and the truck is sent to pick the grain from the store. I get a commission of 20 Ushs/kg of grain purchased from farmers as payment for working with the company'  
(Site Coordinator in Bukolo, interviewed in October 2008)

### **4.3 Contract conditions and dispute resolution**

The Mukwano contract is signed by the farmer and Mukwano and is witnessed by the chairman of the parish, the so-called 'L.C. 1'. When arbitration is needed, the local administrative authority can be mobilised to enforce the contract. The contract is signed only once and is binding whenever the farmer receives seeds from Mukwano or until one of the parties communicates it 4 months in advance. The contract indicated the embedded services that obliges Mukwano, the minimum price paid in cash upon delivery and the mandatory quality parameters for the produce. Increases from the minimum price are possible. However, the contract did not stipulate the procedure to define the exact price at the moment of transaction. Like in most contract farming arrangements, the economic rentability of oilseed production is the responsibility of the farmer.

Side-selling, or 'poaching' is mentioned by Mukwano as major problem in the contract scheme. Mukwano invests in the import of hybrid seeds from South Africa. The fact that the PAN 7351 sunflower grains have a different appearance than the other varieties of sunflower in the area has facilitated Mukwano to effectively detect free-riding traders, and side-selling farmers. The Mukwano contract mentions the option of legal action to force compliance, and, indeed, police has been used in at least one occasion to control free-riding by competing traders.

Mukwano was aware that the use of police and legal action to force compliance of the contract was not really a viable option and had adverse side-effects. Political pressure mobilised by the traders, smaller processors and farmers that were organised in UOSPA did speed up this process. From December 2007, Mukwano decided to distribute part of the PAN 7351 seeds by the input dealers (UNADA). Mukwano is still the dominant channel for the hybrids, but some traders have used the opportunity to buy and sell the seeds to gain a 'licence to buy'. Legal action

of the company against side-selling and free-riding is now even less viable than in the pre-2008 season. From 2008 onwards Mukwano pays the prevailing market price when higher than the minimum price agreed upon. The contract farming scheme in strict sense with exclusive marketing of sunflower to the company has ceased to exist.

Mukwano continues the structure of site-coordinators and entered in open competition with other agents or traders when sourcing oilseeds. Not the contract clauses but the efficiency in logistics and payments are key to defend its position as dominant buyer in the former contract scheme areas. Also, the ample access to working capital by the site coordinator gives this type of bulking arrangement a distinctive feature.

#### **4.4 Other processors' initiatives**

Also, several other processing companies, especially in the Lira area, do not rely on spot market transactions with traders on the Grain Street but are directly involved in setting up their own agent structure in rural areas. Embedded services are more limited than in the contract farming experience of Mukwano, as no exclusive sourcing rights are in place and free-riding on the investment by competing buyers is a major risk. However, the vertical coordination between the processor and the farmers is far greater than in the traditional agent-trader system. Nile Agro, Twin Brothers and Gurunanak are other big processors that started to invest in an agent network after installing or upscaling their processing capacity. They crushed cotton seeds during the 1980s, but turned to sun flower after 2000 as cotton production in Uganda collapsed in the 1990s. They adapted their processing plant to the specificities of sun flower and added additional machinery for refining the sun oil. They try to mobilize their former network of agents that worked in the depot centres several years ago.

'We assemble agents in meeting; explain company expectations, in terms of quantity [...]. Agents have verbal contracts. We advance money to them (between 0.5-2 million Ushs) and pay an commission between 20-30 Ushs/kg. When we worked in cotton we also paid a small salary as incentive for agents.'

(Twin Brothers, interviewed in November 2008)

#### **4.5 Farmer-led bulking arrangements**

##### *Benefits to members*

Collective marketing by farmers is another way of resolving the bulking challenge. Farmers' organisations tend to look for ways to provide the village trader's bulking service to their members, substituting these intermediaries. Members will experience lower transaction costs, as their efforts to find a buyer and complete the market transactions are assumed by the group. However, there are obviously a range of costs associated with collective efforts to perform the same services as provided in the agent-trader bulking arrangement. A resulting net benefit will provide an important incentive for member loyalty to the collective marketing group. Without external support, this net benefit must be derived from efficiencies in economic transactions compared to the trader, like economies of scale in logistics, market information or post-harvest handling.



### *Coping with costs of collective action*

The group needs to generate its 'own income' to pay for the expenses made by active members or hired professional staff. Income from service provisioning to members is used to bear the cost associated with collective action. Additional benefits generated in the collective action are distributed to members, partly by increasing the price of agricultural produce sourced from them, partly by profit sharing and investments in (social) services to the members. Different economic services and mechanisms for income generation existed in the each collective bulking arrangements.

Our case-studies highlight the importance of saving and credit schemes to generates both trust and income in the group. Income from these credit activities still complements the income from commissions applied on the products sold. The income from internal lending seems crucial and important in the initial stage of group formation to pay for the group's expenses.

There are additional advantages in combining bulking with credit and savings activities. Long term credit for farmer groups is expensive, as it is only needed in part of the year. Therefore, internal lending of part of the working capital in times with little turnover is in itself a good way to generate income to pay part of these financial costs. However, it may reduce the amount of money available for advance payments to farmers and limit the volume that can be bulked by the group. Therefore, credit designs that induce pre-harvest cancellation, e.g with a reduction in interest payment or preferred access to critical harvest services, can induce members to cancel loans in kind at harvest time. Lending to members under condition of repayment with their harvest is a good way to reduce financial costs in bulking, increase trust building between members and group, while not affecting the scale of collective bulking

'Through our loan scheme, members were able to access funds to buy improved varieties of seeds. This has led to increased yields and now we started to bulk and look for big buyers to purchase. Farmers wait for the produce to be sold before they receive payment. This has been facilitated by the loan scheme where farmers can borrow money awaiting sale of the produce.'

(Obanga Ateuro Farmers Loan Association)

### *Partial payments and trust in delegated marketing*

Another strategy to increase the scale of operation is to pay only a percentage of the price to the farmer at the moment of purchase and do a second payment only after the transactions with the trader or processor has been finished completely. This option is only feasible when the member have sufficient trust in the persons that do the transaction for them. For many incipient bulking arrangement this delegation of responsibilities in marketing is still problematic. Decisions on the sale of the product can be time-consuming when the group can decide in consensus-seeking meetings. Stronger groups have more agile procedures, with defined responsibilities and processes of accountability.

'Both members and non-members bring their products, and some want to be paid cash and others can wait until products are sold. [...] However, there is a difference between the price received by those who require cash and the price received by those who can wait.'

(Busiu United Farmers Marketing Group)

## 5 Upscaling pathways

To increase benefits of the stakeholders involved, all bulking arrangements need to increase the efficiency of the transactions in the chain. Efficiency gains can be realised by:

- reducing the number of intermediating actors by increasing the bulking capacity of each intermediation segment;
- eliminating some intermediation segments in the value chain by vertical integration by the processor and/or through collective marketing.

The constraints for increasing throughput of the bulking arrangements differ between the three types of bulking arrangements. They can be summarised in the following table.

Type	Key constraint	Upscaling path	Support policies
Trader-led	Working capital	Trade finance	Warehouse Receipt Systems (WRS)
Processor-led	Free-riding traders	Cost-efficient embedded services	Leasing
Farmer-led	Combination of trust, storage and working capital	Cluster development	Guarantee funds, WRS, infrastructural investment grants

### 5.1 Trader-led upscaling

#### *Traders need ways to increase their collateral for loans*

As a result of chronic overcapacity in former cotton seed processing plants, coupled with an expanding and unsaturated market for domestic cooking oil, there is always a buyer for sunflower collected by traders. In the trader-led bulking arrangements, upscaling possibilities lie in the increase of the throughput per agent/trader involved. The capacity to bulk by each agent is constrained primarily by shortage of working capital and only marginally by constraints in logistics, like storage capacity or transport. Upscaling possibilities in these chains are, therefore, crucially dependent on the availability of trade finance. Processors and traders have access to banks, and interest rates are bearable for them as a result of the fast turnover, but there are constraints in their capacities to provide sufficient collateral to increase their borrowing.

#### *The promises of the Warehouse Receipt System*

A venue for upscaling lies in the development of financial instruments to use the stored oilseed grains as a collateral. The warehouse receipt system (WRS) is designed with that concept in mind. It is designed for farmer groups that want to store grains after harvest to wait for an improved price. The pilot experiences with WRS indicate the need to find 'satellite systems' that link smaller bulking arrangements and smaller storage facilities with the big warehouses that have been authorised and accepted by the banks under the WRS scheme. The working capital provided by the banks through these WRS systems would complement their capital to source more volume through their agent networks.

## 5.2 Processor-led upscaling

### *Processors need to offer attractive embedded services*

In the processor-led bulking arrangements the issue of working capital is less constraining, as the contracting companies use to have sufficient collateral for bank loans. The constraints for upscaling are especially related with the costs of investment in service provisioning and the difficulties to avoid free-riding of competing buyers. Low investments that create high farmer loyalty are critical to increase the stability of the sourcing relationship. Provisioning of post-harvest infrastructure to farmers can be an attractive service as an embedded service of the contractor. Limiting the time the farmer has to store the grains in his house, will limit the chance of side-selling to others. Movable storage equipment, like metal silos can be subject to such lease agreements, just like transport vehicles or drying equipment. In leasing, the investment in movable equipment is financed by the bank with the physical integrity of the equipment as collateral. The processor only pays for the equipment in one payment when stolen, but if properly used, he pays a fixed amount during the economic life span of the equipment.

### *Linking up with existing farmer groups?*

Likewise, the farmer groups in the villages can be used as an entrance point for establishing a more stable trade relation. Many farmer groups exist, but only some of them are bulking. Many successful collective marketing experiences visited in the field research proved to be based on a previous experience with non-commercial service delivery, like extension groups, religious groups, etcetera. Partnerships between the organisations that support these groups (churches, NGOs, local government) can establish the channels for contract relations to be established. Trust between members of this 'contract partnership' is essential to make it prosper.<sup>vii</sup>

## 5.3 Farmer-led upscaling

### *Farmer groups need to upscale their bulking infrastructure and governance structure*

Most collective bulking arrangements analysed suffer from constraints on working capital, and many lack governance mechanisms that delegate commercial and administrative functions within a group. Both issues will have to be addressed to facilitate this 'big leap' forward of the farmer-led bulking arrangements. Previous experiences with credit and savings systems and the collective handling of storage or production facilities prove to be key mechanisms for building the trust and management capacity in the largest bulking groups. Cluster development, with strong core groups that facilitates the affiliation of weaker groups in federation-like farmers associations, is the most promising upscaling pathway. In this model, support in storage infrastructure and working capital for trade can be directed to already existing groups that have managed to build internal capacity in resolving problems around collective action and opportunistic behaviour, and in delegating functions and responsibilities within the organisation.

### *New financial product are needed to provide the working capital*

Current possibilities for access to working capital constrain this cluster development pathway, as transaction costs for both the banks and the bulking groups are high and collateral is a major problem. No bulking arrangements interviewed was linked to the Warehouse Receipt System, and their volume of trade will make it unlikely that they can link with the WRS in the nearby future. Even the storage facilities of the cluster groups are too small to make it feasible to certify them as such. Additional investments are needed to meet the minimum requirements related to quality control of the products deposited. The linkage of WRS with these bulking sites will have to go

through the development of satellite systems that link these stores with the certified WRS stores in the cities, be it through higher tier collective marketing federations, or through a partnership with processors or big traders. Some experiences exist already that link farmers organisations to the WRS.

*Guarantee funds are needed to establish innovative credit lines*

Meanwhile, other, innovative enabling policies are needed to facilitate financial service provisioning to farmer groups. A promising venue to increase the access to working capital in bulking exists when it can be derived from a credit line that generates only limited financial costs when credit is not withdrawn. Guarantee funds, like the ones applied by DANIDA in the ASPS programme, will be necessary to induce commercial banks to open such credit lines for farmer groups, as the banks will face the costs of immobilised capital not generating commercial interest.

## 6 Conclusions

*Each type has a specific upscaling pathway*

All bulking arrangements analysed in this research have constraints that limit growth, both in volume and in number of farmers included in the arrangements. These constraints are specifically related with the capacity to generate trust in transactions with supplying farmers and buyers, more upstream in the chain. Upscaling is possible, especially when enabling policies are targeted to the key upscaling pathways in each type of arrangement.

Processors will need to develop cost-effective embedded services to establish more stable relations with bulking agents and farmer groups, that limit their incentives for side-selling. Traders need to find forms to increase efficiency and turnover of their agent network by increasing access to trade finance.

Farmer groups need to generate income and trust in order to upscale their bulking activities.

*Social capital is a critical resource for upscaling*

The research discovered the crucial importance of social capital formation, as a complementary resource to physical facilities such as storage facilities and value chain finance. It also points to the importance of credit and saving schemes in fostering this basic condition for the proper functioning of the collective bulking efforts.

## 7 Recommendations

*Enable groups with bulking capacities*

Bulking arrangements and warehouses are key entry points for development interventions that want to increase the throughput, quality and fairness in oilseed value chain, and add to the objective of smallholder inclusion and poverty alleviation. Enabling policies will have to address logistic challenges to ensure a reliable and consistent supply of produce volumes from scattered and unorganized farmers.

*Coordinate support*

For bulking groups, access to subsidies for infrastructural investments is handled by one set of support institutions, access to value chain finance handled by another (like banks and microfinance institutions) and management and leadership training (though more rare) is often supported by yet another group. For upscaling pathways to be effective, support has to be better

coordinated. The three elements are all needed in combination. When support to these three dimensions is offered in a more comprehensive way, it can generate the synergy that is currently missing.

*Make use of bulking for broader chain development interventions*

Once bulking nodes and warehouse systems are functional, they offer the opportunity to be aligned with other types of chain development interventions, such as advice on quality standards and sustainability certification schemes, innovation processes or market information.

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## End notes

<sup>i</sup> Giel Ton and Sietze Vellema work for LEI Wageningen UR and conducted field research in the oilseed sub-sector during several missions in 2007-2008. David Moses Opeero is a MSc student from Makerere University and collected detailed case-study material in 20 bulking arrangements, half of them farmer-led.

<sup>ii</sup> IFAD (2008). *Republic of Uganda - Value Chain Development and Extension Modalities in Traditional Oilseeds Sub-Sector*. IFAD, Rome.

<sup>iii</sup> In Global Value Chain research, governance is defined as the process of specifying compliance with key product and process parameters along the value chain (Humphrey and Schmitz (2004). Governance in Global Value Chains. In: *Local Enterprises in the Global Economy: issues of governance and upgrading*).

<sup>iv</sup> This is a result of the sub-programme Value Chains for Pro-poor Development implemented under the Partnership Programme 'Globalisation and Sustainable Rural Development' of the Netherlands' Directorate-General for International Cooperation and Wageningen UR.

<sup>v</sup> Fafchamps (2004) highlighted this practice of informal dispute resolution in his seminal paper *Market Institutions in Sub-Saharan Africa: Theory and Evidence*, MIT Press.

<sup>vi</sup> Uganda Programme for Trade Opportunities and Policy (UPTOP) with funds from European Union (EU), 2007. *Contract Farming, Smallholders and the Commercialization of Agriculture in Uganda*, Kampala.

<sup>vii</sup> See KIT (2008) *Trading Up* for recommendations on partnerships to improve the trading system; and Ton and van der Mheen (2009) *Sense and Sensibilities in Contract Farming*, for recommendations to investors in contract farming arrangements.