

## Chapter 6

### Contract Farming in Tanzania: Experiences from Tobacco and Sunflower<sup>1</sup>

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*“Contract farming may be defined as agricultural production carried out according to a prior agreement in which the farmer commits to producing a given product in a given manner and the buyer commits to purchasing it. Often, the buyer provides the farmer with technical assistance, seeds, fertilizer, and other inputs on credit and offers a guaranteed price for the output.” (Minot 2007, p.1)*

Eaton and Shepherd start their widely-quoted briefing note on contract farming by pointing out that, broadly interpreted, it is not new and covers many situations, in most parts of the world, for small farms as well as large. Thus any system of share-cropping, in which a landlord is entitled to a share of the harvest, implies a contract. The ancient Greeks had a system in which the harvest was divided between different stakeholders. Some of the most exploitative share cropping was in the Southern states of the USA in the last half of the nineteenth century. More recently, in Africa, farmers recruited in the 1950s to the Gezira irrigation scheme on the Nile in the Sudan signed contracts which required them to grow cotton and sell it to the scheme. Where a loan is secured against the value of the crop rather than the land, that is, where the costs of the credit are deducted from the payments made to the farmers for their crops when they are sold, there must be a contract; for example the World Bank funded schemes to support farmers growing a number of crops in Tanzania in the 1970s and 1980s. Contracts are also fundamental to agri-business, especially

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<sup>1</sup> We gratefully acknowledge the Danish Fellowship Centre for supporting the research upon which this Chapter is based, through the Tanzania–Denmark Pilot Research Programme

when processing companies contract with large farms, but also when large farms or marketing agents contract with much smaller outgrowers (Eaton and Shepherd 2001, pp.1-2; Watts 1994, pp.26-28).

The contracts are, at least superficially, unequal. The processor, or marketing agent, has the power. The farmers are comparatively weak and divided, and the purchaser knows that, if it is not possible to agree a contract with one farmer, there will be others. Hence the theoretical case for farmers' co-operatives, or farmer groups, in which farmers work together to get the best deal for the group as a whole, or in some cases own processing facilities such as ginneries or mills. The reality may of course be different, as when cooperatives are corrupt or inefficient.

In Europe and the United States, there are a relatively small number of (very large) dairies, and little of the milk is processed on the farms or sold directly from the farms to consumers, so a farmer producing milk must contract with a dairy. The dairy sends its milk tanker to that farm every day. The quantity of milk may not be specified, but the price usually is (although in some systems there are quotas, so that if more than an agreed quantity is supplied the price is less). In recent years there have been surpluses of milk in many European countries, with very low prices and very unhappy farmers. Firms producing canned or frozen vegetables require farmers to sign contracts which commit them to delivering specific quantities of a product at specific times with very clear quality requirements, especially size and colour. The prices may not be high but the farmers get a guaranteed market – they are trading risk for a reliable income.

In the last 30 years or so, two revolutions have brought contract farming to the fore. The first of these is the fast food revolution, led by McDonald's and Kentucky Fried Chicken. They sell burgers and chicken, cooked and ready to eat, in industrial quantities. The second,

even more fundamental, revolution comes from the supermarket chains, which have developed and promoted the concept of the “ready meal” prepared in a factory and then frozen or chilled, requiring only heating at home in a microwave, electric or gas oven before serving. These changes raise many questions about a good diet, and have led to obesity as well as some loss of the skills of cooking. But their cheapness and simplicity is undeniable. The supermarkets also persuaded consumers that they can expect to purchase strawberries, apples or tomatoes, and other fruits and vegetables (and also cut flowers) at any time in the year, sourcing them from different parts of the world. Thus in the UK in 2014 the four largest supermarket chains sold over 60% of the food and non-alcoholic drinks; when smaller supermarket chains and sales on the internet are added the figure rises to 87%, leaving only 13% sold through small shops and markets. Purchases by consumers of vegetables, fruits, flour and fresh meat from markets and small shops are all declining (DEFRA 2016, pp.13 and 19).

The requirements for this kind of marketing of agricultural products – high standards of quality, certification to permit produce to cross international borders, refrigerated and other specialised storage, and advanced logistics to track and order supplies – depend on precise quality standards, timings, and quantities. It is almost impossible to achieve these without contracts with specific farms. So the overwhelming proportion of food sold in both fast food chains and supermarkets is through contracts, i.e. not through traditional wholesale markets. Da Silva quotes a report from the US Department of Agriculture that found that “contracts governed 36 percent of the total value of U.S. agricultural production in 2001” (MacDonald et al 2004), and shows how contracts are increasingly being used all over the world.

Sourcing is increasingly from a small group of countries including Mexico, Chile, Spain, and Morocco. There are some supplies from Sub-Saharan African countries such as Kenya<sup>2</sup>, Ghana and Côte d'Ivoire<sup>3</sup>. Traditional auctions and commodity exchanges still exist throughout the world, dealing with cotton, coffee, and non-perishable products such as cereals and oilseeds but, even with these crops, contracts are often important (for example the brewer SAB Miller contracts with Kilimanjaro Plantations, a large farm in Tanzania, to purchase barley).

One of the downsides of these developments is the wastage of produce at every stage – in the fields if a crop has been grown in excess of a contract, in the logistics train if there are delays or technical failures, at the factory if the quantities contracted for turn out to be more than is needed, in supermarkets when products pass their sell-by dates.

### **Types of Contract Farming**

Eaton and Shepherd (2001) set out how contracts may be specified. In some contracts, the only requirement is to sell to the contractor. At the other extreme, a contract may specify the variety to be grown, inputs and cultivation practices to be used, the times of planting and harvesting, the quality of the product and, if land is leased to the farmers, precisely how it must be used. Prices may be agreed in advance, sometimes in complex formulae, and often relating to market prices at the time of sale.

Thus a contract may specify some or all of the following:

1. The duration of the contract – is it for just one season, or longer?

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<sup>2</sup> Jaffee (1994) documents a series of failures to develop small scale contracts in Kenya, and one possible success, Njoro Cannery Ltd, although at the present time it is not clear from their website whether outgrowers are still an important part of their operation.

<sup>3</sup> Ouma et al (2013) undertook a study of contracts to supply mangos in Côte d'Ivoire.

2. The way in which the price is to be calculated:
  - Prices fixed at the beginning of each season?
  - Flexible prices based on world or local market prices?
  - Prices on national or international spot-markets?
  - Consignment prices, when the price that will be paid to the farmer is not known until the raw or processed product has been sold, or
  - Split pricing, when the farmer receives an agreed base price together with a final price when the sponsor has sold the product
3. Quality standards required by the buyer
4. A quota: a maximum quantity that the farmer will supply.
5. Cultivation practices required by the sponsor
6. The arrangements for delivery of the crop
7. Procedures for paying farmers and reclaiming credit advances
8. Arrangements covering insurance

(Eaton and Shepherd 2001, pp.58-9)

So there are many varieties of contracts; but none are straightforward and all are subject to abuse. Like all long-term contracts, they depend on trust. When all is well, there should not be problems. But if some parts of the contract are not delivered, or if grievances on one side or the other are not dealt with, contracts can easily go sour. If trust is abused by either side it may be very hard to re-establish. The prices paid are often particularly contentious. The farmers are in a position of weakness in relation to the contractors, except that they have the ultimate sanctions of sabotaging the contract by side-selling or by withdrawing completely. Thus contracts are commendable in principle. But in practice they depend on stable and reliable purchasers and processors, and farmers who value the stability of the

contracts and who, in return, accept the conditions involved. If either party abuses the contract it can fail.

The purchaser may also grow the crop. In these cases the farmers may be described as *outgrowers*. This is the case in Tanzania with some sisal estates, the sugar plantations at Kilombero and Mtibwa, many tea companies, and the company Kilombero Plantations Limited which grows rice and is one of the flagships of the Southern Agricultural Growth Corridor of Tanzania (SAGCOT).

The purchasers may be processors, e.g. companies that operate gins in the cotton growing areas of Tanzania or mills that crush sunflower seeds to produce oil. They may be local traders linked with processors who use the contracts as a way of ensuring that they are able to purchase minimum quantities of the crop. They may be major international or national traders in the commodity, as with the four companies that purchase the flue-cured tobacco grown in Tanzania. Or they may be farmers' groups or cooperatives, who themselves sign contracts to supply purchasers or processors of the crop. This has the advantage that there is an organization to negotiate with the purchaser and to help farmers later if there are disputes. They can also help to ensure that loans are repaid as agreed.

As Minot (2007) points out, there are other stakeholders – farmers not in the contract may look at those who are with envy, or make the most of their freedom to plan their farms as they wish. NGOs or cooperatives may have vested interests in the provision of credit and new technology, and wish to see contracts continue in order to sell specific products or seeds. Governments and local governments may see contracts as an easy way of collecting cesses or taxes.

## **Advantages and Disadvantages of Contract Farming**

Eaton and Shepherd (2001) and da Silva (2005) both explore the possible advantages and disadvantages of contracts, for contractors and for farmers, showing that there are risks for both. Agri-business firms use contracts to ensure that quality standards are met, and that produce is supplied as and when it is needed. But the underlying advantage is a reduction in labour costs when compared with production on an estate or plantation, and less expenditure on management. The contracts enable them to ensure that economies of scale in terms of production processes and supplies of inputs are achieved, and that inputs are available and used. Yields on small farms may be as high as or higher than on large farms. The use of small farmers may be the only way in which large companies can access the required areas of land.

The advantages for farmers are reliable and predictable incomes and a guaranteed market for their produce. It also gives them access to credit and they can benefit from extension advice provided by the contractor and, in some situations, services such as ploughing or spraying.

But there are also possible disadvantages. Thus a farmer may lose the possibility of selling the crop for a higher price elsewhere. There may be situations where the contractor does not collect the crop as agreed, or is slow to pay for it, perhaps because, at that time, it finds that it can source the crop more cheaply on its central farm. The farmer may not want to be compelled to grow a minimum amount of the crop (with possible disruption to the growing of food crops for own use or local sales). Farmers may not want to accept the risks involved if the crop should fail. They may not trust the pricing regime and feel that they are being cheated, especially if prices are falling in the long term. They may not trust the quality requirements specified by the contractor and how these relate to the prices they are paid.

Or they may not have confidence in the quality of the inputs being supplied, such as animal feeds or fertilizers, and they cannot source them elsewhere. They may not want to move so far in the direction of monoculture, with its increased risks and costs of controlling diseases and maintaining the fertility of the soil (as forcibly pointed out by Dawson et al 2016 in their critique of contract farming of maize in Rwanda). Small farmers with contracts may feel that larger farmers are being favoured at their expense.

Many of the possible disadvantages for a contractor relate to these points. Thus a farmer under contract may sell the crop for a higher price elsewhere, thus not supplying the quantities agreed, and not paying back the credit (“side-selling”). The contract may prove inflexible, for example if there are good harvests elsewhere, the contractor may not be allowed to purchase the crop more cheaply elsewhere. The costs of supervision and enforcement, and of logistics and supply, may be high. The security of supply in the long term is uncertain.

The literature suggests that contracts are likely to be more successful in some circumstances than others; for example, if a crop is perishable, or quality declines if it is not sold quickly (as with tobacco, tea or sugar), or if it is expensive to transport long distances without processing, as with meat and dairy products, and many fruits and vegetables. Side-selling is hard in these situations.

The next section summarises how contract farming has developed in Tanzania. This is then illustrated by case studies of two crops where the contracts are very different –detailed and specific to the crop in the case of tobacco, but almost minimal in the case of sunflower.



## **Contracts in Tanzania**

Contract farming in Tanzania was implicit in the arrangements for giving credit to small farmers that were pioneered in the 1960s and supported by large World Bank projects in the 1970s and 1980s. It suffered a setback when the cooperative societies and unions were abolished in 1976. With liberalization, especially after 2000, it was clear that it had a part to play (Matchmaker Associates, 2006). This was recognized in the Agriculture Sector Development Programme which covered the years 2006-13 and in the policy statement Kilimo Kwanza (*Agriculture First*) (TNBC, 2009), which was a joint effort of the private sector and the Government of Tanzania. Pillar 7 of Kilimo Kwanza emphasized the need for establishing institutional arrangements to increase agricultural production, with particular importance attached to contract farming. It proposed specific laws to guide farmers involved in contract farming, as in India. Several international NGOs became involved in promoting contract farming, including the Tanzania Gatsby Foundation for cotton, the Rural Livelihood Development Programme working on cotton, sunflower and rice, the Swiss government agency SNV on sunflower and sesame, and Technoserve on organic coffee in the Moshi area.

The first contracts with small farmers were those for tobacco in the 1950s. There was also rapid expansion of coffee and cotton produced by small farmers, under what soon became “single channel marketing” in which producers had to be members of primary cooperative societies, which purchased the crops at “pan-territorial prices” (the same for the whole country). The crops were subsequently sold to cooperative unions, who owned basic processing facilities (coffee pulperies and cotton ginneries), and sold the processed products to marketing boards, who sold them to government purchasers in the UK or (usually for better prices) at international auctions. Many of these arrangements only just qualify as

contract farming, because contracts were not in writing, and there was no alternative outlet for most farmers. But when credit was involved, for insecticidal sprays or fertilizers for cotton, or for fungicides for coffee, there were contracts. Rather than dealing with each small farmer separately, the banks or agencies providing the credit signed contracts with cooperative primary societies. If an individual farmer defaulted on a loan, the rest of the farmers in that society were still responsible for repaying it.

Sugar was largely grown on irrigated estates, but two sugar companies, at Mtibwa near Morogoro, had limited irrigation and signed contracts with outgrowers – small farmers who grew sugarcane and sold it to the sugar company. Matchmaker Associated (2006) summarise the history and describe the position in 2005.

Mmari (2015, pp.58-63) reported a dramatic increase in the production of sugarcane by outgrowers, from 7148 hectares in 1998 to 22,216 hectares in 2006, and 25,371 hectares by 2013. But in the later period almost all of this increase was at Kilombero. At Mtibwa outgrowers provided 49% of the cane in 2009, but only 19% in 2013. Mmari attributes this to the decline in the effectiveness of the growers association which negotiated with the company, along with the company's own financial difficulties. In a later study, Herrmann (2017) showed that outgrowers at Kilombero were somewhat better off than other farmers in the area, but more so if they had access to more land.

Like sugarcane, tea is perishable, and deteriorates if not processed quickly. Up to Independence in 1961, tea production was almost entirely from estates. But some of the estates developed outgrower schemes. They agreed to purchase tea from small farms near their estates, and worked with the extension service to give the farmers the necessary skills. In the mid-1970s the first tea factory purely to process small-farmer grown tea was opened, at Mponde in the West Usambara mountains, followed by a second near Bukoba, West of

Lake Victoria. The factories contracted to collect the tea on certain days in the week, to ensure that farmers were paid appropriately, and to supply fertilizers. In 1985-6 small farmers contributed more than 28% of the tea grown. But after that, in the chaos surrounding structural adjustment and liberalisation, tea was not collected, farmers were not paid, and by 1989 small farmers were contributing only 5% of the production (Tea Detective n.d.).

Cotton was promoted throughout the colonial period (and it was grown in parts of Tanzania before the colonial invasions). During and after the Second Great War, cotton production expanded in the Lake regions, and then in the ten years either side of Independence in 1961, it took off. Marketing was largely in the hands of primary cooperative societies, who sold the crop to cooperative unions, who also owned many of the ginneries, although others were owned by international companies. The processed cotton, lint, was purchased and largely exported by the government-owned Lint and Seed Marketing Board, which operated with a system of “pan-territorial prices” – i.e. the same price was paid to the farmers wherever the cotton was grown, regardless of transport costs. This system was not particularly fair to the farmers – the LSMB, like other marketing boards in colonial and post-colonial Africa, made significant profits many of which were not ploughed back into the crop (Bates 1981). But it gave the farmers certainty, and made side-selling almost impossible. It was therefore a basis for credit, for the insecticidal sprays used to get good quality cotton, and sometimes also for fertilizers, supplied at first by the National Development Credit Agency and later by its successor the Tanzania Rural Development Bank.

This system, like many of the arrangements for the marketing of crops, collapsed in the 1980s, when the marketing board (by then the Tanzania Cotton Authority) lost its powers to purchase and sell cotton lint, and many small firms established ginneries. These firms signed

contracts to supply cotton to international buyers, but found it hard to deliver the promised quantities or qualities, so would buy from any farmer. Eventually side-selling became endemic, as a way of avoiding the payment of taxes and cesses, and of repaying loans. It was facilitated by what Kabissa calls the “marching boys”, buyers who came with lorries in the night and purchased cotton for a higher price than the local ginnery. This in turn led to a collapse in the quality, as farmers added sand, soil, even water, to their cotton, and failed to remove sticks or stained bolls. Since, to this day, the pricing system does not give any extra payment for good quality cotton, farmers have no incentive to undertake the extra work, or lower rewards, that this gives them. It also makes it almost impossible to enforce any kind of contract for credit, as the Tanzania Gatsby Trust and British Aid found from around 2012 when they made a major effort to re-establish contract farming and credit for cotton growing (Kabissa 2014; Coulson 2016).

Cotton was not the only crop for which credit was provided through the cooperative movement. In the 1970s and early 1980s the World Bank financed projects to provide credit for most of Tanzania’s major crops. The finance was channelled through the Tanzania Rural Development Bank to crop authorities, and then cooperative unions and primary societies. These too failed in the mid-1980s, with the abolition of cooperative societies and lack of resources to pay farmers for growing crops such as cashewnuts or, at times, maize.

A detailed review of contract farming in Tanzania was commissioned by the Ministry of Agriculture, Food and Cooperatives. The resulting report (Matchmaker Associates 2006) reported on contract farming for organic coffee, sugarcane, tea, tobacco, pyrethrum, sisal, chickpeas and milk, and on programmes then being developed for cashewnuts, fruits, paprika and other crops, and on marketing arrangements for many other crops where contracts are implicit but not in writing. The researchers obtained copies of 13 contracts for

different crops. Their study remains the most detailed report on the opportunities for contract farming in Tanzania, with frank assessments of the challenges and often the disappointments for those involved.

More recently, contracts with small scale farmers have been promoted to grow sunflower, for example in the Dodoma area, underwritten by the Rural Livelihood Development Company, an NGO supported by the Swiss Government, to supply three mills in Dodoma.

From the point of view of the farmers the main motivation was to get access to hybrid seeds. The contracts, examined in more detail below, were very informal.

Last but not least Kilimo Kwanza and the plans for SAGCOT (launched in 2010), and for Big Results Now (2012) included explicit commitments to outgrowers, and hence contract farming. Initially the emphasis was on large scale farms, but outgrowing was also developed, for example around Mngeta Farm (Kilombero Plantations Limited) in the Kilombero Valley (Nakano et al 2014). Since about 2015 SAGCOT has developed its work with outgrowers rapidly, and these are now the main focus of its programmes to increase production of rice, sugar and other crops.

In order to explore these issues, and the prerequisites for successful contracts with small farmers, the rest of this paper is a study of two contrasting situations of contract farming. The first is the pioneer of contracts with smallholder farmers in Tanzania, who have been growing flue-cured tobacco in the Urambo area, Tabora Region, under contract since the 1960s. Tobacco has become Tanzania's most successful agricultural export crop. The contracts and marketing system have continued broadly unchanged since they were established, but are now under increasing pressure.

The second study is of sunflower growing in Kongwa District, near Dodoma. This is much more recent and, as the crop can be easily transported and does not quickly deteriorate, it is almost impossible to prevent side-selling. A follow up on these farming contracts recently (May 2017) indicates that there are no longer active contract arrangements in sunflower production. Contract farming depended on input provision, particularly of improved seeds. Lack of sufficient capital, coupled with side-selling when harvests are ready, has gravely accelerated the demise of contract farming.

### **Tobacco Farming in Urambo**

The contracts to grow flue-cured tobacco at Urambo, on land cleared between 1947 and 1950 as part of the Groundnuts Scheme, pioneered the processes of contract farming in Tanzania. Following a successful pilot project in 1951, settlers were invited to come and grow tobacco. There were around 40 farms, each growing 5-15 hectares of tobacco and similar areas of groundnuts and maize (Boesen and Mohele, 1979, pp.25-40). Each farm had 2 or 3 tractors and employed up to 500 seasonal labourers. By 1960 they were growing a total of about 500 hectares of tobacco.

The Tanganyika Agricultural Corporation, which had taken over the land of the Groundnuts Scheme, was keen to encourage African farmers. It permitted them to grow small areas of tobacco and, from 1958, after a design was developed for a small curing barn, to cure it. Up to that time this process was alleged to be too complicated for small farmers.

This succeeded for a surprising reason: the poverty of the soil and its poor ability to retain nutrients. High quality tobacco requires exactly the right nutrients, and this is achieved on poor soils by adding chemical fertilizers at the correct times. To harvest a high quality crop, each leaf must be cut at precisely the right time, in the correct manner. The curing takes 6

days. Farmers are given thermometers which show the correct temperature for each of the days. Only if these are adhered to will high grades of tobacco be achieved. Between 1958 and 1962 farmers who wanted to grow the crop had to join a “school” attached to a larger farm for a year, and after that they had to have a recommendation to the effect that they knew how to grow tobacco; many had worked as labourers on other tobacco farms. By 1964 all the European settlers had left the area.

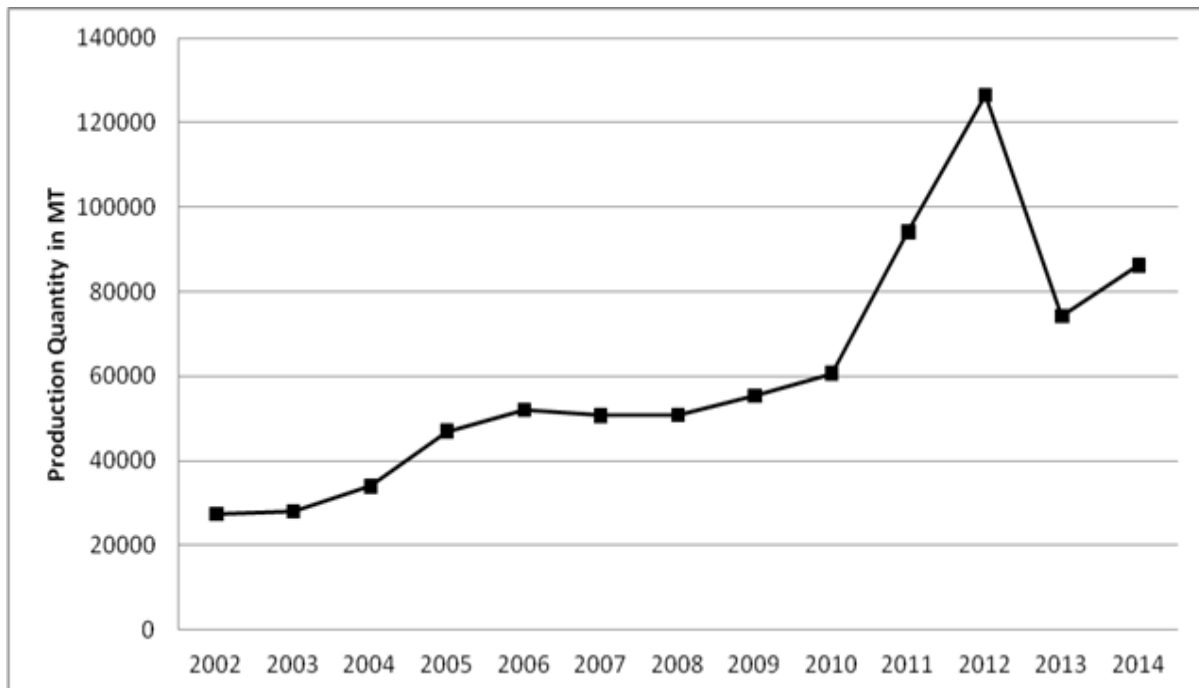
In 1967 the state created a parastatal body to market the crop, the Tobacco Authority of Tanzania (TAT). Boesen and Mohele show how the area was adversely affected by the compulsory villagization of the early 1970s, during which many barns and homes were destroyed. They also pointed out that the forest was being cut down to provide the firewood for the curing process, at a speed that could not continue indefinitely. The crop survived, even though many farmers had to move. There was a demand, from British American Tobacco’s factory in Dar es Salaam, and for export, and the African farmers had shown that they could compete with anyone. Those growing the crop had to be members of a primary cooperative society, and to sell their crop through the society, which would also supply them with seeds and fertilizers. The period after 1990 saw the sub-sector liberalized. The Tanzania Tobacco Board was created in 2001, with functions mainly aimed at ensuring the growing and marketing of a quality crop, similar to those of the TAT in the 1960s. From 2009 the primary cooperative societies contracted with private companies to supply the fertilizers and other inputs.

The marketing of flue-cured tobacco was handled by three international merchants: Alliance One and the Tanzania Leaf Tobacco Company Limited, both with headquarters in the United States of America, and Premium Tobacco International, which manufactures cigarettes in Ireland (and purchases tobacco in the Chunya and Mpanda areas, not in Tabora and

Urambo). These operated together as the Association of Tanzania Tobacco Traders, or “A-Triple-T”. This association came into existence because of the problem of side-selling and to ensure the orderly conduct of the contracted farmers. It also provided logistical and extension services, and coordinated and supervised market procedures. In 2015 a fourth buyer, Japanese Tobacco International, joined the existing three, and A-Triple-T ceased to exist. Independent farmers were now registered and allowed to produce tobacco.

From 2002 tobacco production steadily increased, mostly flue-cured. Figure 6.1 shows a sharp increase from 60,700 metric tonnes in 2010 to 126,600 metric tonnes in 2012, mainly due to an increased price in the world market which persuaded farmers to produce more tobacco (URT, 2013d, p.121). By 2014 tobacco earned more foreign exchange than any other traditional agricultural product. It had become Tanzania’s most successful agricultural product grown specifically for export (Bank of Tanzania 2016).

**Figure 6.1: Tobacco Production 2002- 2013 (Metric Tonnes)**



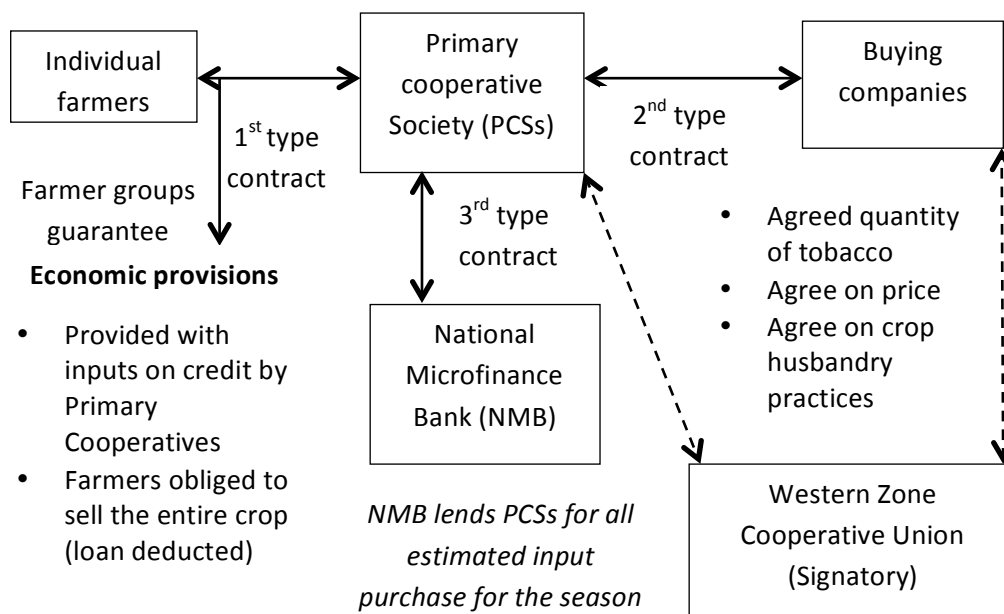
Source: Ministry of Agriculture Food and Cooperatives and Bank of Tanzania Quarterly Economic Bulletin, Dec. 2015, Table 1.13



## The Contract Arrangements for Tobacco in Urambo

The legal framework for tobacco production involves three contracts, summarized in Figure 6.2. The first is the *contract between a grower and primary cooperative society (1<sup>st</sup>C)*. This is just one page written in Swahili, a language all farmers can understand. In this simple contract, an individual tobacco grower must be a member of both a farmer-group and a

**Figure 6.2: Tobacco Contract Arrangements**



**Source: Research Field Visits, 2015**

primary cooperative society. The farmer commits himself to taking all inputs during a particular tobacco production period and selling his entire crop for the season to the primary cooperative society. The inputs are supplied by the primary cooperative society. The farmers in the group commit themselves collectively to repaying the credit.

The second contract is *between the Primary Cooperative Society, the Western Tobacco Cooperative Union and the Tobacco Processing Company (2<sup>nd</sup>C)*. In this contract, the farmers, as producers of green leaf tobacco, are represented by the primary cooperative

society which contracts with the buyers. The cooperative agrees to produce and sell an agreed quantity of tobacco using crop husbandry techniques specified by the Tanzania Tobacco Act which provides for regulations, improvement and development of the industry. The TPC commits, through a commercial bank (NMB), to provide all inputs estimated and required during the production period. As overseer of primary cooperative societies, the Western Tobacco Cooperative Union (WETCU) also signs the contract.

Before the production calendar starts, each Cooperative Society, through its members, decides which company to sell their tobacco to. The contracts they sign are the same and in principal, once contracts are signed, the prices are determined for each grade, and there is no further competition between the companies for that season. The companies compete with each other not through the details of the contract but through packages not included in the contract like engagement in social responsibility programmes.

The third and final contract is *the Facility Agreement between the banks and the primary cooperatives* (3<sup>rd</sup>C). This enables a primary cooperative society to borrow from the commercial bank for purposes of purchasing inputs. The inputs purchased include fertilizers (NPK, CAN and Urea), packing materials, agrochemicals, and some cash to help the farmers cover the costs of harvesting, grading and marketing.

In this arrangement, the individual smallholder tobacco growers are not directly in contact with the suppliers of the inputs. By signing contracts with the primary cooperative society, the farmers surrender to the society the mandate to negotiate terms with the suppliers. The Tobacco Act and its regulations, and the contract between farmers and primary cooperative societies, prevent farmers not in the contract from growing tobacco.

While registration is a requirement to grow and sell tobacco in the region, use of input credit provided through the contract arrangements is not mandatory. To explore this, a survey of 300 farmers in the Urambo area was carried out in 2012 (Ilembo 2015: 97-98, 105-108). Of these, 245 were users of credit and 54 were not. Non-adopters of credit had on average slightly larger farms than adopters, and grew slightly larger areas of tobacco. They also used more fertilizer - approximately 180 kilograms per acre compared to 140.2kgs by credit adopters.

**Table 6.1 Production Situation for Credit and Non-Credit Users (mean values)**

	Credit input users (246)	Non-credit input users (54)
Farm size (acres)	6.0	7.2
Area of Tobacco harvested (acres)	2.2	2.7
Yield (kg per acre)	604	619
Price Per kg (TSh)	2519	2489
Fertilizer Use (kgs per acre)	140.2	179.5

Source: Ilembo (2015: Table 4.3)

Non-credit adopters achieved slightly higher yields compared to those who depended on credit. This difference is not significant, especially considering that it is only for one season, and it is not clear what caused it. Non-adopters are relatively few in number, mainly better-off farmers who can obtain inputs, including fertilizer, in other ways, including own financing. On the other hand credit input adopters sell their produce at prices that are substantially higher than the prices achieved by non-adopters, probably because, for credit

adopters, the buyers employ leaf technicians who have the opportunity to monitor the entire process of tobacco production.

### **Farming Sunflower Seeds in Dodoma**

Kongwa was the main centre of the Groundnuts Scheme, and large areas of land were cleared. There were many mistakes, such as the use of unsuitable machinery and failure to remove the roots from the soil before using tractors. But the main problem was the shortage and unreliability of the rainfall (Coulson 2013, pp.78-82).

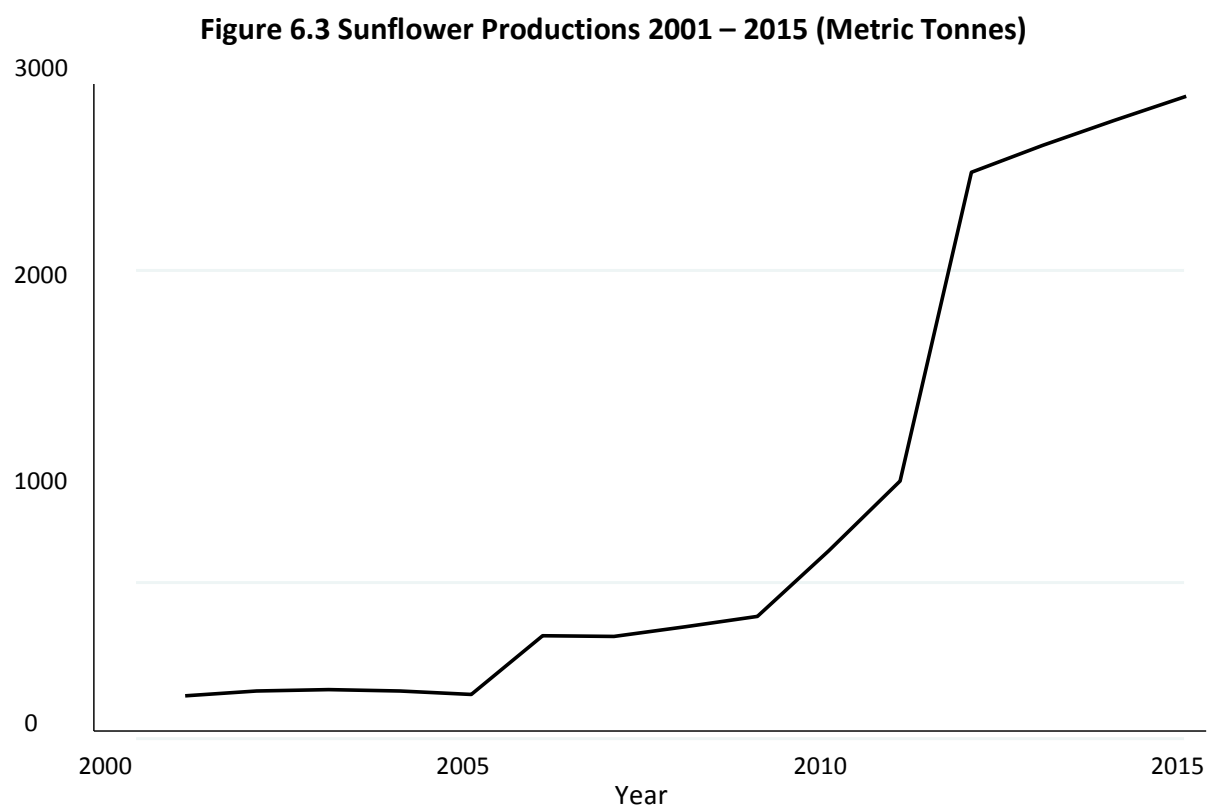
For this reason it was decided that the cleared land should become a cattle ranch. It passed to the Tanganyika Agricultural Corporation and then to the National Agricultural and Food Corporation. But NAFCO failed in 1996 and most of its farms became derelict.

Sunflower had a long history in an area not far away. It was grown by Greek farmers on land near Dakawa close to the Wami river. It was drought resistant and offered an alternative to maize. It was not, however, a major crop, perhaps because cotton seed oil and coconut oil offered cheaper alternatives for cooking oil.

However, in recent years, hybrid seeds have become available that are relatively resistant to drought, quick growing and high yielding. To get best results they require fertilizer and insecticide. It is on that basis that crop agriculture, in particular the growing of maize and sunflower, has succeeded in the Kongwa area. Contract farming has been introduced as a way of ensuring that farmers get access to the new seeds and to fertilizers and sprays.

Unlike tobacco, sunflower is a crop which can either be consumed locally and/or sold on a commercial basis. Demand for sunflower oil, which is cholesterol free, is increasing and its potential for becoming a major agricultural commodity for export is therefore rising. The total amount produced has increased steadily over time, from an average of 80,000 tons per

year in 2000/2001 to about 2,625,000 tons per year by 2015/2016 (URT, 2015). In 2011 total vegetable oil consumption in Tanzania was estimated at 300,000 tonnes, of which 40% or more came from sunflower seeds. Increase in sunflower production seems to have been accelerated by the introduction of relatively inexpensive oil expellers and filtering machines from China, in addition to extension work provided by government offices, and NGOs such as the Rural Livelihood Development Company (RLDC 2008; 2010)



Source: URT 2013 (Economic Survey 2012) and Annual Budget Speeches (URT 2014 & 2015)

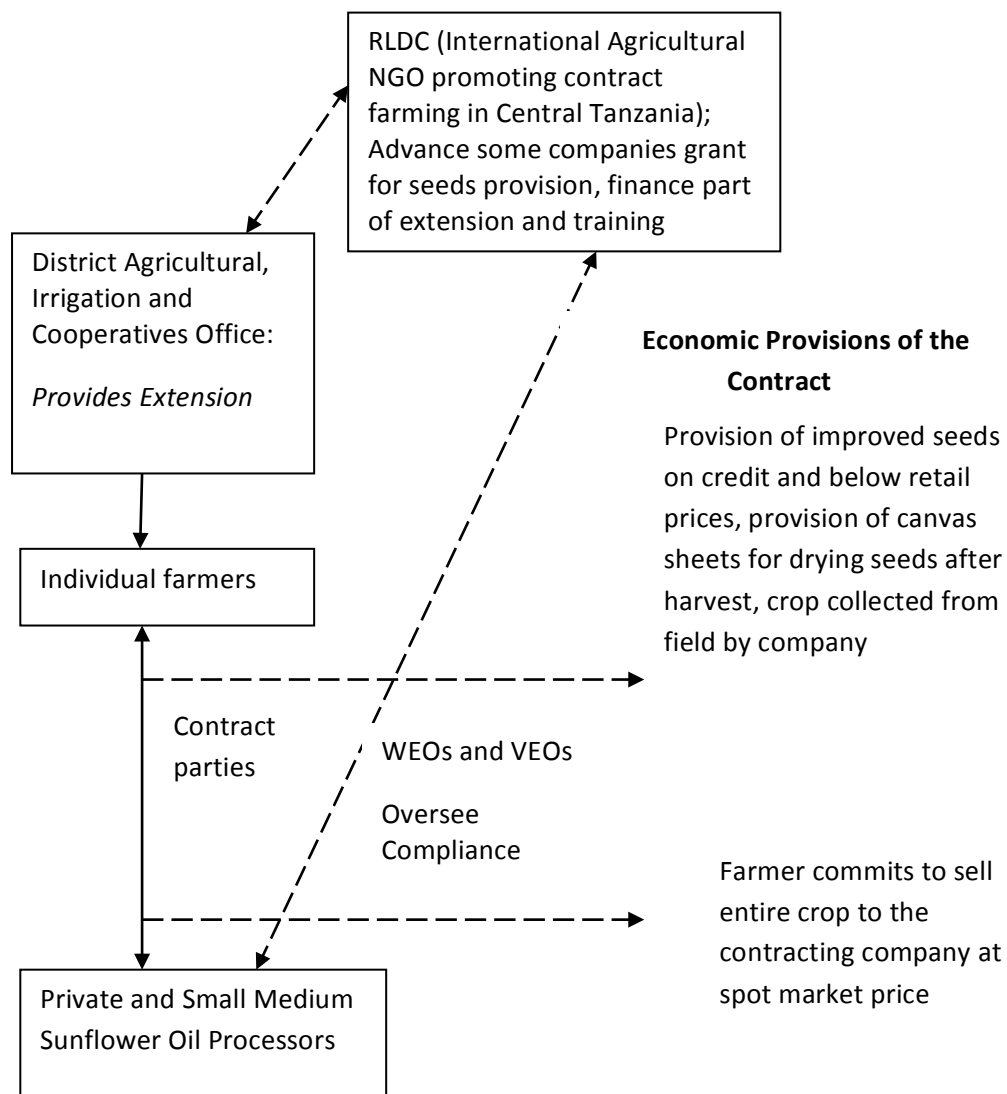
### **Sunflower Production and Marketing Contracts**

Sunflower production contracts in Kongwa district began in the 2008/09 crop season, as an initiative of two private companies based in Dodoma town: RIG Investment Company, and Uncle Milo Company Sunflower Oil Ltd, and the Rural Livelihood Development Company, an

NGO supported by the Swiss Government agency Helvetas 2016), the Netherland government agency SNV (2012), and the private sector (JICA, 2014). This helped in designing contract farming arrangements and organized mobilization seminars in different villages. The framework of the contract is summarized in Figure 6.4.

The contract guaranteed the farmers market outlets for their sunflower produce, and support in terms of inputs and farm implements such as ploughs, and canvas sheets to

**Figure 6.4: Sunflower Contract Arrangements**



**Source: Research Field Visits, 2015**

ensure that the produce is kept clean enough for quality drying and storage until further processing takes place. It also promised them that they would obtain high-yielding hybrid seeds, particularly the improved variety, *Record*, produced by Mount Meru Seeds in Arusha

The contractors also promised to establish a sunflower marketing centre in each village, to facilitate the formation of farmer groups, to buy all sunflower produced at the going market price, to facilitate and finance farmers' demonstration plots in the selected villages, to extend appropriate knowledge through seminars on proper sunflower agronomics and contract farming arrangements, and to provide cash on credit to assist farmers with the costs of farm preparation (tilling and obtaining the needed quantity of farm manure, usually cow dung). Farmers, in return, agreed to produce more sunflower and sell to the firms at least 50% of the total sunflower produced on their farms in a season.

A study was conducted in 2012 of eight villages in four administrative wards. A multi-staged stratified sample of 205 contract farmers and 195 non-contract farmers was randomly selected from these villages, a total of 400 small holder farmers. Table 6.2 indicates that the contracted farmers were growing slightly larger areas of sunflower than the non-contract farmers - a mean of 3.7 acres compared to a mean of 3.3 acres. This suggests that the contracts did not prompt farmers to acquire larger farms or release more land for sunflower from their family land holdings. On the other hand the contract farmers achieved higher yields and on average 30% more production.

From Table 6.3 it can be seen that, despite the contracts, only 46.3% of the contracted farmers managed to access all the improved seed they needed. They therefore had to use both the improved and local seed varieties which can be purchased in local markets or saved from their own previous harvest. This suggests that there was a shortage of improved

**Table 6.2 Sunflower Production: Contracted and Non-Contracted Farmers**

Relevant Variables in Mean Values	Non-Contract- Farmers	Contract Farmers	Difference	t-Test of difference
Acreage	3.3	3.7	-0.4	-1.44*
Share of sunflower land	.47	.49	-0.02	-1.06
Yield per acre (kgs)	103.9	121.5	-17.7	-2.17**
Mean output (kgs)	325.1	422.2	-97.1	-2.41**

\*\*\*, \*\* and \* represent significance at 1%, 5% and 10% levels respectively

Source: Mpeta (2015: p.41)

seeds. When farmers were asked why they had joined the contract, 80 per cent of them mentioned the need for better yielding seed as a major economic motivation. Use of hybrid seed, such as the *Record* varieties of sunflower, requires new seed stock each year. Most of the farmers understand this, and were very disappointed when they could not obtain the quantities of the new seeds they wanted.

Of the farmers in the sample 87.75% signed contracts on an individual basis. Only a few reported belonging to a farmers group (12.25%). Farmers were initially organized in groups of 70 members. However, over time, most of these producer groups collapsed and the few remaining groups are very weak due to poor management.



**Table 6.3 Inputs and Farm Implements Used for Sunflower Production**

	Contract farmers		Non-contract farmers	
	Frequency	Percent	Frequency	Percent
	Type of seed used		Type of seed used	
Improved seed variety	95	46.34	17	8.72
Local seed variety			177	90.77
Both (improved & local)	110	53.66	1	0.51
Total	205	100	195	100
	Cultivation method		Cultivation method	
Hand hoe	30	14.63	31	15.90
Ox-plough	162	79.02	154	78.97
Tractor	13	6.34	10	5.13
Total	205	100.00	195	100.00

Source: Mpeta (2014)

During focus group discussions farmers raised the issue of poor credit services as a pressing problem. It was revealed that no contractor had provided cash credits as agreed. Four per cent of the sample had accessed credit services outside the contractual arrangements, mainly through informal savings and credit schemes run by the villagers themselves on a self-help basis, but the loan sizes amounted to no more than a few thousand shillings.

The lack of credit hindered farmers from hiring tractors or ox-ploughs, hiring labour especially during the labour intensive activity of weeding, or supplementing their supplies of seed. As shown in Table 6.3, the majority of farmers in the sample used ox-ploughs to prepare the land. Without capital to hire more ox-ploughs or tractors, many of these farmers would not be able to start and finish preparing their land before the first rains, which are critical in a climatic area with little and unreliable rainfall. Late planting hinders proper maturity of the crop, and yields are low.

### **Contract Challenges**

Table 6.4 highlights the differences and similarities in the institutional set up and outcomes of the two contract arrangements. Tobacco is a perishable crop, at least at the farm level, where great skill is required to get good quality. Most of the crop is exported, and the quality makes a huge difference to the price. Sunflower seed has a long shelf life, but the quality is depressed if the crop is wet, or contaminated; the prices paid to farmers do not necessarily reflect the quality of the crop.

Whereas the business model in the case of sunflower is direct farmer–buyer/processor contracting, in the case of tobacco it is farmer–farmer group–primary cooperative society/intermediary–buyer/processor contracting. The nature of the market is also distinctly different, with tobacco having just four large buyers and prices for each grade pre-determined for the season, whereas sunflower can be stored and later transported almost anywhere and prices are not agreed in advance.

Another big difference is levels of formality. The tobacco contract is guided by an act of parliament and very formal, while the arrangements for sunflower are more informal.

**Table 6.4: Comparison of Tobacco and Sunflower Institutional Set-Ups**

Crop Characteristics	Crop	
	Tobacco	Sunflower
Perishability at Farm level	Perishable	Non-Perishable
Use	Export 95%, 5% locally consumed	Food and sale of seeds and oil locally
Experience of Contracts	Before independence )	Relatively new in Kongwa and Singida (2007)
Market Nature for Biological Supply	Non-Competitive: dominance of four 4 giant buying companies; little possibility of side selling	Competitive: Many small/ medium processing companies: Side selling possible
Formation	Must join contract farming to receive input credit; Can, however, also grow tobacco as an independent farmer	Voluntary (can grow sunflower without joining contract farming)
Formality	Rigid written formal. Defined by Tanzania Tobacco Industry Act, 2001  Three written contracts; the contract involving the growers and the cooperative is relatively simple (one page); the between buyer and cooperative is 22 pages.	Relatively simple and informal
Seed and agro inputs	Seeds offered for free but agro inputs all on credit; Buyers commit to offer extension services	Initially seeds provided free through a support given to processors by the international NGO RLDC. Currently, with the closure of RLDC, seeds are obtained on credit and agro inputs for cash.

Crop Characteristics	Crop	
	Tobacco	Sunflower
Institutional Governance	The contract is mandatory for one to receive input credit through the primary cooperative. Farmer must be registered. The contract specifies the market, and the provision of credit, and how the crop must be grown. Premium prices are paid for high quality but farmers are confused by many quality standards.	Not mandatory.  The contract specifies that the trader will purchase the crop, and provide improved seeds on credit; and access to other services like tractors. There is no provision for premium prices for higher quality crop.
	Strong Primary Cooperatives;	No formal farmers' organization.
	Contract Provided in the Act and Regulations; but compliance and enforcement seen as challenge due to lopsided power relations.	Based mainly on trust. No mechanism for dispute settlement
Outcomes	Credit Adopters access inputs they would otherwise not be able to obtain; credit adoption also contributes to efficiency levels.	Contract Farmers attain higher productivity (and therefore higher income) mainly due to use of improved seeds.

With both of these crops, a proportion of the farmers chose not to sign the contracts. The reasons for this are not certain, but it is likely that many who did not sign did not want to be bound by the conditions of the contract, which required them to undertake specific activities, in the case of tobacco in very specific ways. They preferred to run their own farms, as they wished. The sections which follow consider some of the main challenges which must be confronted if contract farming is to succeed.

## **Disputes about Price**

Neither of these contracts addresses the issue of price risks. If prices are fixed in advance, or if there are “indicative prices” that are the best estimates at the start of the buying season, and if prices then rise subsequently, there are strong incentives for farmers to sell outside the contract. If they fall, the buyer will try to pay a lower price and the farmers will feel cheated.

If prices are not fixed in advance and if there are many local outlets, which is the case with sunflower produce, and the spot price rises, then, given the fact that raw sunflower produce does not require immediate processing before selling (as it is not a perishable commodity), some farmers will breach their contract obligations and side-sell to buyers who offer a better price.

## **Disputes about Grading – The Need for Premium Prices for Quality Produce**

The contract agreements for sunflower do not specify how quality will be reflected in the prices that will be paid when the crop is sold. There are no grades and standards that must be followed during the procurement process. This means that there is no extra reward for farmers who produce good quality crops. There is no additional gain in terms of price when they sell good quality produce.

Tobacco, in contrast, has many grades, 64 in the 2011/2012 season and 72 in 2012/2013. Grading is done at the farm level, the marketing level and at the factory level.

At the farm, each individual farmer has to grade tobacco leaves and bale them before taking them to the Cooperative Society marketing point. Some farmers hire a specialist to assist in this – at a cost of between Tsh.50 to Tsh.100 to grade a bundle of 15-20 leaves. The quality of the leaf depends on the way it is cultivated, including the amount of rain and when it

falls, appropriate use of fertilizer, the size of each leaf and any blemishes, how it is harvested and finally on how it is cured, a complicated process in which temperature and humidity have to be adjusted and monitored over a 6-day period. If the temperature falls too much, water condenses and quality is lost. Each grade has its own price, but it is hard for farmers to obtain the highest grades. Farmers are confused by the number of grades, and often think that their tobacco should get a higher grade and a higher price. They would prefer fewer grades with higher prices for each grade.

Grading at market level is done when the tobacco bales are ready for sale. This time the whole bale is graded. This is where a buyer and a seller meet. Price is not an issue at this point because, once a grade is agreed, the price for that grade is predetermined. But it is common to find disagreements over grades; when this happens, a farmer bargains with a blender and, if that fails, the matter is forwarded to one of the farmers' representatives who are always available during marketing. Although this system allows for negotiation on grades between farmers and traders, and rewards high quality production, ultimately, farmers have no option other than to agree on the blender's decision, as was put by one of the farmers during the interview:

*... in disagreement of grades, the Cooperative Society board member has always been there and at least would help. The problem is with the blender (buyer) who is more powerful as he is the buyer's representative. The issue here is, whatever agreement on grade is made, a farmer would ultimately agree as he has no alternative market for the crop.*

The tobacco leaves that arrive at the processing factories (which for both Alliance One and Tanzania Leaf Tobacco Company are in Morogoro) are re-graded to meet the requirements of the customers before they are processed. The factory level grading is even more complex

and includes about 120 grades that relate to the needs of individual products and factories. The merchants allege that, if tobacco is significantly misclassified, the chance of losing future business is very high, but from the farmers' point of view this makes the whole process even more mysterious and unfair.

### **Failures to Supply Inputs as Agreed**

There are many problems getting the right inputs to where they are needed and distributing them on time.

For sunflower producers the contractors have not been able to supply sufficient quantities of improved seed.

For tobacco, the inputs were originally supplied by the buying companies. But in 2009 they ceased playing this role, and the Cooperative Societies took over. Some farmers were not happy:

*... with the companies distributing the inputs, they could monitor the Societies accurately and diligently, something which is not done at the moment. Tobacco production strictly follows a calendar and one has to follow it, so if inputs are delayed then that would affect farmers in terms of production, and this has put farmers into so many unrecovered debts*

However, the case of the sunflower farmers shows that private traders also can let the farmers down. The larger tobacco farmers, who can pay in cash, would like to order inputs directly from the suppliers which they believe would reduce the challenges they have been facing with the current system, which range from delayed inputs to mismatch between what was ordered and what is received. The current system is associated with malpractices and

hidden overhead costs, which reduce what is paid to the farmers. The following quotation is from an interviewee who spoke on behalf of the Cooperative Society:

*... the shift from companies ordering inputs to the present system is even worse! It is normal to pay for unused inputs and you may find that the Cooperative Society has deducted money even for inputs not delivered. For example, for the 2012/2013 season, the Cooperative Society ordered a total of 5031 bags NPK 10:18:24 fertilizer, but received only 4700, while at the bank the record shows 6186 bags! You can see this discrepancy. We also ordered 1400 bags of CAN fertilizer but we received 750 bags (each bag weighs 50kg). This trend causes the Cooperative Society to use internal sources of income to repay bank debts unnecessarily which threatens the sustainability of the Cooperative Societies.*

Thus for both sunflower and tobacco, those who supply the inputs are not fulfilling the terms of the contract. If this continues, resentment will increase, and eventually the contracts will collapse.

### **Farmer Organisation and Commitment to Contract Agreements**

A contract can fail due to bad practices by either party. In the case of sunflower, some of the contracting firms are small private enterprises. They are capital constrained and may find themselves unable to meet the expectations and obligations specified in the contracts, or to obtain the quantities of seeds and other inputs they have contracted to supply to farmers. If farmers feel that the contractors are not doing what they agreed to do, they may side-sell their produce to different buyers even though they had signed a contract promising to sell their produce to the firm who gave them the inputs. Against this background, contract buyers, in some cases, have deliberately chosen not to supply inputs to some farmers as a way to minimize their losses.



On the other hand, inquiries as to why farmers do not honour the contracts and do side selling revealed that farmers have little feeling that they own, and are equal partners in, the contracts. The explanation for this appears to be rooted in the way the contracts are formulated. Village meetings held shortly before the farming season commences appear to be the only times when farmers are involved in negotiation of terms of contracts. Farmers are not sufficiently involved. Firms dominate the process. A farmer is just asked to accept or reject the terms and conditions of contracts prescribed. In general, farmers are not involved in the important stage of contract design. This is expressed by the fact that none of the sunflower farmers, when asked during the survey, could produce a written copy of the contract he/she signed. The only written contract document left with a farmer is a sheet on which they sign to acknowledge receipt of inputs supplied, such as seed or canvas sheets.

Similar issues arise with tobacco. The power lies with the purchasers and those who decide the grades of individual leaves and bales, and farmers often feel disappointed and cheated.

Thus for both crops there is a significant imbalance in the contract between farmers and contracting firms. This imbalance could also arise from farmers' own obvious weaknesses - in the case of sunflower because most of them are not organized in strong producer groups.

## **Conclusions**

Tobacco and sunflower are at the extremes of contract farming in Tanzania. For growing tobacco, the contracts are very strong; for sunflower they are extremely weak. But many of the challenges are similar. Both crops are highly successful in national terms, with quantities produced rising fast. But if farmers lose trust in the marketing arrangements, they will, if they can, sell their crops outside the contracts. In the extreme case they will not grow the crops. In the case of tobacco, the rigid arrangements have made side-selling difficult, but

the farmers do not understand the grading systems and often feel cheated in the prices they get.

Contracts are an essential part of any form of marketing that involves credit. But all contracts depend on trust, and trust can easily be lost. Once trust is lost it is hard to rebuild it. In the case of agricultural contracts, if companies do not deliver the inputs or services they have contracted to supply at the agreed times and with appropriate quality, some farmers may resort to side-selling. If they get away with this, then other farmers will do the same, and the contractor who supplied the credit will not be able to continue. There has to be some remedy, or penalty, if either side of a contract does not carry out what they agreed.

In the case of sunflower many farmers signed contracts in order to be sure of getting access to hybrid seeds. However, many farmers did not get the seed they were promised, and some resorted to side-selling, and there are now few farmer groups. If this continues or expands, it will drive the companies that supply inputs and the banks that support them out of the market.

For tobacco growing small farmers have to be members of farmer groups, which are grouped into primary cooperative societies. They sign a written contract, and get paid according to the grades of tobacco they produce. Inputs are bulk purchased by the cooperatives, and they recover their money when the tobacco is sold. The crop is purchased by just four companies in the whole country, but these have built up international contacts, and learnt how to act locally, and under this arrangement production has expanded.

But the survey results show that this is not working well. Many farmers do not understand or trust the grading system, which is complicated and open to abuse by some of those

involved. They feel cheated over prices, and the cooperatives have not always delivered the inputs as and when needed.

The system puts power into the hands of the purchasers. They agree the prices, and grade the crops, and it is very difficult for farmers, and even for the Tanzanian government, to know if these prices are fair. This is made more difficult with companies based in the USA or Japan, who are among the few companies in the world that have the trust of the big cigarette manufacturers, and the necessary personal contacts to make forward contracts, i.e. to agree to supply the tobacco before they have purchased it. The example of cotton, where many ginning companies are now on lists of companies that cannot be relied on to deliver contracts, shows the dangers.

There is therefore pressure to simplify the grading system, to encourage more companies to enter the market and purchase the crop, and to allow farmers to have credit to purchase inputs from suppliers directly, rather than through the cooperatives. Any of these changes runs a risk of destroying the system which has been built up successfully over 60 years. If more companies enter the market to purchase the crop, some may take part in side-selling, and thereby help farmers to avoid paying back their credit, as has happened with cotton in the Lake area. The grading system could no doubt be simplified, but if it is allowed to fall into disrepute, Tanzania will lose its reputation in international markets as a reliable supplier of carefully graded tobacco.

Any government intervention must be very careful with both these crops. For the sunflower crop, the companies who multiply the hybrid seed could give priority to the farmer groups. If farmers are not able to organize themselves in farmer groups, it may be possible for them to be supplied with fertilizers and improved seeds through Warehouse Receipt Schemes. For the tobacco crop, the grievances of the farmers must be addressed, but it is also necessary

for the relevant authorities to make sure that the farmers understand how the system works. They need to work with the cooperatives to expose any farmer who is found to be involved in side-selling to avoid repaying a loan. It would be very disappointing if either of these crops, both success stories, lost their markets because of failures to understand and enforce good contracts.

Some of the literature on contract farming argues that private firms are generally more trustful and effective than public agencies in delivering the services provided in the contracts (e.g. Umali-Deininger 1997; Bellemare 2010). But the cases of the sunflower farmers and the cotton farmers in the areas around Lake Victoria show that private traders can also let the farmers down.

Farmers need more information about prices. In the case of sunflower they should be given higher prices for clean, dry seed. With tobacco, the mechanism of setting indicative prices is transparent, through a forum that combines key stakeholders in the tobacco industry, but the purchasers are able to influence the prices they would pay more than they would in a more competitive market (Gereffi 1994). The cooperatives need, access to independent information about world prices, information about what farmers are paid in nearby countries such as Zimbabwe and Mozambique, and to work with agents in these countries to maximize the prices paid to the farmers.

Taking a broad view, contracts in agriculture are not going to go away, but they can easily go wrong. In future years, more production will be directly commissioned by processing companies in Tanzania or overseas, and supermarkets will wish to purchase fruits and vegetables from reliable sources. But those who are negotiating contracts need to be fair to both sides, for if farmers feel they are being exploited and their grievances are not addressed, they may walk away.

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