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Kenya: a Company, a Cooperative and a Family

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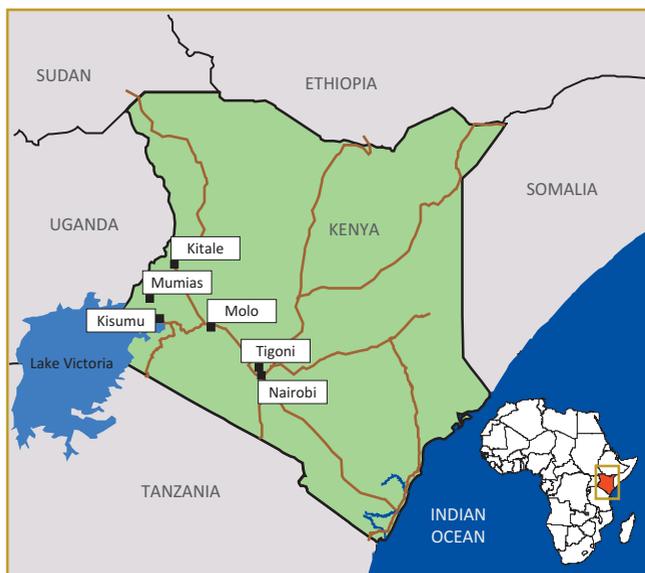
9.1 Introduction

9.1.1 Agriculture

Eighty per cent of the people of Kenya make a living from agriculture, but for 60% it is a precarious life of survival on less than a dollar a day. New, appropriate technology would increase agriculture's current contribution of 24% to the gross domestic product (Republic of Kenya, 2009).

Kenya can be divided into four agro-ecological zones, namely: (i) high potential (a) mixed farming (b) cereal and dairy; (ii) marginal agriculture; (iii) agro-pastoral; and (iv) mostly pastoral (Republic of Kenya, 2009). The enterprises described in this chapter are all in the high potential, high altitude zone, with relatively high rainfall, high population density and constant migration. Here most seed technologies have been tested and adopted since the colonial period (Misiko, 2007).

Since the colonial period, maize and beans have been popularized in Kenya along with cash crops such as coffee and tea. After independence, policies have neither evolved nor been implemented to promote other crops aggressively (Misiko, 2007). Compared with maize, groundnut or rice with established seed and commodity marketing channels, soybean, for instance, has a long way to go in improving the marketing links between farmers in rural areas and processors, both large and small (Misiko, 2007; Tinsley, 2009).



On the other hand, potato has enjoyed a vibrant existence especially because of its demand in both rural and urban centres. This vibrancy, however, is often curtailed due to the unavailability of quality seed.

Healthy seed of high yielding varieties will be key to increasing agricultural productivity. While the world seed market is worth about \$30 billion, sub-Saharan Africa's share is a mere \$800 million, 3% of the world's total. Kenya is a middle range key player with a \$42 million seed market (Republic of Kenya, 2009), next to South Africa (\$160 million), Morocco (\$160 million), Egypt (\$140 million), Nigeria (\$120 million), Zambia (\$15 million) and Malawi (\$10 million).

9.1.2 Seed systems in Kenya

Informal sector. The diverse informal seed sector obtains planting material from farm-saved seed, farmer-to-farmer exchange, local markets, NGOs, community-based organizations (CBOs), entrepreneurs and the formal sector. The informal sector includes any seed producer, company or dealer who is not registered with the Kenya Plant Health Inspectorate Service (KEPHIS), including relief agencies and major flower firms who supply seed of unknown quality.

Formal sector. The formal sector includes donor agencies, KEPHIS, the Plant Breeders Association of Kenya (PBAK), the Seed Trade Association of Kenya (STAK), agents, sub-agents and agro-dealers. It is broadly governed by several laws, namely the Plant Protection Act (CAP. 324); the Agricultural Produce Export Act (Cap. 319), the Seeds and Plant Varieties Act (Cap. 326); and the Seeds and Plant Variety (NPT) Regulations, 2009. These laws are enforced by different agencies, besides KEPHIS (Republic of Kenya, 2009).

KEPHIS is the regulatory body established in 1996. It has played a critical role in streamlining operations of the seed industry to ensure that farmers have access to certified seed. It has overseen the growth of seed companies operating in Kenya, from a mere 18 in 1996 to 73 in 2010. This growth has seen local seed companies increase and dominate local seed business. Over this period, certified seed production has tremendously improved. For instance, the rejections in seed crop fields during certification reduced from 30% to 15%, while seed lots not meeting national standards have recently reduced from 15% to 4% (www.kephis.org).

Most of the Kenyan seed companies sell seeds for cereals, oil crops, pulses, pastures, and fruits and vegetables, mostly crops which also dominate research in the Ministry of Agriculture, KARI, the African Insect Science for Food and Health (ICIPE), International Potato Center (CIP), International Center for Tropical Agriculture (CIAT) and other research institutions.

Producers of open-pollinated varieties are CBOs, small or medium-sized enterprises or small units at the Kenya Agricultural Research Institute (KARI). Large companies that have ventured into OPVs have either opted out or scaled back due to low profits. CBOs and national institutions such as KARI and the Agricultural Development Corporation (ADC) are driven more by social responsibility than by profit, i.e. to grow quality seed for family farms. The bulk of seed certified by KEPHIS is hybrid maize (Table 9.1).

Table 9.1. Seed of crops certified (tonnes) in Kenya, 2004–2009.

	2004	2005	2006	2007	2008	2009
<i>Maize OPV</i>	562	464	244	473	2	138
<i>Maize hybrid</i>	23,686	22,545	26,987	27,989	22,698	29,264
<i>Beans</i>	153	164	179	307	457	378
<i>Sorghum</i>	506	350	539	544	606	3,215
<i>Millet</i>	50	65	33	8	13	27
<i>Soybean</i>	0.1	–	0.5	2	–	–
<i>Groundnuts</i>	–	1	11	2	–	4
<i>Cowpeas</i>	191	89	103	176	145	166
<i>Green gram</i>	–	12	25	36	115	124
<i>Pigeon peas</i>	21	19	7	8	4	8
<i>Potato</i>	93	62	410	225	362	489
<i>Total</i>	25,322	23,922	28,719	30,159	24,606	33,912

9.1.3 Policy

The seed sector in Kenya is regulated through the Seeds and Plant Varieties Act, which allows any producer, processor or marketer of seeds that meets the standards and requirements to register as a seed enterprise (KEPHIS, 2008).

Seed certification. KEPHIS certifies seeds of both hybrid and open-pollinated varieties. Most material submissions to KEPHIS come from KARI (57 submissions), the Kenya Seed Company (41), Leldet Ltd (17), the University of Nairobi (15) and Western Seed Company (six). KEPHIS handles mostly maize seed, whereas potato accounts for less than 3% of the entries.

Potato is logistically complex to inspect and certify because the fields are often small and scattered and the bulky seed samples are difficult to carry back to the lab. Sampling and analysing are important because potato has many seed-borne diseases, so seed certifiers often have the unpleasant task of rejecting a smallholder's seed plot because of disease. The main institutions producing and distributing certified seed potato are the ADC and KARI-Tigoni, while soybean seed is handled by CIAT.

Regional harmonization. Kenya belongs to several African associations that support agriculture, including the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), which has as one of its projects the harmonization of seed policies and regulations among member countries. However, Kenya claims to be the only Eastern African country that follows OECD seed standards. Kenya's seed testing laboratory is accredited according to the strict rules of the

ISTA – International Seed Testing Association (KEPHIS, 2009). The lack of compliance among the other countries hampers formal seed trade in the region.

9.1.4 Seed use and demand

Maize. Sixty per cent of Kenyan farmers use certified maize seed, mostly hybrid, at least some of the time. Seed enterprises see OPV maize seed as unprofitable and few companies produce it; 80% of the total supply of maize seed comes from the informal sector. Most Kenyan farmers usually keep their own seed, often selected from hybrid harvests, to be used in two or even more subsequent seasons (Mango and Hebinck, 2004).

In 2008, only 9% of Kenya's seed imports were maize, mostly varieties not found locally, but 76% of all seed exports were maize as well (KEPHIS, 2008) because Kenyan maize seed was competitive in the EU, Japan and elsewhere.

Soybean. The national demand for soybean or derived products is at least 100,000 tonnes per year (Tinsley, 2009), mostly for industry (e.g. for animal feeds) and for schools and refugee camps. Food in which soybean is an ingredient is not in demand by households. Most soybean in Kenya is imported from Uganda, Malawi, Brazil and Argentina, so capacity building along the value chain is needed (Misiko, 2007).

Potato. About 59% of the farmers never renew their seed potatoes. Those farmers who do renew their seed potatoes do so after an average six seasons, so only 7% of the seed stock of Kenya gets renewed each season from any of the possible sources outside the farmer's own farm (Gildemacher *et al.*, 2009). Seed potato exports were modest, even though potato is the second biggest crop in Kenya, because only about 1% of seed potato required was certified, far below domestic demand (Guyton *et al.*, 1994; Republic of Kenya, 2007).

Case studies. This chapter presents three case studies. The Western Seed Company is one of the few seed companies in Kenya that produces OPV maize, besides hybrids. Western Seed produces seed of several varieties of OPV maize, showing that it is possible to run a large, successful OPV seed business, even if it is a challenge. Second, the Mumias District Federation of Soybean Farmers (MUDIFESOF) is a promising CBO, the only one expanding its seed production. It started as a CBO before producing seed and enjoys a lot of support from a research institution, both of which are probably important for its success. And, third, Sungus Enterprise is a thriving family business that produces clean seed potato.

9.2 Western Seed Company

9.2.1 History

Western Seed Company Ltd was founded in 1986. In 1990 it started producing seed of OPV maize varieties grown in western Kenya as well as new varieties from national research. It targeted smallholders by producing seed of robust, early maturing, disease-tolerant varieties, adapted to dry areas and wide agro-ecological zones.

Western Seed now reaches 200,000 farmers through its network of distributors. All of its seed is produced in Kenya, including hybrids. Most of Western's varieties are developed through its own research programmes or through collaboration with research institutions such as ICIPE and KARI.

Farmers prefer the company's hybrid maize WH502 over other varieties because it is resistant to the parasitic striga weed, maize streak virus and grey leaf spot and is drought tolerant. Western Seed has many other successful hybrid maize varieties, better known than any of its OPVs. However, Western Seed has produced several of its own OPV varieties, besides researching and producing sorghum, cowpea, common bean, pigeon pea, sunflower, amaranth, green gram and millet. Besides its own lines, Western Seed is successfully collaborating with KARI and other research institutions to market other OPVs (www.westernseedcompany.com).

According to its director, Syed Osman Bokhari, the OPV varieties earn the company less than 5% of its profits. In 2009, 400 tonnes of WS909 OPV maize seed were earmarked for an NGO, which failed to collect it. The seed was burned to avoid extra costs of storage (which needs extra electricity and manpower).

Mr Osman explained that farmers' preferences for hybrid seed were based on logical calculations of benefits. For instance, 2 kg of OPV seed costs KSh 200 (\$2.70) and hybrid seed costs KSh 240 (\$3.20). When planted on 1 acre (4000 square metres), a farmer needs 10 kg of seed and will therefore only spend an extra KSh 200 (\$2.70) on seed when planting a hybrid. This, however, translates into an extra average of 15 bags (1350 kg) of maize yield per acre, representing an average KSh 35,000 (\$467) more in the value of the harvest per acre, at recommended rates of fertilizer. The yield differences between certified OPVs and farmer-saved seed under smallholder conditions are not documented, though farmers in Mumias believe there is little difference.

Though they are not as profitable as hybrids, Western Seed discovered that OPVs have a unique niche when adapted to smallholder fields plagued with drought, infertile soil and the striga weed. Western Seed explains that it is comparatively easier and even cheaper to deal in OPVs with existing extra advantages, rather than to develop hybrids with similar or better capacities. The company is therefore investing in research to develop quality protein OPV maize varieties (e.g. WS104), adding qualities that do not already exist in OPVs. These OPV lines are developed as part of the company's corporate social responsibility, reflected in their slogan of 'bringing technology to the farmer'. OPVs turn out to be a successful marketing scheme (they are cheaper and offer added advantages), now enjoying brisker sales among smallholders, who are 99% of the company's clients.



Western Seed Company has been in business for about 25 years. Although it started producing OPV maize, this now counts for less than 5% of its profit.

9.2.2 Structure

Management. Western Seed Company has 50 staff, a managing director and two directors who oversee five departments: marketing, research and farming, processing, administration and sales support. There are no separate departments for different crops or for OPV and hybrid varieties. They have many agents and agro-dealers around Kenya.

Outgrowers. KEPHIS inspects and certifies seed of the company's outgrowers, a few hundred large-scale farmers and companies in Western Kenya near their facilities, who have proved that they can honour contractual obligations. Western Seed Company provides foundation seed, training and follow-up and buys back seed at competitive prices. The outgrowers are not organized as a group.

Land. The company leases thousands of hectares of land for research on their own and with research centres and for growing seed. Most of the seed land is in Trans Nzoia district, which has fairly good roads leading to Kitale town, where Western Seed is based.

Infrastructure. Western Seed has all the necessary facilities, including modern laboratories and seed processing units, huge storage facilities, ample machinery and a packaging unit. The company maintains multi-tonnage lorries and other vehicles, specialized field production equipment and loading facilities. From its headquarters in the small, agricultural city of Kitale, Western Seed has access to roads, electricity, suppliers and research. Western Seed invests constantly in upgrading its facilities.

Farmers' feedback. The company gets smallholder feedback through its extensive network of seed dealers and by interacting with farmers during field days, demonstrations and open discussions. This allows them to learn about farmers' needs for new varieties and other corporate services (see Box 9.1).



Maintaining and upgrading the infrastructure and producing the seed that farmers want are key to staying in business.

9.2.3 Cash flow

Western Seed Company faces competition from multinationals, CBOs, the Kenya Seed Company and farmers. It adds or drops seed of particular varieties, usually based on research and sales statistics. It keeps strong capital reserves to manage risk. It does not have insurance for its seed farms or for outgrowers. All seed ventures are prone to floods, drought and theft, driving up insurance premiums.

Western Seed estimates that seed demand in Kenya is increasing and still unmet. This is based on three observations: first, their distributors finish their stocks early

and clients are still looking for seed; second, the company's output has been increasing steadily; and, third, the surveys done by their own marketing department. So even with the existing competition there is little worry for a well-run company.

Western Seed Company's main concerns are production costs (electricity) and targeting the right clients by producing the seed they want rather than simply producing good seed. It has strong flagship varieties so they can target certain niches. For instance, WH502 is preferred for its high yield. Farmers in Mumias said it 'is voluminous' and good for the market. Most farmers in Kenya sell their produce in 2 kg tin or plastic containers (locally called *koro-goro*). So farmers sell maize by volume, not by weight. Farmers also like WS502 because it is adapted to local conditions, e.g. low rainfall and the parasitic striga weed. Its main competitor is the hybrid 614D from the Kenya Seed Company, which is popular because of its taste and heaviness – it satisfies hunger. Western Seed targets client niches (e.g. for market, for roasting) for farmers who do not necessarily seek more seed but want seed with unique advantages.

Western Seed Company believes that seed has to be affordable and being near its main buyers in western Kenya is a huge advantage. Most of the smallholders who buy its seed are in North Rift, Western and Nyanza Provinces. Western Seed also prices its seed to reflect its quality and its advantages, such as resistance to striga and high yielding capacity.

Cash sales only. Western Seed Company is the only seed company in Kenya that prints recommended prices on its packages. The company's annual customer base of 200,000 farmers is growing. The sales department ensures that the seed prices do not discourage buyers while still ensuring a profit margin for agro-dealers. Wholesale prices vary depending on the reliability of the agro-dealers and their annual seed turnover. Sales representatives earn a commission on each seed sale and Western Seed staff monitors seed circulation through visits. Retail prices are the same all over Kenya, since smallholders insist on paying the price on the seed package. Western Seed does not give agro-dealers credit; all sales are cash and carry. This is quite an achievement especially compared with Nigeria (Chapter 4) where companies are forced to sell most of their seed on credit.

Box 9.1 The ideal variety: does it exist?

On 2 February 2010 Michael Misiko met with a group of maize farmers in Mumias to learn why open-pollinated varieties (OPV) from Western Seed Company are used by farmers. Farmers easily recalled the certified OPV Katumani. Informants remembered the hybrids more, especially the striga-resistant WH403 and WH502, which they preferred for its high yield, big cobs, uniform bright colour and drought tolerance. But WH403 was not available.

Nor did the farmers know well how to tell Western Seed that WH502 rotted after heavy rains. 'It opens at the tip ("mouth") and is not good in long rains.'

The farmers also liked hybrid 614D from the Kenya Seed Company, because it is 'heavy, and good tasting'. Participants were willing to pay extra for it, and for WH403. They grow well during the first season, and at higher altitudes.

The farmers appreciated all three of these varieties and did not rely on any one seed source or type; none of them was the ideal variety.

They had all learned about the varieties at demonstrations, from FM stations and by word of mouth.

9.2.4 Marketing

Western Seed Company does not retail any seed outside its facilities in Kitale. Marketing was simple when the company was young. As the company grows, it relies more on a network of distributors and agro-dealers, who are all trained by the company. It also relies on its reputation and trust from clients. Therefore the main task of the marketing team is to ensure that the company brand is unique and known to as many people as possible, through the media and marketing channels, but more critically through effective communication with the government, KEPHIS, research and development partners and especially farmers. The company is also helped by client loyalty and by word of mouth advertising.

On-farm demonstrations provide technical advice for smallholders on seed, fertilizer, agrochemicals, etc. Field training strengthens loyalty and retains old customers. Other information channels are Agricultural Society of Kenya (ASK) shows, open community (*barazas*) meetings, farmer field schools, leaflets, field days, open days, newspaper and radio – especially regional vernacular ones such as West FM.

Western Seed's reputation helps to spread every new variety that is released; clients just want to try it. The most successful agro-dealers are usually the ones who help push new releases. Recognizing this, the company's staff trains them to use best business practices and to provide useful feedback for Western Seed.

Western Seed Company's consistent and recognizable packaging allows farmers to identify their seed, reducing scope for counterfeiters and cutting packaging costs (e.g. by minimizing redesign costs). The company has kept a specific label and colours for a long time, and uses a particular type of thread and paper material. Customers and government agents easily recognize the simple package, which is duly certified and stamped by KEPHIS (KEPHIS, 2009: 6). The company adheres to regulations, simplicity and client loyalty to beat counterfeit seed.

9.3 Mumias District Federation of Soybean Producers

9.3.1 History

Mumias District Federation of Soybean Producers (MUDIFESOF) is a young, community-based organization (CBO) with 31 members. It became known as MUDIFESOF after researchers identified it and when it was registered under the Social Services Department of the Kenya government in 2007. Before this, its members collaborated in many other activities, including seed production. The Federation works closely with several supporting agencies, especially CIAT, but also the Ministry of Agriculture, KARI and the Western Region Christian Community Services. This case illustrates the critical role of community-based seed enterprises, and why they may run out of steam over time.

MUDIFESOF is based on organized leadership and on the technical and financial support of CIAT for soybean varieties, in the form of training and \$3000 annual support (ended in 2009). CIAT supports the introduction of new soybean lines, especially high yielding ones. MUDIFESOF supplies its seed to thousands of farmers from Mumias and beyond, including those working with KARI, the Lake Basin Authority and other CBOs. Soybean is a relatively new crop among smallholders, introduced into Kenya in the 1970s, but never popularized.

9.3.2 Structure

Management. MUDIFESOF's 31 members include a chairman, a secretary, a full-time caretaker (who looks after the buildings and equipment) and five representatives in Mumias District (one in each division), who mobilize seed growers, some of whom are not members of MUDIFESOF. CIAT gave all the members training in seed production, while KARI taught them processing and marketing. The members have taken further training as needed, e.g. on new diseases, pests or agrochemicals. MUDIFESOF outgrowers (non-member seed producers) have not all been trained and have to be closely supervised while the crop is in the field. This involves roguing off-type plants.

In 2009, MUDIFESOF produced 2 tonnes of soybean seed which was uncertified, because they are not registered with KEPHIS. The five representatives monitored farmers' fields to see that seeds are not mixed. MUDIFESOF provides quality seed of new lines, based on customer variety preferences, determined by highly valued variety characteristics (e.g. amount and taste of soya milk) and maturity rate. Varieties that can be stored for up to 12 months are preferred over ones that last only about 6 months.

Infrastructure and equipment. MUDIFESOF's storage facility is a simple room, with no temperature regulation and with no special storage bags (e.g. sisal). Bags usually carry handwritten labels that indicate the variety names. Seed characteristics are not further specified, but are told to farmers along with other verbal explanations on crop management practices.

MUDIFESOF relies on mobile telephones, and it is connected to the national electricity grid. The limited storage capacity is not a serious obstacle as the seed moves fast, especially because buyers do not line up at planting only but rather buy seed early to store it themselves. The most sought-after varieties are still under-supplied and are usually bought immediately after harvest.

The CBO has basic sealing equipment and a standard kitchen fridge for storing about 30 litres of soya milk. It has a machine to make soya milk and other soybean products. MUDIFESOF's demand for grain from farmers is increasing. This grain is processed into products such as milk and flour. This in turn has led to the growth of demand for soybean seed, which is supplied by MUDIFESOF. A similar positive value chain effect on the seed market was observed in Nigeria, where a brewery needed a regular supply of sorghum of a particular variety (Section 4.6).



The community group in Mumias has received ample support from research to improve the use of soybean by rural communities. Apart from processing, the group has also embarked on seed production.

9.3.3 Cash flow

MUDIFESOF sells most of its seed for cash, but sells a small amount to trusted farmers on credit. They also sell soya milk and soya flour to local consumers for cash. They receive soybean grain from farmers. If they have sold seed on credit, farmers can repay in grain, although MUDIFESOF prefers cash sales, which are safer. MUDIFESOF also processes and packages other grain for farmers, and can label these soybeans in the other farmers' names. This provides cash for MUDIFESOF, but gives potential competitors a leg up. From 2007 to 2009 MUDIFESOF also received \$3000 per year from CIAT, and still receives some support from KARI, for training, and this helps them sell seed to other CBOs.

9.3.4 Marketing

MUDIFESOF more than doubled its seed sales since 2007, mostly to smallholders. Their selling point is straightforward; the new varieties can fix nitrogen without inoculation, are tasty and high yielding, suppress striga weed and generate income. Besides, the varieties are from renowned research institutions. KAPP and MoA had several field days, promoting soybean as nutritious food for HIV patients and children.

MUDIFESOF has a front office for sales, promotion and collaboration. Other CBOs are copying MUDIFESOF's style, but they are still not serious competitors and demand for soybean seed is growing. This demand is reflected in the rapid growth of MUDIFESOF seed production: 2007 – 1.5 tonnes, 2008 – 2.7 tonnes, 2009 – 5.4 tonnes and in 2010 it expects to have 7.5 tonnes. Although this seed is not certified, a growing number of clients were associating MUDIFESOF with certain varieties, especially SB25 (Namsoy) and SB3, demand for which has soared since 2007.

The price of seed should be at least twice that of grain, considering the inputs required and the benefits of quality seed. In February 2010 a kg of soybean seed at Mumias town was selling for KSh 80 (\$1.10), while grain was half that price. Because soybeans are new in Kenya, few enterprises deal in them.

MUDIFESOF built its reputation by giving seed on credit to smallholders, to be repaid in cash or in soybean grains. But customers may mix seeds, a serious challenge beyond merely repaying the debt. This CBO is so dependent on the community's goodwill that they never reject seed from a producer. Mixed or low quality grain is often processed and sold as another product, not as seed. MUDIFESOF also offers packaging and processing services for other community businesses like that of a local soyabean entrepreneur named Alice. The risk is that MUDIFESOF is helping Alice and the others become more serious competitors.

9.4 Sungus Seed Potato Enterprise

9.4.1 History

Sungus Enterprise produces clean seed potato in Molo District under the management of Anne Mbugua, the wife of Mr Sungus. Seed potato is part of a larger family business that also includes ware potatoes, a dairy farm, a registered hotel and other

activities. But as recently as 1985 the Sungus family just had a conventional potato farm. It steadily evolved until 2005, when Anne drastically transformed it after taking a GTZ-led ‘clean seed potato production’ course. Mrs Mbugua qualified for the GTZ training because of her farm’s potential to produce clean seed, e.g. she uses about 2 hectares of land at a time to allow for crop rotation.

9.4.2 Structure

Management. Sungus is a family enterprise, with 15 regular employees producing seed potatoes. More workers are hired for harvesting, mostly people who have worked for Sungus before. The permanent and temporary workers receive all their training on the job. Only one variety may be planted per plot at a time, which happens monthly. After two potato crops Sungus plants oats and feeds them to the dairy cows. This helps to cut down on costs and disease and reduce volunteer potato plants from the field, so that Sungus can plant a different potato variety after harvesting the oats.

Sungus values hard work and commitment. Anne has learned to use positive selection, which means identifying the best plants in the field and keeping their tubers for seed for the next season. The healthy plants are marked with a peg and harvested separately. She also uses negative selection, removing sick plants. Such selection requires patience and skills.

In recent years, Sungus has mainly produced Sangi seed, i.e. seed of a newer variety whose origin and source is not clear. Sungus bought Sangi from a seed seller and multiplied it. Some people perceive Sangi as unscreened and dangerous, of poor storage abilities and from an unknown source (Organic Farmer, 2009). But farmers like this red-skinned variety because they say it is tolerant to poor soils, high yielding, disease resistant, early maturing and tasty. It is now Sungus’s best-selling variety. But Anne thinks demand for Sangi may decline. It sprouts fast, so it has to be sold quickly, or distant clients may need to transport it and store it carefully, in a slightly humid room which is not too dark (‘diffused light’). Sungus also produces other red-skinned varieties such as Asante, Kenya Karibu and Dutch Robin (from ADC). Sungus produces small quantities of the white-skinned variety, Tigoni (from the KARI potato research centre in Tigoni). Much of Sungus’s source seed is foundation seed from KARI and ADC.

Sungus perceives certification as too demanding and costly. The lack of certification from KEPHIS means that it is against the law for Sungus to sell seed from its premises. As Sungus seed enterprise is not inspected, diseases such as bacterial wilt, which may show no symptoms at high altitudes, may go undetected.



Sungus is a family enterprise devoted to producing quality seed potato.

Land. Sungus has 24 hectares of farmland, and rents another 6 hectares. Seed potato is planted all year round, 2 hectares every month throughout the year. With good planning and good weather, monthly planting allows Sungus to manage with minimal seed storage.

Infrastructure and equipment. Sungus has several home stores big enough for several tonnes of seed, which are still not enough, even with staggered seed planting. It plans to expand and put up a recommended potato seed storage facility. Sungus hires machinery, especially tractors for ploughing. But Sungus is planning to buy machinery, especially for harvesting, the most expensive and labour-demanding activity.

9.4.3 Cash flow

Sungus farm is run as a professional seed business. Anne keeps the capital separate from other entities. Sungus does not attract clients through credit or offer after-sale services. However, credit of up to 20% of the price is occasionally offered to loyal clients.

Sungus prefers to ‘set standard prices that encourage clients to return’ and is not biased in favour of friends or kin. Sungus sells a 50 kg bag of seed potato at KSh 2000 (\$27), whereas KARI sells a 50 kg bag of foundation seed for KSh 2200 (\$30). Because KARI’s seed is subsidized and of excellent quality, there is never enough of it to go round, which is why Sungus can charge nearly as much for their seed as foundation seed.

Sungus’s most important strategy to spread cash flow is staggered planting. Other strategies include building capital reserves, learning new seed production and management skills, collaboration with research and development institutions, diversification of varieties and strict adherence to technical advice, which minimizes disease and loss. Sungus has shied away from seeking a commercial loan. Anne believes that bank loans are risky and that it would be hard to persuade a bank to give her a loan.

9.4.4 Marketing

Kenya’s demand for good ware potatoes is high and rapidly increasing; Sungus’s clients sell all their produce quickly and profitably. According to Sungus, high prices for ware potatoes encourage farmers to sell all their produce and not save any as seed. Seed potato storage, transportation and management are not as straightforward as with cereals or legumes. For instance, some of the popular varieties break dormancy fast and therefore require special storage conditions with diffuse light. So customers will buy seed potato even if the price increases. There is so much demand for seed that some ware potato merchants select small tubers and sell them as seed, even though they have not sprouted. Sometimes farmers can find no other seed when they need it and are forced to buy this seed or plant another crop.

Sungus Enterprise is situated in an area where many smallholders grow potatoes and is thus near many of its customers. Seed sells rapidly after harvest and having to tell customers that they have to wait until the next harvest shows Anne that they cannot satisfy all of the demand. It is increasingly serving larger-scale farmers and seed traders. Formal institutions, like secondary schools with school gardens, are ‘too

demanding, and often ask for post-sale services' that drain Sungus's profits or labour. For instance, secondary schools insist on physically clean seed tubers. This means Sungus has to use plenty of clean water and extra drying space.

Sungus has earned a good name through discipline and reputable management. It adapts fast and is usually the first to offer clean seed of new varieties in commercial quantities. Sungus's customers learn of new materials from the employees, from Anne herself, but mostly through her loyal clients and her network, including MoA staff, traders and researchers.

Because Sungus is unable to certify its crop, it means that it cannot brand or label its potatoes as seed tubers. It does all the packaging in plain new 50kg bags. Marketing is through word of mouth, by customers, employees, social networks and links with researchers and institutions. Sungus is proud of the trust that it has earned by producing clean, uncertified seed.

9.5 Challenges and Strengths of the Seed Enterprises

Western Seed is challenged by its smallholder customers, who save seed rather than buying it all every year, and who cannot afford all the fertilizer that would help certified seed to reach its full yield potential. It is difficult and expensive to develop even one new variety for marginal areas, and Western Seed cannot invest in breeding varieties that customers may not buy.

Besides the usual shortcomings associated with community-based enterprises, such as capital constraints, low technical capacity, unrealistic expectations, blurred structure and dependency on aid, MUDIFESOF faces some challenges unique to soybean production, such as unfamiliarity of consumers and poor value chain development. It will have to learn to manage capital and labour on a larger scale if it is going to be a major player in the seed sector in Kenya. They will need to focus more on their brand outside their immediate locality. Their name is unfamiliar and difficult for clients to remember or understand. Clients simply referred to MUDIFESOF as 'the soybean group'. Compared with Sungus or Western Seed Company, 'MUDIFESOF' is going to be difficult to establish as a brand name. However, having a well-known brand name also makes an enterprise vulnerable to counterfeiters, such as the ones selling poor quality seed in falsified bags labelled 'Western Seed Company'. Catching counterfeiters is easier said than done.

Certification is easier for soybean than for potato. Compulsory certification for seed sales puts enterprises like Sungus at a disadvantage more than those producing seed of other crops. Community-based organizations and family seed enterprises can provide clean seed and serve smallholders, especially through partnerships with research institutes and seed companies, and should not be forced into certification.

In spite of (or perhaps because of) Kenya's advance in seed legislation, there are still inconsistencies in the legal and regulatory framework. The seed industry is governed by several acts of parliament and enforced by different institutions besides KEPHIS. This duplicates efforts and creates conflicting mandates. For example, fertilizer quality and use fall outside the KEPHIS mandate and yet they can directly or indirectly influence seed quality.

MUDIFESOF and Sungus do not have easy access to affordable credit. They see credit as risky, and they avoid debts.

A large supply of cheap, informal seed (sold as grain) drives down seed prices and discourages investment by seed enterprises, because poor customers are attracted by low prices. Electricity and construction are expensive, further curbing investment. There is also the low technical capacity of the research and government institutions, especially for potato, but also for all other crops. Available staff of government and research institutes cannot, for instance, supervise or offer useful technical follow-up for small enterprises that do not have production capacity. Much of such support is through collaborative programmes, whose efficiency is at times hampered due to ownership of material and publication issues.

Seed potato is bulky and expensive to buy and transport. Seed buyers lack seed quality information, such as the meaning of ‘certified seed’ and ‘percentage of germination’. Limited amounts of foundation seed are available. There is also a lack of capital or affordable appropriate machinery, e.g. potato harvesting equipment.

An enterprise like Western Seed has to deal with many different agencies, e.g. for fertilizer, seed certification, export, taxes, monitoring pesticide use, and other things. They find this tedious and feel that transactions would be faster if they could deal with fewer government agencies.

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