Report to

The Government of Mozambique
And

The World Bank

Review of Horticultural Outgrower Schemes in Mozambique

FINAL REPORT

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Prepared by:

ECI*Africa* Consulting (Pty) Ltd

Maple Place North
Woodmead Business Park
145 Western Service Road
Woodmead 2148
Tel: +2711 802 0015
Fax: +2711 802 1060

www.eciafrica.com

AgriDev Consult Ltd

P.O. Box 50797

Lusaka Zambia

Tel: +260 1295377

Cell: +260 977 84779

E-mail rvangent@zamtel.zm

List of Abbreviations

ACDI-VOCA	Formerly Agricultural Cooperative Development International - Volunteers in Oversees Cooperative Assistance
ACIAIM	Associacao Comercial Industrial e Agricultura dos Investidores de Manica Association of Investors in Trade, Industry and Agriculture of Manica
ADEM	Agencia de DesenvolvimentoEconomico da Provincia de Manica Agency for the Economic Development of Manica Province
ADIPSA	Apoio ao Desenvolvimento de Iniciativas Privadas no Sector Agrario Support to Development of Private Sector Initiatives in the Agricultural Sector
ASTA	American Spice Trade Association
BDS	Business Development Services
BEC	Birds Eye Chillies
CABAM	Potato Producers Association of Manica
CAC	Compania Agricola de Chimoio
CEPAGRI	Centro do Promocao da Agricultura (previously GPSCA) Centre for the Promotion of Agriculture
CGA	Central Growers Association
CLUSA	Cooperative League of the USA
DANIDA	Danish International Development Assistance
EPA	Extension Planning Area
ESSD	Environmentally and Socially Sustainable Development Network –WB
EU	European Union
EUREP-GAP	Euro-Retailer Produce working group on Good Agricultural Practices
GAP	Good Agricultural Practices
GAPI	Sociedade de Promocao de Pequenos Investimentos Small Investment Promotion Company
GDA	Global Development Alliance
GPSCA	Gabinete de Promocao do Sector Comercial Agrario Office for the Promotion of Commercial Agriculture
Ha	Hectares
HTF	Horticulture Task Force
IDG	Industry Development Group (Poultry Sector)
IFC	International Finance Corporation
Kg	Kilogram
LACCU	Lubilima Agricultural and Commercial Cooperatives Union
M&E	Monitoring & Evaluation
MADAR	Ministerio da Agricultura Ministry of Agriculture
MIC	Ministerio da Industria e Comercio Ministry of Industry and Trade
MLT	Mozambique Leaf Tobacco
MT	Metacais
MWK	Malawi Kwacha
NASFAM	National Smallholder Farmers Association of Malawi
NGO	Non-Governmental Organization
NRI	Natural Resources Institute

PAMA	Paprika Association of Malawi
PDM	Pimentas de Mozambique
POTC	Producer Owned Trading Company
RSA	Republic of South Africa
SCCI	Seed Certification and Control Institute
SFAP	Support to Farmers Associations Project
SME	Small & Medium Enterprises
SSA	Sub-Saharan Africa
TAZ	Tobacco Association of Zambia
TNS	TechnoServe
USAID	United States Agency for International Development
VAT	Value Added Tax
WB	World Bank
ZAHVAC	Zambia Association for High Value Crops
ZATAC	Zambia Agribusiness Technical Assistance Center
ZKW	Zambian Kwacha

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EXECUTIVE SUMMARY

A number of outgrower schemes in Mozambique, Zambia and Malawi were reviewed, with an emphasis on paprika and cotton, but also on covering crops such as fruits and vegetables for export, and tobacco.

In Mozambique, constraints emerging from interviews with a range of companies and several support organizations could be grouped in two main categories: business and institutional environment; and attitude and capacity among smallholder farmers.

In Zambia and Malawi, various outgrower models in the paprika, cotton, export vegetables and tobacco sectors were reviewed to identify best practices for outgrower schemes, thereby focusing on aspects such as outgrower network organization and management, group membership requirements, contract design and viability, input provision and payment modalities, extension services and costs, field practices and production volumes, purchase prices and payment modalities, and crop marketing arrangements and logistics. An analysis of the various outgrower schemes is provided, with an emphasis on the viability of smallholder outgrowers, crop quality constraints, constraints to production volumes, viability of extension and marketing arrangements, pricing mechanisms, and the role of NGOs and donors.

It transpired that the constraints to outgrower schemes in Mozambique or in Zambia and Malawi are not that different between the countries. The most important are low production volumes by smallholder farmers, low quality of smallholder produce, defaulting by smallholder farmers, and high costs for provision of extension services.

Individual companies involved in outgrower schemes have been addressing the constraints in ways that are often crop specific, and relate to the specific quality requirements applicable to the crop in question. The most demanding crops are export vegetables and tropical fruits, followed by paprika and tobacco, and cotton. In view of the quality requirements, it is not surprising to see that not all of these crops are equally suitable for production by smallholder farmers.

Vegetables and tropical fruits for export require high management levels, and are most suitable for commercial and emergent or semi-commercial production. Among support organizations there is a tendency to concentrate on smallholder farmers only, thereby ignoring the group of emerging or semi-commercial entrepreneurs, who could provide a better continuum.

Paprika and tobacco are crops that are also subject to certain quality criteria, albeit less stringent than for vegetables and tropical fruits for export, and are suitable for smallholder production, although still a high level of supervision by the outgrower companies is required. Cotton is the least demanding of the four crops, with the direct control over the production base and crop quality standards having been released partly through the appointment of intermediaries dealing with the smallholder farmers.

The one element that the various models used in the outgrower schemes for the different crops have in common is that they are all based on linkage-dependent relationships, with the companies providing inputs and technical support to the smallholder and/or semi-commercial farmers, in return for access to their produce. To facilitate working with smallholder and semi-commercial farmers, the companies have organized them into small 'interest' groups or

clubs, with the common interest being the production of a certain crop. Rarely the groups are formally registered associations or cooperatives, which is important to take into consideration when designing donor-financed support programs.

Elements of the various outgrower models are not mutually exclusive. There is not a single outgrower model that is 'the best' and would suit all crops, as different crops have different requirements. Nor are the outgrower models static; changes are being made all the time to address certain constraints.

In first instance these changes have been, and are focusing on, reducing default on credits. Little or no attention has been placed on increasing yields. Instead, outgrower schemes have focused on increasing the number of farmers or land areas under production to reach production volumes necessary for meeting capacity requirements. Increasing yields per unit area is, however, becoming ever more important in view of declining prices for the commodities on international markets and increasing costs for inputs. In the paprika industry there is now a shift towards focusing more on fewer areas with the highest potential, and attracting more commercially oriented farmers who have demonstrated ability to properly manage the crop, have the means to at least contribute towards the cost of inputs, and eventually may be able to grow the crop on a self-sustaining basis.

If an outgrower scheme is to succeed and eventually become a self-sustaining, income generating supply chain, focus has to be placed on ensuring that the right caliber producers are contracted, and there is a need for developing selection criteria to ensure that potential participants in outgrower schemes meet minimum standards. Selection criteria could include land availability, location and conditions, agricultural knowledge and experience, basic business-awareness and willingness to learn. Minimum acceptable production standards relating to yield and quality should also be developed, with farmers repeatedly failing to meet these standards being removed from the scheme to increase its sustainability. Whereas this is already happening to some extent through 'natural' selection of farmers, this issue may have to be approached much more proactively. Developing selection criteria and production standards will also assist in assessing what level of support is required to facilitate further development. For farmers to be able to make informed decisions on which crops to grow, it is important to develop transparent pricing systems.

The role of donor-funded NGOs and other facilitating organizations involved in supporting the development of smallholder-private sector linkages is often heavily criticized and needs to be reviewed. Too often NGOs have been operating in isolation of the private sector, with sometimes creating market distortions or being responsible for the establishment of subsidized competitors of the private sector, rather than being mere facilitators. Government or donor support (through NGO-type intermediate organizations) to the private sector should not result in distortions to the detriment of commercial operators. Rather than continuing in this way, funds for smallholder mobilization and capacity building could be given into the custody of the industries, with a more business-oriented approach towards issues such as farmer capacity building, extension, and marketing. There is an important role here for NGO type of organizations, but their agenda should be more dictated by the private sector and should be more demand-driven.

The issue of side-selling and defaulting by smallholder farmers featured predominantly in many of the interviews. Constraints as expressed by companies on the one hand and farmers on the other hand are often interlinked: diversion of inputs results in lower production levels,

making it difficult for farmers to pay off credits and still make a profit on the production of the crop. Farmers have a tendency of translating this into the complaint of 'too low' prices being paid for their produce, and resort to side selling of the crop to avoid repayment of credits (strategic default). Diversion of inputs, side-selling of the crop and non-repayment of credits result in companies choosing risk-averse strategies, including minimizing the provision of inputs, and scaling down extension support. This again leads to farmers complaining about the lack of credits, inputs and technical support, and contributes to smallholder production remaining stagnant at low levels.

NGO and other support organizations could play an important role in educating farmers on the effects of side-selling and defaulting, and should emphasize the positive aspects of building long-term, linkage-dependent relationships between farmers and outgrower companies. Companies should be encouraged to subscribe to a Code of Conduct, promoting fair and ethical trading with smallholder farmers, and agree to abstain from side-buying. Mechanisms to further reduce side-buying, especially by non-aligned individuals, should be developed.

Roles and responsibilities of the various parties in outgrower arrangements (processing companies, service providers, NGO and other facilitating intermediaries, farmers, government) need to be clearly defined. Based on the experiences of outgrower schemes in Mozambique, Zambia and Malawi, recommendations have been formulated.

Proposals for mechanisms for finance delivery to support the development of outgrower schemes in Mozambique have been formulated, and stress the importance of going through the private sector in the form of 'result contracts', whereby possible beneficiaries are to show a track record of their involvement with and commitment to smallholder and/or emerging or semi-commercial farmers, and are to pre-finance the activities for which financial support is sought, with clearly defined objectives and targets.

Companies should be invited to submit proposals, for the evaluation of which criteria have been suggested.

1 INTRODUCTION

1.1 BACKGROUND

The export of non-traditional agricultural products from Africa contributes to economic growth and to poverty reduction. To these ends, the World Bank assists the countries of sub-Saharan Africa (SSA) with the design of strategies for agricultural diversification and for strengthening the competitiveness of agricultural exports. The Environmentally & Socially Sustainable Development Network (ESSD) of the World Bank is now conducting a regional study of the horticulture sector in selected countries (Uganda, Senegal, Ghana, Mozambique, Ethiopia and Tanzania) to evaluate progress and review experience.

A recent report (Dixie *et al*, 2005) reviewed the history and current situation in fruit and vegetable exports from Mozambique, and assessed the future prospects for the subsectors. The overall objective of this report was to provide the Bank with the technical, economic and strategic analysis necessary to help Mozambican stakeholders and policy makers articulate a strategy for the horticultural export industry.

The report concluded that the way forward for the development of the export horticultural industry was to focus on three main areas. These are:

1. **Exports to RSA** – offers varied opportunities including extending the season of supply of raw material to processors and the fresh market, as well as product and yield advantages.
2. **Support outgrower production of suitable crops –** this would involve encouraging the establishment of linkages between outgrowers and agribusinesses that export less perishable products, or accessing markets that can accommodate family farm production.
3. **Develop exports of tropical fruits into the Middle East and Asia** – this is where the greatest potential lies, but is also where the most research and development, as well as investment are required.

In the longer term, the key issues to be addressed were identified as:

- Designing an innovative finance program for horticulture to fill the likely future gaps in the portfolio of agricultural financing schemes, and in particular to cover infrastructure, tree crops and support for agribusinesses wishing to secure supply from the family farming sector;
- Building up a stronger understanding of the markets amongst the agribusiness and farming communities, especially in the target markets, e.g. internal, regional and on the Indian Ocean rim;
- A crop development program, informed by market knowledge and particularly focusing on those crops suitable for production by smaller-scale farms, e.g. paprika, chillies, mangoes, litchi, squashes etc;
- Developing a strategy including infrastructure, trade and SPS agreements which will facilitate access to the markets to the east of Mozambique; and
- Establishing a mechanism through which interventions of existing and future projects can be better controlled and targeted using a public-private partnership approach.

Key issues to be addressed in the short term to improve Mozambique's competitive position in the three main export target areas were:

- Tackling the key constraints affecting the existing export growers, i.e. access arrangements to the South African markets, IVA (VAT) rebate on critical imports and facilitating the import of urgently required agrochemicals; and
- Building up a greater understanding of specific key issues that need to be incorporated into the industry Strategy and Action Plan, e.g. innovative finance, internal and regional markets opportunities, small-scale outgrower agribusiness operation and investment in Maputo port infrastructure.

To evaluate the above immediate issues facing export horticulture, the report recommended that five further studies were to be undertaken:

1. A survey of local and regional market opportunities.
2. An evaluation of the horticultural business environment.
3. A study of outgrower best practices.
4. A review of the current sources of finance and lending needs.
5. A study of the facilities at Maputo port and the cost of installing equipment needed to make it compliant with Japanese market standards.

The present report addresses the study of outgrower best practices. The focus of the outgrower study was to evaluate and analyze current outgrower arrangements in Mozambique, Zambia and Malawi; evaluate their impact on smallholders, agribusinesses, and service providers and other actors along the value chain; and make recommendations for outgrower best practices.

1.2 SCOPE OF THE STUDY

An international consultant performed the outgrower study in March and April 2006 over a six-week period based on the Terms of Reference presented in Annex 1. The study was guided by an initial inception meeting with GPSCA at the start of the consultancy, in which Malawi was identified as the second country to be covered next to Zambia for identification of 'best practice' models of outgrower schemes.

The study methodology used key informant interviews and focus group style meetings with farmers. Key informants in Mozambique (Maputo, Manica and Tete Provinces) were identified in consultation with GPSCA. The consultant identified key informants to be interviewed in Zambia and Malawi, as well as field visits to be made to farmers and farmer associations. For the description of outgrower schemes in Zambia and Malawi, use has been made of interview notes prepared during outgrower case studies in 2005 for the World Bank, complemented with updated information collected during the current study.

A full itinerary and list of people contacted is provided in Annex 2. A guide questionnaire was used for interviewing farmers (Annex 3), another for interviewing companies and organizations (Annex 4). Documentation made available by GPSCA and other literature collected by the consultant was used to provide background information.

The objectives of the assignment were:

i) To carry out a comprehensive review of the outgrower production systems in Zambia and another African country – concentrating on paprika, but also taking cognizance of the schemes and institutional arrangements made for other crops such as cotton.
ii) To make appropriate recommendations to improve the systems of outgrower production for horticultural export crops such as paprika, but also taking cognizance of how the recommendations could be adapted to other similar crops.
iii) To provide recommendations as to how development finance can best be applied to support companies in establishing outgrower networks in their early years, i.e. when management and support levels need to be high but output is at its lowest.
iv) To design two pilot projects in line with the World Bank's "Learning and Innovation Loan" program. These pilots would be implemented in the Manica province and in southern Mozambique.

Section 1 of the report presents a general background to the study. In Section 2 of the report a general review of literature on contract farming and outgrower schemes is presented. Section 3 of the report presents an overview of the status quo of outgrower schemes in Mozambique. Section 4 of the report presents a description of different outgrower models in Zambia and Malawi, focusing on the paprika, cotton, export vegetables and tobacco sectors. In Section 5 an analysis of the various outgrower models is presented. Section 6 provides an overview of lessons learned, and recommendations for outgrower best practices and mechanisms for applying development finance.

In consultation with GPSCA it was decided to only provide a background paper on the principles and criteria of the World Bank 'Learning and Innovation Loan' program, complemented with relevant criteria related to outgrower schemes. This background paper, presented separately, is to be made available to outgrower companies, which will be invited to submit their own proposals, rather than the consultant designing the pilot projects.

A presentation of draft findings and recommendations was made to GPSCA and other interested stakeholders at the end of the study. Following submission of the draft report, comments were received from major stakeholders. The consultant either adjusted the report or responded to the comments, as shown in Annex 5.

1.3 ACKNOWLEDGMENTS

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Lusaka, April 2006
Rudy V. van Gent

2 LITERATURE REVIEW

2.1 INTRODUCTION

Poverty reduction is one of the major concerns of policy makers in many countries in Sub-Saharan Africa. Given that in many Sub-Saharan countries the vast majority of people live in rural areas, promotion of employment and/or income generation for rural households is considered the key approach for poverty alleviation. Since the agrarian structure in most parts of Africa is dominated by smallholder production, particular emphasis is given to strengthening rural economies by supporting productivity growth in smallholder agriculture (Van Damme & Dirckx, 2000).

Meeting the challenge of improving rural incomes in Africa will require some form of transformation out of the semi-subsistent (non-market oriented), low-input, low-productivity farming systems, which currently characterize much of rural Africa, into a dynamic market-oriented sector.

Past poverty alleviation strategies through commercialization of smallholder farming have primarily focused on the promotion of a number of 'traditional' export cash crops such as tea, coffee, cotton and tobacco. Because of declining world market prices for many of the traditional export commodities, African countries are now attempting to diversify their agricultural export base and try to locate new market opportunities through crop diversification into high-value non-traditional export or niche commodities (Van Damme & Dirckx, 2000).

However, smallholder farmers often lack the financial resources to invest properly in production and marketing of both traditional commodities and high-value non-traditional exports. Access to credit is often limited by a lack of collateral or preliminary savings. There is also a lack of necessary production and marketing information, particularly for new crops and species/varieties. Uncertain and inefficient markets also undermine the ability to fully benefit from producing high-value export commodities. Coordination of production and marketing activities is crucial, especially when production is carried out by many dispersed smallholder farmers (Van Damme and Dirckx, 2000).

Efficient market linkages and vertical arrangements are generally not well developed, or inaccessible or unprofitable for individual smallholder farmers because of the small quantities they produce, and thus the absence of economies of scale. One of the main development challenges in Africa is the delivery of agricultural services (marketing, input supply, financing and other support) to smallholder farmers. Economic liberalization and institutional reform have reduced and redefined the role of the state in service provision and the emphasis is now on the emerging private sector to provide production and marketing services. Better services are needed to increase production (or arrest declining production) of traditional smallholder crops and, where appropriate, to enable diversification into more profitable, high-value cash crops (Coulter *et al*, 1999).

Research by the Natural Resources Institute (NRI) in several Sub-Saharan African countries has identified two important approaches that have the potential to deal with many of the production and marketing problems of smallholder farmers (Coulter *et al*, 1999):

- Contract farming, often referred to as outgrower schemes; and

- Cooperation through formal cooperatives, farmer associations, or farmer groups.
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2.2 CONTRACT FARMING

Contract farming has been in existence for many years as a means of organizing the commercial production of both large-scale and smallholder farmers. Interest in it continues to expand, in particular in countries that previously followed a central planning policy and in those countries that have liberalized marketing through the closing down of marketing boards (Eaton & Shepherd, 2001), as in many Sub-Saharan countries in Africa since the mid-1990s.

2.2.1 Opportunities and Limitations of Contract Farming

Contract farming refers to a range of activities taken by private agribusiness processing and or marketing companies to secure access to smallholder produce, and are often referred to as outgrower schemes. Companies provide services to farmers and in return receive access to some or all of the farmers produce. Schemes typically involve the provision of inputs (seed, chemicals, fertilizer) on credit, often with extension advice, but may also include a range of other services such as ploughing, crop spraying, provision of packaging materials, and transport of the produce. Costs are recouped when the produce is sold (Coulter *et al*, 1999). Most importantly, the schemes provide smallholder farmers with an assured market for their produce.

Well-organized schemes provide market linkages, and would appear to offer an important way in which smallholder producers can farm in a commercial way (Coulter *et al*, 1999; Eaton & Shepherd, 2001), thus promoting the smallholder farm sector's involvement in the high value export industry, e.g. the horticultural sector.

Although contracting companies provide financial support to smallholder farmers in the form of inputs, they should not be seen as (micro-) financing institutions aiming to recover outstanding credits. Instead, they are primarily interested in the product for the purpose of processing and marketing. The direct involvement of the processing or marketing companies in crop production, including provision of inputs and extension support, is more often than not out of necessity, because the production base amongst smallholder farmers is very weak. Without the direct involvement of such companies a large part of smallholder production for the markets would probably come to a halt (Agridev Consult, 2005a).

Development of contract schemes has often been limited to areas with relatively better access to markets, while productivity levels of the majority of smallholder farmers tends to remain low. The main constraints for broad-based commercialization of smallholder farmers can be summarized as:

1. Limited access to credit/financial resources to augment/capitalize farm operations and to use modern inputs and technologies.
2. Lack of access to markets and market information.
3. Lack of adequate infrastructure in the outlying areas.
4. Limited use of irrigation.
5. Inadequate advisory services.

Various studies have indicated that the potential of contract schemes is threatened by two main problem areas: contract default and the scale of farmer operations (Coulter *et al*, 1999; Stevens, 2004).

2.2.2 Contract Default

A company may break a contract with farmers, for example by failing to deliver inputs and services at the correct time, refusing to receive produce or arbitrarily raising quality standards. However, the development of competitive output markets has shifted the balance of risk toward agribusiness companies, who now have a strong incentive to maintain good relations with smallholder farmers, since this helps to secure future access to their produce. A key challenge for agribusiness companies is how to overcome the threat of farmers defaulting on contracts (Coulter *et al*, 1999).

Default can occur because of production failure or simply because farmers have sold the produce to competing buyers, partly to avoid repaying credits. The absence of a strong legal system, the lack of collateral held by smallholder farmers, and weak insurance services create considerable risk for companies entering into contract with smallholder farmers. The problem of deliberate or 'strategic' default has been exacerbated where failure to recover earlier credit has created a lax atmosphere (Coulter *et al*, 1999).

2.2.3 Scale of Farmer Operations

Potentially high transaction costs in, for example, service delivery and monitoring may result in the exclusion of smallholder farmers, especially in more remote areas, from involvement in company contract schemes. A study carried out by the Natural Resources Institute in Zimbabwe showed that in order to break even, a horticultural exporter might have to pay its smallholder suppliers less than 30 percent of the price paid to commercial farmers who delivered directly to a packing plant (Coulter *et al*, 1999).

The production risks of smallholder cultivation may also be higher, especially on rain-fed marginal lands. Larger farmers may have better crop management skills and greater access to extension services, reducing the risk of crop failure. This may tend to exclude weaker, smaller farmers (Coulter *et al*, 1999). Nevertheless, smallholder farmers have been involved in contract schemes in large numbers, e.g. in the cotton industry in Zambia, with over 260,000 smallholder farmers involved in cotton production, and the paprika sector in Malawi, Zambia and Mozambique, with between 20,000 and 30,000 smallholder farmers involved in paprika production cumulative in all three countries (see Section 4).

2.3 TYPES OF CONTRACT FARMING

Multinational corporations, smaller private companies, parastatals, individual entrepreneurs and, in some cases, farmer cooperatives can all act as promoters for contract farming activities. Contract farming can be structured in a variety of ways depending on the crop, the objectives and resources of the promoter, and the experience of the farmers. Eaton and Shepherd (2001) distinguish five different types of contract farming.

2.3.1 The Centralized Model

The most common form of contract farming is the centralized model, whereby the contracting company provides support to the production of the crop by smallholder farmers, purchases the crop from the farmers, and then processes, packages and markets the product, thereby tightly controlling its quality. The promoter may work with tens of thousands of smallholder farmers. The centralized scheme is generally associated with crops such as tobacco, cotton, paprika, sugar cane and banana and with tree crops such as coffee, tea, cocoa and rubber.

Where fresh vegetables and fruits are grown under contract, the term 'processing' may include grading, sorting and packaging as well as the provision of cool storage facilities.

The level of involvement of the contracting company in production may vary from just the provision of the correct type of seed, to provision of land preparation, seedlings, agrochemicals and even harvesting services.

In Africa, the contracting out of crops to farmers under centralized structures is common, and is usually referred to as 'outgrower' schemes. As an example, in Zambia the multinational corporation Dunavant contracts approximately 200,000 smallholder farmers, whereas the smaller private company Cheetah Ltd. contracts between 20,000 and 30,000 smallholder farmers annually in Zambia, Malawi and Mozambique.

2.3.2 The Nucleus Estate Model

Nucleus estates are a variation of the centralized model. In this case the promoter also owns and manages an estate plantation, which is usually close to the processing plant. The estate is often fairly large to provide some guarantee of throughput for the plant. A common approach is for the contracting companies to commence a pilot estate and then after some time introduce to farmers (sometimes called 'satellite' growers) the technology and management techniques of the particular crop. The nucleus estate model is mainly used for tree crops.

Contrary to the centralized model where ten of thousands of farmers may be involved, the number of farmers linked to the nucleus estate model is usually much smaller. Depending on the particular crop, the focus may be more on emergent or semi-commercial farmers rather than on smallholder farmers.

2.3.3 The Multipartite Model

The multipartite model usually involves government statutory bodies and private companies jointly participating with farmers. Multipartite contract farming may have separate organizations responsible for credit provision, production, management, processing and marketing.

2.3.4 The Informal Model

This model applies to individual entrepreneurs or small companies that normally make simple, informal production contracts with farmers on a seasonal basis, particularly for crops such as fresh vegetables, watermelons and tropical fruits. Crops usually require only a minimal amount of processing or packaging for resale to the retail trade or local markets. Material inputs, if any at all, are often restricted to the provision of seeds and basic fertilizers, with technical advice limited to grading and quality control matters. Financial investment is usually minimal. This model is the most transient and speculative of all contract-farming models, with a risk of default by both the promoter and the farmer.

2.3.5 The Intermediary Model

Throughout Southeast Asia the formal subcontracting of crops to intermediaries is a common practice. Food processing companies and fresh vegetable entrepreneurs purchase crops from individual 'collectors' or from farmer committees, who have their own informal arrangements with farmers. The use of intermediaries must always be approached with caution because of the danger of contracting companies losing control over production and prices paid to farmers by middlemen. Also, the technical policies and management inputs of

the contracting companies can become diluted and production data distorted. In short, subcontracting disconnects the direct link between the contracting company and the farmer. This can result in lower income for the farmer, poorer quality standards and irregular production.

2.4 ORGANIZATION OF OUTGROWER SCHEMES

The centralized outgrower schemes can again be divided into three distinct models:

- The processor employs its own field staff mobilizing and managing the outgrower smallholder farmers;
- The processor uses local agents or other intermediaries, which work on the basis of a commission, and are the link to the outgrowers; and
- The processor is linked to cooperative societies or associations, which manage the individual member outgrowers.

Examples of all three models of outgrower schemes can be found in Zambia, and are discussed in greater detail in Section 4.

2.5 FARMER ORGANIZATIONS

When farmers are ill organized, they mostly deal individually with obtaining inputs and selling produce and thus do not obtain the more advantageous prices that larger groups could. Agribusiness companies often distrust contracting individual smallholder farmers as these are resource poor and have no collateral to ensure recovering the company's investment in them (through input and service delivery), and would rather prefer entering into contracts with more capitalized growers.

Group approaches to farmer organization can help farmers to improve their livelihood and household food security by increasing their collective self-help capacities, and their negotiating and market power. Organizing smallholder farmers means reaching economies of scale and thus reducing transaction costs, which is beneficial for both farmers and companies. By working through farmer organizations, companies can reduce their cost on delivery of services, whereas farmers can reduce transport costs to bring their produce to the company buying their crop.

Apart from the private sector, government and donors may also use farmer groups as the main channel for their agricultural support programs because support services delivered in bulk reduce costs and broaden the impact of the development assistance.

For companies contracting smallholder farmers, farmer organizations (whether formal cooperatives; or farmer associations, farmer production groups or clubs, people's participation groups, rural group businesses, women farmer groups/clubs or youth farmer groups/clubs – to mention just a few of the myriad of farmer organizations other than the formal cooperative societies) entail more advantages than only reaching economies of scale. Farmer organizations could theoretically reduce farmer default in contract outgrower schemes if peer pressure within the group eliminates potential defaulters and thus reduce the risk of default.

Good communication and close monitoring remain particularly critical issues, especially with export products involving European and Northern American markets, where there is a need to ensure quality and traceability of produce. When communication between agribusiness and farmers is weak, group members can still monitor each other. More generally, good communications to foster good company-farmer relationships and a sense of trust has a positive effect by reducing strategic farmer default, i.e. farmers selling their produce to another company to avoid repayment of inputs.

The better and broader the range of services offered, the closer the relationship between farmers and business, and the more the farmer will lose by breaking the relationship. Delivering timely services, which respond to farmers' needs, creates incentives for farmers to honor contracts, which is also controlled by moral pressure from other group members.

Farmers engaged in contract outgrower farming benefit from organizing themselves in groups. Group formation is in most cases already a requirement from the company to facilitate input provision and delivery of extension messages, but at the same time it could ultimately also strengthen the farmers' bargaining and marketing position. Groups can also be seen as 'learning laboratories', where farmers learn from each other as members share ideas, problems encountered and solutions found.

Legally registered groups could obtain access to credit from financial institutions provided that they have collateral. Strong, well-trained groups could look for alternative markets, which could make them more independent from the companies and put them in a stronger bargaining position.

2.5.1 Features of Successful Farmer Organizations

The type of activity to be undertaken will have a major impact on the management demands made on the group. These may range from coordinating marketing or procurement activities to operating jointly owned assets (Coulter *et al*, 1999). Successful farmer organizations:

- Are generally involved in relatively simple marketing, input supply and saving/credit operations involving liaison with market intermediaries higher up the marketing chain;

- Have a close match between the activity and services on the one hand and the group's experience, and financial and managerial capacity on the other hand;

- Tend to begin with a single activity as more complex operations, for example involving the operation of jointly owned fixed assets or processing facilities often fail, with some significant exceptions in the case of women's groups; and

- Tend to concentrate on relatively high value produce (e.g. seed maize, dried fruit, oil palm, cotton, horticultural products) rather than low-value staples; or they concentrate on produce with an added value component through grading and/or processing and/or storing over seasons.

Successful farmer organizations are generally built upon pre-existing organizations and/or social groups, where members already share considerable trust and familiarity and have a

strong sense of local ownership. They tend to have a small membership, between 10 and 30 members, of relatively homogeneous characteristics.

The agenda of the organizations should be member-driven and show internal cohesion, which tends to occur more in groups of small size. Taking into account misuse of funds by state-controlled cooperatives of the past, transparency is very important to re-establish farmers' trust in each other and the organization itself. In the relationship of successful farmer organizations to external agents, there should be absence of political patronage and a high degree of self-financing.

Successful cases were never associated with interest rate subsidies, but always with viable business objectives, which made subsidies unnecessary. The farmer organizations need external training input, however, particularly when aimed at integrating the group into the wider economy through development of links with financial and market intermediaries.
Various studies have shown that generally farmer organizations are found to be most successful with small, cohesive groups involved in simple activities in liaison with agribusiness (Coulter *et al*, 1999).

Research by the Natural Resources Institute identified two types of successful farmer organizations:

- The linkage-independent group, which can stand alone in the market, and provide smallholders with sufficient market presence to seek out independent relationships with other market intermediaries; and

- The linkage-dependent group, having a long-term commitment to a particular service provider.

Linkage-independent farmer organizations are able to negotiate on behalf of their members to get the most competitive deal and are quite independent of any buyer or supplier. The advantages of this type of farmer organizations are independence and autonomy.

Alternatively, the linkage-dependent groups have the advantage of a commercial partner being very interested in the survival of the farmer organization and which therefore may provide assistance and support to the group, although the linkage places the group in a weaker bargaining position.

Negative findings relate mainly to cases where farmer organizations were being formed on an ad-hoc basis (e.g. as a result of government programs), or on a large scale as part of development projects. There is growing evidence that government, donor and/or NGO projects, promoting farmer cooperation, do not always lead to the emergence of viable farmer groups. Project evaluations indicate that groups are often formed hastily and with little reference to the underlying patterns of social and economic organization or commitment to cooperative action. Farmers are typically required to join a group in order to receive inputs that were donated or highly subsidized, thus attracting to the group those primarily interested in the subsidy (Coulter *et al* 1999).

In this light it is not surprising that whereas formal farmer organizations may be the 'ideal' partner for outgrower companies, it is often seen that companies rather tend to work with

loosely organized 'interest groups'. Individual outgrowers within such groups may at the same time belong to the same, different, or even several cooperative societies or associations without this having a bearing on the organizational set-up of the outgrower schemes.

It is not uncommon for an individual to belong to as many as four or five different associations, all located within a small geographical area. As one farmer said: '*It is always useful to belong to several associations, in case one or another donor or NGO passes by*'.

2.6 ROLE OF FACILITATING INTERMEDIARY ORGANIZATIONS

Cooperation among farmers, whether as formal cooperatives, farmer associations or farmers groups could go a long way in alleviating some of the problems associated with working with individual smallholder farmers. Impartial intermediary organizations (i.e. NGO, official donor organization or other organization) can play an important role in organizing farmers, especially in ensuring that 'real' smallholder farmers also become involved in outgrower schemes.

In the past, many government and donor funded programs with their main objectives being the promotion of linkages between smallholder farmers and the private sector, focused on promoting linkage-independent farmer organizations, such as the use of cooperative farmer groups. Because of the failure of the cooperative movement in many countries in Sub-Saharan Africa, the more recent donor-funded programs have focused on the formation and promotion of farmer groups that were not related to the cooperatives of the past, nor was the focus on existing cooperative societies or associations.

However, with many donor-funded programs, the formation and strengthening of farmer groups often appears to be an objective in itself, without taken into account the concerns and needs of the private sector. Consultation with the private sector has been very limited or non-existing, with few successful linkages between smallholder farmers and the private sector.
Experiences in working with NGOs from the perspective of the private sector were not always positive. At times NGOs have a tendency to masquerade as agribusiness enterprises, cross-subsidizing their business activities with donor funding, and thus in effect undermining private businesses. Other negative experiences relate to the creation of market distortions to the disadvantage of commercial outgrower companies, or failing to provide for appropriate exit strategies. In all such instances the private sector is in effect directly undermined, resulting in an unsustainable industry in the longer term once the NGO pulls out (Agridev Consult, 2005a).

Despite these criticisms it is believed that donors and/or NGO's still have a role to play, especially in remote areas, in:

- Facilitating group formation,
- Assisting in reducing transaction costs,
- Adding value at producers' level through promoting quality control and/or processing,
- Promoting savings by farmers, and
- Understanding of the role and use of credit to make such farmer groups stronger.

However, NGOs, or any other facilitator, should be operating complementary to the functions undertaken by the private sector, and not take over those functions.

It is very important that the role of each partner is clearly defined and understood when an intermediary partner gets involved in building new, or strengthening existing, market linkages between smallholder farmers and private sector companies. If this is not done:

(i) Farmers will expect companies to give them assistance or services that the company has neither the intention nor the capacity to provide;
(ii) Companies will expect farmers to take on roles which the farmers are unable or unwilling to perform; and
(iii) Both farmers and companies will expect the NGO to fill the gaps and to perform roles which are or should basically be the responsibility of either the farmers or the company.
(iv)

Sometimes the facilitating intermediary partner (NGO or otherwise) finds itself obliged, in order to get the partnership going, to take on additional roles in the early stages of the partnership, which should rightly be performed by the company or by the farmers. The temptation to do this should be avoided as much as possible as it is often difficult to transfer the role back to the company or the farmers once the precedent has been set. If the NGO does take over some of the company's or the farmer's roles, it should always pass on at least part of the cost of the service provided to the company or the farmers to give them the incentive to take on the role themselves, and to avoid market distortions (Van Damme & Dirckx, 2000).
If it is the objective of the facilitating organization to link smallholder farmers with the market, it is essential that agribusiness companies are closely involved in the design of the programs, if only to ensure that mobilization of farmers does not become an objective in itself, without any relation to the concerns and needs of the private sector.

Roles and responsibilities of each partner could possibly be defined as follows (Van Damme & Dirckx, 2000):

Farmers

- Grow the crop on their land;
- Sell the crop to the company;
- Repay company loans;
- Contribute to the costs of services provided by the companies;
- Contribute to the costs of services provided by facilitators; and
- Join producer groups for consultation, negotiation, training, and economies of scale in input and output distribution.

Companies

- Demonstrate the production opportunity;
- Recruit and contract farmers;
- Supply production inputs (crop financing);
- Support production (extension);
- Purchase the crop (provide a guaranteed market); and
- Process and market the end product.

Facilitators

From the company perspective

- Support existing farmer-company linkages (attitude change);
- Assist in producer group formation;

- Assist in reducing transaction costs; and
- Promote quality control (value adding at producer's level).

From the farmer's perspective

- Advise and train farmers (capacity building);
- Facilitate negotiation on contracts and prices;
- Mediate between partners where necessary; and
- Monitor progress.

From the facilitators' perspective

- Maintain an impartial role; and
- Withdrawal from the partnership (exit strategy).

2.7 ROLE FOR GOVERNMENTS

Governments have an enabling/regulating and development role to play if contract farming is to be successful (Eaton & Shepherd, 2001).

2.7.1 Regulatory and Enabling Role

Contract farming depends on either legal or informal agreements between the contracting parties. These in turn have to be backed up by appropriate laws and an efficient legal system. As an example, there should be the possibility of an efficient recourse through the judicial system to address the problem of defaulting on credits through side-selling of the produce. In most countries there is no legislation that specifically regulates contract farming. If such legislation is introduced it should ideally be based on the ability of the industry to regulate itself.

Over-regulation by governments should be avoided. The private sector, particularly those involved with exports, frequently complains about the red tape and the costs involved with complying with excessive bureaucratic regulations and procedures. A simplification of official documentation, for example, could have a positive impact on the outlook of potential investors. The burden of taxes is another issue that could make it difficult for agribusiness to be competitive and discourages potential investors.

Governments could play an arbitration or dispute resolution role by establishing dispute resolution guidelines for agricultural contracts and/or offer mediating services through an institution that is seen as not having vested interests in matters brought before it.

Other enabling activities to sustain contract farming may include provision of training in technological and managerial skills (in cooperation with NGOs if so wished, but at any time after a thorough dialogue with the private sector to properly identify the needs), initiation and facilitation of research activities into the products under contract (in collaboration and consultation with outgrower companies), and provision of agricultural extension services to outgrower companies that do not employ their own field staff.

At national level, it is a precondition that specialized services are available to provide institutional support to production, processing and marketing. Government services such as phytosanitary controls, plant pathology clinics and research stations are essential, especially for companies that invest in high-value crops for export.

2.7.2 Development Role

As contract farming grows in importance, governments should possibly re-allocate development resources towards its promotion by bringing together agribusiness and interested farmers or farmer groups. Dissemination of market information, highlighting the products for which there is a commercial demand that can be satisfied through contract farming, is another example of how governments could play a developmental role.

Where contracted farmers are organized into cooperatives or groups, governments can play an important role by carrying out activities to strengthen the managerial skills of these organizations. Although the performance of agricultural cooperatives has been marginal at best, improving a cooperative's managerial capability could, in theory, greatly enhance its business performance, the transfer of technology to farmers, and its marketing skills.

The government has a role to play in ensuring that companies involved or proposing to invest in contract farming are *bona fide* and are planning long-term partnership arrangements with smallholder farmers.

3 STATUS QUO OF OUTGROWER SCHEMES IN MOZAMBIQUE

Given the poor performance of the financial system in rural areas in Mozambique, contract farming has been the most successful instrument in providing credit to farmers, especially for cash crops. Private companies are considered to be, by far, the major providers of agricultural credit in Mozambique, providing inputs and guaranteeing the commercialization of the output. It is estimated that more than 400,000 farmers benefit yearly from the cotton, tobacco, sugar, and oilseed agro-industry credit, what is more than 16 percent of the total farms in the country (World Bank, 2005).

Although aimed at cash crop producers, the beneficiaries in the schemes are basically smallholders. The average size cultivated by these producers is below 1 ha, and they receive, on average, no more than US$ 10.00 per producer as input credit for cotton and US$ 40.00 per producer as input credit for tobacco. While no micro-finance institution or bank could economically provide such small loans without enormous transaction costs per dollar lent, it makes a lot of sense for a processing or marketing company which aims to make the profit from the produced crop, not from the financial transaction (World Bank, 2005).

3.1 COTTON AND TOBACCO SECTORS

The largest outgrower schemes in Mozambique working with smallholder farmers are in cotton and tobacco.

3.1.1 Cotton

The production of cotton is important to as many as 300,000 smallholder families in the country, but is at the same time highly associated with poverty. This can be attributed to very low yields, adverse world market conditions, and weaknesses in the local industry, which despite paying farmers the lowest prices in the region, has been largely unprofitable. Cotton companies have mostly proven to be risk-averse and reluctant to invest in improved seed, extension services and more cost-effective means of linking with farmers. There has been little horizontal coordination among industry participants in areas of common interest. As a result of these factors production has stagnated at around 80,000 ton per annum (World Bank, 2005).

Outgrower companies typically do not provide fertilizers to minimize risks with recovering this credit, the technical assistance provided by them is normally poor, barter ratio (inputs/output) is not clear for the producers, and the prices paid to cotton producers are the lowest in the region, as firms try to capture monopsony rents as much as possible. Producers in turn break contracts and sell their production to other buyers if prices offered are more attractive, usually deviate received fertilizer to their own food crops, and the management of some farmer organizations is frequently associated with misuse of resources (World Bank, 2005).

The average area cultivated by smallholder cotton producers is below 1 ha, and they receive, on average, no more than US$ 10.00/producer as input credit for cotton.

3.1.2 Tobacco

Tobacco was important during the colonial area, but has only recently re-emerged as an important crop, aided in part by the collapse of production in Zimbabwe. Tobacco in Mozambique is predominantly a smallholder crop, with the number of farming households

involved in production having increased from about 30,000 in 1997/98 to 119,000 in 2002/2003. It is now the second most important crop after cotton in terms of the number of smallholder farmers involved in production. Production grew more than tenfold over this same period, from 3,000 ton to 4,600 ton in 1999/2000, and from there to 37,300 ton in 2002/2003. The contract farming system for tobacco has been adopted in Mozambique under favorable circumstances, namely (World Bank, 2005):

- major need for inputs, credit and technical advice;
- lack of demand for local consumption; and
- the existence of a concession regime that provided more confidence for the industry to invest.

Box 1: Mozambique Leaf Tobacco, Angonia, Tete Province

Mozambique Leaf Tobacco (MLT) has been operating in Tete Province for 8-9 years. All burley tobacco production is by a total of smallholder farmers. The production target for Tete and Niassa (Cuamba area) Provinces together is 50,000,000 kg of tobacco in 2005/2006. For Angonia alone there are 4,500 farmers involved in the production of burley tobacco, with a target in 2005/2006 of 2,600,000 kg of tobacco (average 580 kg per farmer). It is intended to increase the number to 9,000 smallholder farmers, with a targeted production of 4,000,000 kg. There are plans to split Angonia into two areas, with one area concentrating on the production of Dark Fired Cured (DFC) tobacco. The foreseen increase in the number of smallholder farmers will partly depend on MLT being able to make input packages available, and on developments on the tobacco market.

New farmers will be screened for access to land, and perception towards commercial production of tobacco, i.e. how business minded the farmers are. Individual contracts are signed between MLT and the smallholder farmer. Each farmer is assigned a grower identification number. Farmers are identified through their identity cards, which all Mozambicans have.

Inputs are made available to smallholder farmers fully on credit. In the past MLT also used to make plastic sheeting, watering cans and rain coats available, but is at present restricting inputs to seed, chemicals and fertilizer (NPK and CAN). The input package is based on 0.3 ha of tobacco production (with a minimum value of MT 2,750,000), with most farmers growing 0.3 or 0.6 ha of tobacco. Credit recovery rates have been approximately 85percent, with a decline to 66-67percent in the 2004/2005 season due to the drought conditions. MLT is striving for a 100percent recovery of credits. Farmers are grouped in clubs of 15 farmers on average, but are individually responsible for re-payment of credits. There is a tendency that the clubs grow in number, but with a smaller number of growers per club as result of a continuous selection process with non-repaying farmers being weeded out. Side selling of the crop is not a major issue, although there are always the activities of vendors, tempting farmers to side-sell the tobacco, with farmers then not repaying their credits.

The (Assistant) Area Manager oversees the outgrower schemes, with direct linkages to the Accounts/Credit Manager and the Chief Stocksman. A Chief Leaf Technician oversees the operations of the Leaf Technicians (25), who are the direct link to the farmers. Currently each Leaf Technician interacts with approximately 360 farmers, but MLT strives to bring this ratio to 1:250, which would allow the Leaf Technicians to visit the farmers twice a month. Shed Managers are in charge of tobacco collection points. Classifiers classify the tobacco, after which it is taken to the MLT plant in Vila Ulongue, where farmers also receive their payments. In case of any serious disputes there is an Arbitration Committee.

Source: Interview notes

Most of the tobacco produced in by smallholder farmers is of the burley type. The average area cultivated is 0.25 ha or less, and farmers receive US$ 40.00/producer on average as input credit (World Bank, 2005).

3.1.3 Regulatory System for Cotton and Tobacco

The regulatory system for the cotton and tobacco supply chains, especially with regard to the government allocated monopsony concessions, has been a very controversial issue in the country. Especially in the cotton sector the regulatory system has proved inadequate in some areas, notably in screening the quality of concession companies and monitoring their performance. The recent entrance of some international firms with long experience in cotton is an encouraging sign. Regulatory shortcomings are attributed to technical weaknesses, lack of effective institutional autonomy, and variability in the policy environment. Production in the cotton leading province of Nampula has been particularly affected by farmers side-selling and consequently defaulting on their credits, coupled with failed moves towards liberalization of the sector (World Bank, 2005).

Monopsonies, if not properly managed and enforced, permit firms to capture rents easier. Whereas companies can operate with lower risks and no explicit competition within their concessions, they do not seem to pass the benefits of their favorable market position to smallholder farmers.

However, a fragile cotton market scenario with weak international prices and low profitability together with high levels of side-selling has led some analysts to propose a strengthening of the concession system. It is feared that any impromptu liberalization attempt is likely to lead to a rush of side-selling and have an adverse impact on quality and volume of production, with negative consequences for industry performance. At the same time it will be important to strictly monitor the performance of concession companies and hold them publicly accountable. For companies committed to invest and build long-term relationships with farmers, it is important that competitors with short-term agendas do not undermine their efforts (World Bank, 2005).

3.2 HORTICULTURE SECTOR

3.2.1 Opportunities for Outgrower Arrangements

A study by the International Finance Corporation (2003) showed a high potential for high value horticulture in the Beira Corridor – superior agro-ecological conditions, with rainfall, land and water availability, humidity, and temperature diverse enough to support a wide variety of fruit, vegetable and floriculture crops. The benefits of this crop diversity were considered significant. Large volumes of diverse crops are more likely to benefit the smallholder producers, encourage the development of a robust agro-processing industry, and lead to freight economies of scale.

Dixie *et al* (2005) noted that whereas the EU's demand for traceability and strict control over agrichemical usage has restricted the role of smallholder vegetable producers as export growers, the smallholder family farming sector will be in a less disadvantaged position when supplying markets that are less demanding with respect to quality and food safety, e.g. local, South African, Middle East and the Indian markets.

Whereas many crops can only be grown by the most skilled managers coupled with high capital investment (e.g. cut flowers, citrus and other fruit crops), the smallholder farm sector has an advantage with labor intensive but less perishable crops (e.g. paprika, chillies and cashew nuts). For the smallholder farming sector, special emphasis is to be given to the more easily accessible markets, agronomic research of suitable smallholder crops, and support for the development of smallholder-agribusiness linkages (Dixie *et al*, 2005)

Efforts should be made to reduce the risks for smallholder producers, especially when new crops or markets are being developed. This can be achieved if commercial farmers and export businesses are the primary risk takers and create the critical mass, develop the technology and establish marketing chains. Involvement of the smallholder farming sector will be enhanced if support is given to those exporters/agribusinesses intending to source product from outgrowers, e.g. identify best production practices for outgrowers, research markets for new crop opportunities, and establish effective outgrower networks. With some support, particularly in terms of market linkages, crop development could lead to crops like paprika, chillies, pineapples, squashes, mangoes, litchi, limes and easy-peeler citrus being produced by the smallholder farming sector (Dixie *et al*, 2005).

Examples of outgrower schemes in Mozambique are presented in the following sections.

3.2.2 Citrus – CITRUM (Citrinos do Umbeluzi), Maputo, Maputo Province

Three years ago the CITRUM company took over a state-managed citrus plantation near Maputo. It has been involved in the export of citrus, oranges and grapefruit for the last 3 years. Currently it is the only company in the citrus industry in Mozambique that exports to mainly Europe and to a lesser extent also the Middle East. In the first year exports amounted to 15,000 cartons. In the second year this had increased to 33,000 cartons, and further to 66,000 cartons in the third year of operation. The company prides itself in not having had a single rejection. The company further exports banana and papaya to South Africa, and produces strawberry for the local market.

Citrus requires a high level of management, while exports are subject to stringent quality standards (EUREPGAP), which makes it less suitable for smallholder production. However, the company is looking to promote a cultivar that is suitable for smallholder production for processing in juice factories in e.g. Swaziland. It is intended to initiate a pilot program involving both its own workers (who already have exposure to commercial farming) and others who do not work on the farm, and evaluate the performance of the two groups. Smallholder farmers could also be assisted to produce for the local market.

The company is also in the process of identifying a small number of entrepreneurs that are growing between 8 and 15 hectare of citrus, providing them with technical assistance, transport and a market, with the objective of reinforcing export volumes. Currently two such entrepreneurs have been selected, and it is intended to further increase this number. Entrepreneurs will be trained in technical aspects to a level required for the international markets. It is believed that such levels cannot be reached by the smallholder farming family sector. Farming of certain crops, requiring high management levels, is not for every farmer. However, there may a spin-off effect in creating employment opportunities.

The initiatives are fully financed by the company itself, without any outside donor support. However, the company would welcome support to expand its programs as long as the company is in charge of any projects.

3.2.3 Fresh Vegetables – Vanduzi, Chimoio, Manica Province

Waluru Lda., building on its experience in Zimbabwe, initiated export horticulture in Manica Province. Apart from its own farm production, the company also supported commercial and smallholder outgrowers. Smallholder outgrowers with access to irrigation water from the mountains were organized into associations. Initially collaboration was with two of these associations, which number later increased to seven. A heavy emphasis was placed on training of the smallholder farmers, but with company staff carrying out all spraying to not jeopardize EUREPGAP requirements.

Waluru Lda. continued under the name of Vanduzi SARL after Aquifer from the UK made a direct investment into Waluru Lda. Several months later Mocfer was created as Aquifer's Mozambique holding company to facilitate further investments, with Aquifer transferring its shareholding to Mocfer. Other shareholders in Vanduzi SARL are the co-founders of Waluru Lda and Vanduzi SARL in their personal capacities.

The seven smallholder associations each have a membership of 15-40 farmers, and are situated within a radius of approximately 8 km from the Vanduzi pack house. Of the total membership of the associations, there are at present 76 smallholder farming families involved with Vanduzi. The associations have access to limited gravity/flood irrigation, and production for Vanduzi SARL is limited to baby corn only.

Another company has been doing trials in Manica Province with tabasco chillies under smallholder production, and Vanduzi SARL may also include this crop in its smallholder program to reduce the dependency on a single crop, as this is considered very risky. Chilli production requires close monitoring, and it is intended to take one of the farm managers to supervise the smallholder chilli production once this program takes off.

The associations working together with Vanduzi have been set up and formally registered with assistance from ACDI-VOCA. Vanduzi provides all inputs (seed, chemicals, fertilizer). Company field staff provide technical support, including spraying operations. The input by the farmers is in the form of water (flood irrigation), and labor. Farmers supply to Vanduzi, and recovery of credit is done at the point of sale, implying that Vanduzi carries all the risk.

Vanduzi would like to work with as many smallholder farmers as possible, thus creating new opportunities for the smallholder farming sector. In terms of overall volumes the company aims for 50percent of its production on its own farm, 40percent by contracted commercial farmers, and 10percent by the smallholder family farm sector.

The smallholder farmers collaborating with the company are not only supplying produce to Vanduzi. They also produce tobacco and/or paprika in collaboration with other companies, and cabbages for the local market. There is a relative abundance of water, although there are problems in the winter months. This problem could be overcome through the construction of small dams, while there is also a need to improve delivery systems to bring the water to the fields.

Vanduzi would like to invest in rehabilitation of older existing, as well as developing new, small-scale water delivery systems. However, with the farmers also producing crops for other companies and markets, it is difficult to get a full return on any investments, which could be a gap for NGOs to fill. When developing new or rehabilitating old water delivery systems it would be preferred to train people in the necessary engineering skills to construct and maintain the systems by themselves, rather than just 'giving' it to them, with little or no sense of ownership as a result, and the added risk of the venture collapsing.

There is an opportunity to increase the number of smallholder farming families involved in export horticulture. One of the most important aspects is developing business skills, with budgeting and planning skills, for which there is again a role for NGOs. There is also a need to enhance creative thinking and entrepreneurship.

Apart from addressing the need of improving water delivery systems and developing business skills, there is a need to provide technical training especially to government extension staff. There is a lack also of focused, market-related research. There are too many generalities, e.g. research would advise to produce fine beans and peas in certain areas, while the crops are only suitable for cooler climates.

Support to smallholder farmers should be shifting from direct donor funding to some initial funding through the private sector, to reduce the dependency on donor funding. This aspect should be factored into any program from the outset, with a clear exit strategy.

It has to be recognized that only the private sector can be the front-runner in agricultural development, including the smallholder sector, if only because the private sector fully understands markets and its requirements. The private sector should be closely involved in the development of strategies that aim to achieve long-term sustainability.

3.2.4 Paprika – Pimentas de Mozambique, Chimoio, Manica Province

Pimentas de Mozambique (PDM) is originally a paprika trader, based in Zimbabwe, working mostly with commercial farmers. Due to the current circumstances in Zimbabwe the company initially investigated investing in Zambia but eventually settled in Manica Province in Mozambique. Outgrower production of paprika started 3 ½ years ago. In the words of the company it has been a trial and error approach. Prospects appear uncertain because of various problems encountered.

In the first year of operation, smallholder farmers were recruited through a local tobacco company. This resulted in losses from the lack of direct control over the operation. Only 86 farmers were involved, each cultivating between 0.1 and 0.5 ha paprika. These were the same farmers which Vanduzi was working with, i.e. farmers with access to irrigation. PDM advanced the inputs to the farmers, including fertilizer, but ultimately only 17 out of 86 farmers repaid their credits.

In the second year of operations PDM worked with 810 smallholder farmers, identified with the assistance of ACDI-VOCA. Of these, only 15percent eventually repaid their credits. Smallholder farmers tend to take the inputs, apply only a small portion to the paprika, resulting in lower yields (< 300 kg/ha). Hence, they have difficulties in repaying credit. Farmers tend to 'translate' this into complaints that the prices paid are too low. The main problem with working in the smallholder sector is the diversion of inputs.

Because of the problems with credit recovery, PDM stopped providing inputs other than seed. Technical support continues to be provided through a team of 4 coordinators covering different parts of Manica Province. The team was set-up with financial support (US$ 60,000) from ADIPSA. The annual operational cost for the team of coordinators, 2 clerks and a driver amounts to US$ 36,000 per annum. Financial support has also been provided in the form of a grant from TechnoServe (US$ 40,000) for crop purchases.

In the third year of operation, 2,600 farmers were provided with seed, but paprika was purchased from 1,500 farmers only (the others did not plant the crop or failed to produce anything due to adverse weather conditions or unfamiliarity with the management of the crop). This season (2005/2006) seed has been distributed to 8,000 smallholder farmers, but expectations are that only 4,000 farmers will grow paprika on an average area of 0.10-0.15 ha. With an average yield of 300 kg/ha the total production from the smallholder sector is expected to be in the range of 120,000-150,000 kg or slightly above. For PDM, smallholder paprika production becomes feasible when volumes exceed 135,000 kg.

In 2005/2006 also PDM has started concentrating more on the semi-commercial sector. This sector consists of emerging farmers with a Mozambican nationality, who may have 1-2 tractors and other assets. Some 27 emerging farmers are expected to grow paprika this season. Areas under paprika production will vary from 0.5-5.0 ha, with yields ranging from 1,000-1,500 kg/ha. PDM will only provide minimal finance.

Most commercial paprika production is done by ex-Zimbabwean farmers. Monthly visits are made to the farms, written advice is provided, and financial advances are being made on basis of the status of the crop. The break-even point for commercial paprika production is at 2,000-3,000 kg/ha. It is expected that yields in the 2005/2006 season will vary from 1,500-3,000 kg as much of the crop has been washed out because of the heavy rains.

3.2.5 Litchi – RDI Limitada, Chimoio, Manica Province

RDI Limitada is seeking to develop a litchi outgrower scheme in Manica Province in close collaboration with a number of associations of semi-commercial farmers with additional production from the surrounding smallholder farming areas. In future the outgrower scheme is to include mango and macadamia production. Initial studies have been done to assess the suitability of various areas for the three crops. Care has been taken to identify areas with good road access to central locations where packing facilities are to be established. This is especially important in the case of litchi, where the time between picking and refrigeration should not exceed 2 hours.

One of the associations with which a relationship is built is the ADAMA association, with 25 members, all of them semi-commercial farmers with areas of land ranging from 100 to over 700 ha. Most of this has year round availability of water, although some rehabilitation of canals or additional boreholes may be necessary.

ADAMA association is one of the groups of farmers who already have significant numbers of producing litchi trees, with scope for further expansion. Other tree crops being considered are mango (which would require planting of suitable commercial varieties, rather than the variety commonly grown at present) and macadamia. Already plans are being formulated for the

establishment of central nurseries to provide seedlings to farmers. Members of the association recently visited South Africa for a tour of fruit producing areas with assistance from GPSCA.

The association is also working with smallholder farmers in 6 nearby villages, of which one alone has 99 'peasant' farmers. Both association members and smallholder farmers are assisted with marketing of their produce (e.g. maize, pineapples, soybean). An activity considered very important is provision of training to farmers, for which financial assistance has been received from Oxfam.

ADAMA runs a small abattoir for poultry. Chickens are bought at fixed prices from farmers, slaughtered, and supplied to nearby markets and shops. Equipment for hatching eggs is available to produce chicks. The association would also like to begin producing chicken feed, which is not readily available.

3.2.6 Potatoes – CABAM, Chimoio, Manica Province

CABAM has been set up as an association of commercial potato producers. Criteria for joining the association, among others, are access to irrigation/pumping facilities, being in possession of a tractor for land preparation, and a good water supply to the farm. The association currently has 22 members, of which 14 are active. The non-active members have relatively small operations, and are not very strong. Eighty percent of the members have 25-30 years of experience in farming, having managed to survive through all the changes. Around each of the nucleus estates of the active members of CABAM there a number of semi-commercial entrepreneurs who have been selected carefully and also have some experience in potato production. The total number of satellite entrepreneurs is 90.

With support from ADIPSA, a feasibility study into potato production and markets was done. Before CABAM was established, potato production was not deemed to have potential, but is now attracting more interest, to the extent that the industry is at risk of becoming politicised. Demand for potatoes in Manica Province easily exceeds 7,000 ton.

Certified seed potato is available from the Netherlands, Zimbabwe and South Africa, being produced on order by seed potato farmers. Obtaining certified seed potato in South Africa and Zimbabwe is difficult, but these are the nearest sources for varieties climatically suitable to Mozambique. In the words of CABAM, it is currently difficult to export certified seed potato from Zimbabwe as any farmer who does so runs the risk of his farm being confiscated on grounds of economic sabotage. To circumvent this problem, and with careful planning, certified seed potato is not used for production of 'table potatoes' only, but also to produce seed potato for the following season. CABAM provides seed potato to the satellite entrepreneurs.

Producing ones own seed potato implies that these need to be kept in refrigerated cold rooms for 2-3 months until the next season. To maximize the use of the cold rooms it is intended to also use these for horticultural crops and fruits, allowing CABAM to enlarge its position through providing a market for local producers.

The 14 members of CABAM produce potatoes in two seasons - April-July and July-October - with total production ranging from 1,800-3,000 kg weekly. Individual members grow from 2-8 ha of potatoes. Break-even production is about 5,000 kg/ha, with actual production levels

being at 8,000 kg/ha (as compared to yields of 12,000-14,000 kg achieved in for example Zimbabwe). The satellite entrepreneurs cultivate 0.5 ha of potatoes on average.

Other crops grown by the members of CABAM are tomatoes, paprika, maize and tobacco. Between the members, approximately 200 permanent staff are employed, and about 1,000 casual workers, with another 500 to be added when tobacco is grown.

3.2.7 Paprika – Cheetah Mozambique, Vila Ulongue, Tete Province

Cheetah Mozambique started its operations in Tete Province in 2002. In the first year of operation (2002/2003) more than 400 farmers were recruited. In the 2003/2004 season this number grew to over 3,000 farmers; and further to 7,000 farmers in the 2004/2005 season.

The current season (2005/2006) has seen a decline to approximately 3,000 farmers again. This is largely attributable to the increased competition from the tobacco sector, which was making an input package available to the smallholder farmers that was very attractive (and fully on credit). In 2004/2005 there was a shortage of maize, with many farming families needing to make cash purchases of maize. The input package from the tobacco sector was a welcome relieve for many farmers. Lack of cash resources with farmers was the reason for Cheetah not introducing a contribution towards the value of the inputs in 2005/2006.

The company is intending to introduce such contributions in 2006/2007. This is because many farmers are readily accepting inputs made available fully on credit, but are then not necessarily growing the crop, as shown by discrepancies between the number of farmers contracted and those actually delivering paprika. By introducing a contribution it is expected that only more committed farmers enter into a contract with the company.

Cheetah Mozambique has invested in the construction of a warehouse, office block, staff housing and a receiving area, showing its commitment to staying in Mozambique. In 2004/2005 only 80 ton of paprika were produced, largely due to the drought conditions. Because of more favorable weather conditions, it is expected that production in 2005/2006 will increase to 150 ton of paprika, despite the reduced number of contracted farmers. In the coming two seasons, the targets are 400 ton (break-even volume for Cheetah) and 600 ton. This growth in volume could be accelerated if it were possible to make more inputs available on credit to the smallholder farmers.

The average area under production by smallholder farmers is 1 acre (0.4 ha), with production levels varying from 150 kg/acre to 400 kg/ha. The farmers that are doing well often procure their own fertilizer inputs. Many of the smallholder farmers growing paprika with Cheetah have been doing this for several seasons, with mostly the less successful farmers discontinuing paprika production, something that is also being observed in the tobacco sector.

Support provided by Cheetah consists of quality seed and embedded services such as extension support (including training in the use of chemicals and cost analysis training), packaging materials, a guaranteed market, and transport. The company is intending to make agrochemical packages available on credit to selected farmers who have proven reliable in terms of deliveries and quantities, even with minimum inputs.

Farmers are organized into clubs of 15-20 members. The clubs are registered with Cheetah, but production agreements are signed individually with the farmers. Farmers are individually responsible for repayment of credits; group responsibility for credits is difficult to implement.

Some of the constraints mentioned by Cheetah Mozambique are:

- Side-selling of the crop (see also Box 2);
- A legal system that is slow, complex and costly, making it futile pursue defaulting farmers;
- Cross-border selling of the crop by vendors (mostly into Malawi);
- Competition by the tobacco sector;
- Lack of qualified and skilled staff;
- Labor laws (employees are aware that they are well protected; even in cases where there is justification for outright dismissal, employees immediately turn to the labour office where they find a willing ear); and
- Licensing procedures.

There are numerous licensing regulations to comply with, without one single authority that is providing a clear overview of all regulations. Only through being penalized for non-compliance does one discover such regulations. There is also the perception that income for local government depends largely on revenues from fines, with the local government therefore not really being interested in being transparent on all regulations. For the company this can at times become very frustrating.

Box 2: Side selling of paprika crop in North Mozambique

Cheetah Mozambique initially started its operations in Nampula Province. Organized farmer groups in the province entered into contracts with the company to produce paprika for export marketing. Seed was distributed by the company to several thousand interested farmers through several NGOs working in the area, in return for the farmers selling the crop to Cheetah at the end of the season. Farmer groups received technical support, information and advice on paprika production.

Despite unfavorable weather conditions during the first two growing seasons, the paprika was grown on a reasonable scale and a substantial crop was produced. The company lost a large proportion of its purchases, however, as a result of farmers selling to other traders who had come into the area during the marketing season. The formal arrangements made between the farmer groups and the company appeared to be of very little value to many of the farmers. Bad experiences with cashew and tobacco traders in the past lead them to sell to the first buyer who offered some cash.

Source: IAC, 2004

Eventually Cheetah would like to grow to a volume of minimally 1,000 ton per year, at which level it will be viable to expand the warehouse space. Cheetah is also considering investing in de-seeding equipment (at a cost of US$ 80,000), creating opportunities for value-adding.

To achieve this growth, significant investments in training and extension for smallholder farmers is required. To increase production levels, input packages will have to be made available to the farmers, consisting of quality seed (US$ 4.00/acre). Successful farmers will

become eligible for higher input packages, also containing chemicals including foliar feed (US$ 25.00/acre), and eventually also possibly including fertilizer (US$ 50.00/acre).

The rationale behind this approach is that paprika is a new crop for most smallholder farmers, and they need to become familiar with its cultivation. If the management of the crop is not right, there is an inherent risk of no returns on fertilizer inputs, with the farmers becoming trapped in a vicious circle of growing the crop to pay off debts.

At a production level of approximately 121 kg/acre, at an average price for the paprika of US$ 0.65/kg, the farmer would already reach the break-even point for a full input package, while expected volumes with such full input package are minimally 250 kg/acre. Once Cheetah realizes higher volumes of paprika, there are opportunities to improve the prices paid to the farmers, since overhead costs for the company, and especially the cost of extension services, will reduce. Currently extension costs are not fully charged to the farmers and effectively are subsidized.

Cheetah has developed a computer program to monitor the performance of individual smallholder farmers, providing a basis for assessing the eligibility of farmers for higher input packages through tracking their performances.

The main problem with making more inputs available to large numbers of smallholder farmers is the cost of financing such inputs. Cheetah is therefore looking for third parties willing to make seasonal (9-month) working capital available for input financing at affordable rates. When input packages could be made available in the 2006/2007 season to e.g. 5,000 farmers, each then producing 250 kg/acre, the total volume would grow to 1,250 ton, a significant improvement on growth projections mentioned earlier.

Cheetah is geared towards making such input financing available to the farmers and monitoring credit recovery. The company can do this at an interest rate of 20 percent over a 6-month period, whereas microfinancing institutions often charge an interest of 35 percent over the same period (70 percent per annum) because of high overhead costs. A possible disadvantage is that extension officers will be shouldered with more responsibilities, extending beyond their core responsibility of providing technical support to the farmers.

Another issue of concern to Cheetah is collaboration with other organizations, in particular NGOs. In the words of the company, it is unfortunately still so that NGOs focusing on smallholder-private sector linkages write their own projects, develop their logical frameworks, and obtain financing without any prior consultation with the private sector. The company would like to see that NGOs consult and write any proposals together with the private sector to ensure a proper matching of objectives, and a clear description of the roles and responsibilities of the various parties.

Such an approach has been taken by Cheetah Malawi with Cordaid, a Dutch based NGO, which is proving to be successful and satisfying to both parties (see also Section 4.1.3.2). At the start of the project a thorough baseline study was carried out, which is being up-dated every year to monitor the achievements. Within Cheetah there is experience with monitoring and evaluation (M&E), with staff within Cordaid providing supplementary support.

Finally, it is important to note that Cheetah Mozambique is also looking at diversification of the product range to be produced by smallholder farmers, e.g. beans and sesame. In this the company is looking to collaborate with Sunsmile Mozambique Ltd (Box 3).

Box 3: Sunsmile Mozambique, Vila Ulongue, Tete Province

Sunsmile Mozambique was originally located near Beira where it was operating an outgrower scheme in chillies during 2002 and 2003. This operation was unsuccessful due to drought, too large a scale of operations that made it difficult to effectively manage the scheme, and low production volumes as a result of which the cost of extension was too high.

In 2004 Sunsmile relocated to Chimoio, where it became involved in trading beans, sesame, chillies and maize. Sesame is the most interesting crop because it has the most value-addition.

Sunsmile is concentrating on sesame, cashew and beans. These three crops have different production periods, allowing the company to operate year-round. Operating a large-scale outgrower scheme for sesame alone, with the company providing inputs on credit to smallholder farmers, is risky as there are many buyers. Although the company is currently only buying produce from smallholder farmers, it is set support a limited number of smallholder farmers located around its own farm in Chimoio (Nucleus Estate model), who will be provided with credit (seed) and extension support. Another option is being explored in Makassa area, where there are 2,000 families looking to focus more on farming, where they now depend to a large extend on poaching.

One of the most important aspects of outgrower schemes is the continuous reassurance of farmers that the company (and therefore the market for their produce) is there. Criteria for the selection of farmers could be:

- Experience (visible success with current crops) ;
- Availability of land;
- Business acumen; and
- Purchasing power to acquire own or contribute to the value of inputs (if not, it is also questionable that the farmer will be in a position to successfully grow the crop).

Sunsmile is looking to work together with Cheetah Mozambique in developing outgrower schemes involving various crops, such as combinations of paprika with beans and/or sesame.

Source: Interview notes

3.3 OTHER CROPS

Opportunities for smallholder outgrower schemes that were frequently mentioned by key informants, other than in the cotton and tobacco sectors or in the horticultural sector, are presented in the following sections.

3.3.1 Cashew

Prior to independence Mozambique was the world's largest cashew producer. The sub-sector went through a period of decline after independence, and despite the recovery experienced after the cessation of armed conflict in 1992, marketed production levels have stagnated around 40,000-65,000 ton since the late 1990s, compared to 216,000 ton in 1972. During the

2003/2004 season a total of 42,300 ton were marketed, which is far below the government target of 100,000 ton by 2004/2005 (World Bank, 2005).

Since 1998, there has been a shift from large-scale processing units to small and dispersed processing units, employing manual processing technologies rather than mechanized technologies. New investment in the cashew processing industry has been largely concentrated in Nampula Province, but it is expected that investments will also be stimulated in southern Mozambique. However, stagnation in the production of raw nuts and persistently low quality remain binding constraints to the development of a competitive cashew sub-sector. Unless the current situation of low yields and poor quality is reversed, income from cashew farming will remain low, the emerging processing sector will continue to face problems in accessing sufficient volumes of good quality produce, and raw and processed nuts will continue to be sold at a heavy discount in international markets (World Bank, 2005).

Future subsector growth will require new plantings and major improvements in production and post-harvest management practices. This presents considerable challenges given the dispersed nature of smallholder production, current weaknesses in input supply chains, the lack of farmer access to credit and inadequate extension services (World Bank, 2005).

3.3.2 Sunflower

Optima Industrial is a local crusher, contracting smallholder farmers for production of sunflower, from which it extracts the oil, selling the cake to local poultry producers. The company claims to work with 103 associations with a membership of 2,215 farmers. It would be worthwhile to investigate opportunities for further expansion.

3.3.3 Soybean

Optima Industrial is also seeking to introduce soybean through outgrower arrangements. Soybean production offers interesting possibilities for incorporation into outgrower schemes, involving rotation with other crops. The main limitation will be the size of domestic markets at which the crop can be sold.

The poultry Industry Development Group (IDG), which includes feed processors, is actively promoting the local production of soybean. Currently soybean is imported in large quantities from countries such as Brazil. The objective is to work towards import substitution for the local market. By producing cheaper soybean feed for the poultry industry, chicken will become more affordable. In this case, cheaper feed will result in cheaper food.

In Manica Province, there are many associations involved in the poultry industry. However, there is no feed industry, forcing the farmers to buy feed from Zimbabwe. There have been instances that feed was impounded by Zimbabwe customs, not allowing the feed to leave the country. As a result farmers have been forced to buy feed from Maputo, involving much higher transport costs. There would be an opportunity for smallholder farmers in Manica Province to grow soybean for a local feed industry, which however is yet to be established in Manica Province.

3.3.4 Sesame

Sesame is a relatively new crop in Mozambique. It was introduced by various NGOs, and production is mainly exported as seed to countries such as Japan. TechnoServe will shortly be initiating a market study to investigate other options, including local processing.

3.3.5 Bamboo

It may be feasible to introduce a bamboo variety to be used not only for making charcoal, but that can be processed also into ceiling boards, paper and other uses.

3.4 EXTERNAL SUPPORT TO OUTGROWER SCHEMES

3.4.1 USAID

USAID has just signed an agreement with BCI Fermento Bank for US$ 4,000,000 funding under a 50percent USAID guarantee as an agribusiness lending facility (with a maximum of US$ 300,000 for individual projects). The focus is on the Chimoio area in Manica Province. The program is to be implemented over a five-year period. The USAID initiative is to become operational in April 2006.

The loan facility is intended for strengthening linkages of smallholder farmers to agribusiness processors and traders and may extend to both operating and capital loans. Operating costs would also include trade financing to overcome the period between buying from farmers and being paid by overseas clients.

3.4.2 TechnoServe

TechnoServe is a private non-profit organization helping entrepreneurial men and women in poor rural areas of the developing world to build businesses that create income, opportunity and economic growth for their families, their communities and their countries.

Focus is on private sector Small and Medium Enterprises (SMEs), assisting these in developing their businesses, and thereby providing linkages with government and financial institutions. In the context of Mozambique it should be realized that small and medium by international standards is medium and big by Mozambican standards. In the Mozambican context, 'small enterprises' often refers to family level enterprises, which are not directly targeted by TechnoServe.

In Manica Province, TechnoServe has formed an alliance with ACDI-VOCA, called Emprenda. ACDI-VOCA provides the bridge to the smallholder farmers, who are assisted in building associations comprising of 15-30 farmers that are linked with local markets or companies. Similarly TechnoServe collaborates with CLUSA in the Nacala Corridor (Nampula Province).

TechnoServe is involved in the following activities:

- Zambezia — Soybean, sesame, pigeon pea (with SAGAR)
- Manica — Soybean, sesame, mango, vegetables (with Vanduzi)
- Nacala Corridor — Soybean, sesame, pigeon pea
- Maputo — Citrus (with CITRUM)

As for promotion of soybean production, TechnoServe is working closely with the poultry Industry Development Group (IDG), which includes the feed processors. Shortly a market study will be initiated to research the opportunities for sesame production, including local processing.

3.4.3 ACDI-VOCA

In Manica Province, ACDI-VOCA was previously working with approximately 300 smallholder farmer associations, many of which were established by ACDI-VOCA itself. More recently the number has been reduced to about 41 associations only. Whereas ACDI-VOCA will continue to work with this reduced number of associations, there will be a further consolidation by focusing on a small selection of some 6-7 associations (linked to Vanduzi), with the objective of consolidating achievements and developing models for replication. One of the most important criteria for the selection of these associations is access to water.

In the past, discussions have been held with the Small Investment Promotion Company (GAPI) for financial support to the 41 farmer associations for the development of water delivery systems. However, for the associations to be eligible they need to be legalized. GAPI also requires guarantees (collateral), which the associations cannot provide. ACDI-VOCA now has been able to secure limited funding from ADIPSA and USAID (US$ 32,000 and US$ 150,000 respectively) that will be used to develop the water delivery systems for the 6-7 selected associations. One of the requirements is for the groups to provide all labor for the establishment of the water delivery systems, with only materials (piping, couplings, cement) being paid for from the grants.

ACDI-VOCA is also investigating tropical fruits (litchi, mango, banana), and the livestock sector. A livestock sector specialist has been employed as it has been recognized that animal traction is needed for land preparation especially for rain fed crops such as sesame and soybean.

3.4.4 ADIPSA

The Danish International Development Assistance (DANIDA) is supporting ADIPSA (Support to Private Sector Initiatives in Agriculture). Analysis of various value chains identified that the main constraint was market linkages between the smallholder farmers and the private sector. ADIPSA support is demand-driven, but improving weaknesses in the value chains is the main focus. In the 1st phase, which ended in December 2005, ADIPSA was active in Manica, Tete and Cabo Delgado Provinces.

The 2nd phase is commencing in June 2006. The interim period is used to conduct studies, such as general data collecting on potential stakeholders, which should result in recommendations for possible interventions by ADIPSA, thereby looking at target groups, crops, and synergies.

Financial support from DANIDA for the 2nd phase will amount to DKK 85,000,000 (approximately US$ 14,000,000) over a 5-year period. In the 2nd phase ADIPSA will also establish a unit to provide credit to smallholder farmers, something that is not accommodated by the banking and other financial institutions. In the 2nd phase, the ADIPSA office in Manica will be the main office, with satellite offices in Tete, Sofala and Zambezia Provinces.

Whereas in the 1st phase any new activities could qualify for ADIPSA assistance, activities in the 2nd phase will be limited to a maximum of 4-5 value chains. It is expected that out of these, 2-3 will be value chains that also received support from ADIPSA in the 1st phase.

As for Manica Province, outgrower schemes were the main focus of ADIPSA support in the 1st phase. Compared to a few years ago the environment in Manica Province has changed due

to the influx of new investors from South Africa and Zimbabwe, with 3-4 new companies having been established in the agricultural sector, introducing new crops into Manica province. All of these were facing similar problems, such as lack of contacts, and lack of specialized staff to link with farmers.

ADIPSA provided financial assistance to these companies in setting up the necessary infrastructure through the establishment of outgrower teams (the salaries being paid by ADIPSA), and by providing vehicles. Co-financing contributions from the companies consisted of technical support to the farmers, a guaranteed market for the produce, and provision of seed and other inputs.

Important lessons learned from the 1st phase are that proper screening of the target group of farmers and securing inputs, whether directly by the company or through a third party, are critical components of outgrower schemes, as exemplified in the case of paprika. Other issues that will require attention are the diversion of inputs and side selling.

Beneficiaries of ADIPSA support in Manica Province during the 1st phase were Pimentas de Mozambique, Vanduzi, Compania Agricola de Chimoio (CAC), and Qualita.

Pimentas de Mozambique (PDM) – Paprika
ADIPSA has been providing support to PDM over a period of 2 years, paying the salaries of one Provincial Coordinator and 4 District Supervisors. The latter identified key contact farmers within clusters of farmers interested in the production of paprika. Contact farmers were provided with bicycles to make them more mobile and efficient. A bonus system was used at each level to encourage the staff and contact farmers to perform well. In the two years of ADIPSA support the number of farmers involved in paprika production grew very rapidly to several thousands. As a result of the rapid growth management of contracts became a constraint.

Also, the philosophy of the company changed. It was felt that the company was more interested in volumes than in the quality of paprika, with insufficient training being provided to the farmers. The company stopped providing any inputs other than seed to the farmers, i.e. no chemicals or fertilizers. It appears that especially the first year of ADIPSA support was used for screening of farmers, rather than farmers being screened beforehand.

Vanduzi – Horticultural Export Crops
ADIPSA paid for the salaries of one Outgrower Manager and one Supervisor for providing technical support to the farmers, as well as means of transport.

Compania Agricola de Chimoio (CAC) – Birds Eye Chillies
CAC was assisted by ADIPSA with salaries for one manager and one supervisor, as well as transport. The outgrower scheme involved only 20 farmers, of which only a few managed to produce any BEC because of lack of irrigation. Also, the seed provided to the farmers was of poor quality, with many off-types. Commitment by the company was low. Support to CAC has been stopped.

Qualita – Seed
Qualita is a producer of seed. Through assistance from ADIPSA consultants were brought in to provide technical assistance to smallholder farmers involved in the production of bean and

maize seed. A distribution network of agents has been set up, each of which has also been trained in establishing demonstration plots. Business Development Services (BDS) is provided both to the agents and to the farmers involved in seed production.

3.4.5 GAPI

GAPI is a microfinancing institution providing both working and investment capital to small and medium enterprises. GAPI has offices in all provinces of Mozambique except for Ikhambane. Working capital is to be repaid within one year; loans for capital investment (for example for irrigation equipment) usually within three years. Loan size varies between US$ 2,000 and US$ 300,000. Interest rate varies from 16-22 percent, which is below the interest rates charged by the commercial banks, with an additional commission of 1.5-3.0 percent over the loan sum.

At the local level, loans of up to US$ 5,000 for investment capital and of up to US$ 10,000 for working capital can be approved within one week if eligible. Loans of up to US$ 25,000 and US$ 50,000 for investment and working capital respectively are decided at regional level during meetings held twice a month. Loans over and above these amounts are decided upon in Maputo and take approximately one month to be processed, provided that all relevant information is provided in the application. Funding of GAPI is from own resources, but also from KWF bank in Germany. GAPI does not receive or manage any donor funds, but does at times buy funds from donors such as DANIDA.

The portfolio of loans in Manica Province up to December 2005 amounted to US$ 2,500,000. About 51 percent of loans are provided to legally registered companies (90 percent of which are owned by foreign investors; in total there are some 20 foreign investors in Manica Province), with 42 percent being provided to private sector companies that are mostly not legally registered and owned by Mozambican nationals. The remaining 7 percent is being provided to associations, with members of the association having a collective responsibility towards repayment of the loan.

Examples of companies in the portfolio of GAPI in Manica Province are:

- Vanduzi - The loans are provided to Vanduzi, mostly for the procurement of inputs, which are then made available to the farmers. When the farmers deliver their produce (baby corn) to Vanduzi, the loans are deducted from the payments. Vanduzi is responsible for repayment to GAPI.

- Rainhah - Loans have been provided for investments in machinery. The company buys cattle from smallholder farmers, keeps the cattle in feedlots and then slaughters the animals.

- Abilio - Abilio is the biggest poultry producer in Mozambique. The company requested credit to buy maize from South Africa. This has been noted by farmers and has resulted in an increase in maize production as it is realized that there is a demand. GAPI needs bigger companies as Abilio also, being a big and safe client. The justification is that Abilio helps increase smallholder production and income.

3.4.6 ADEM

ADEM is a public-private partnership established at national level at the end of 2005. Members are companies and organizations. It is to facilitate processes aimed at implementing local development strategies through the provision of services.

Manica Province has much agricultural potential. Successes in agricultural development should be measured in benefits to the economy as a whole and to individual smallholder farmers, but it is feared that there are not many successes to be reported for Manica Province. Outgrower schemes in Manica Province are not very well developed, having been started while being badly prepared, with insufficient resources.

ADEM in collaboration with other organizations and institutions assisted in identifying the needs of commercial farming (crops, quantities) in relation to the markets, while looking at how smallholder farmers could be linked in. Technical assistance is then facilitated, taking into account the whole value chain from input supply to marketing.

Commercial farmers are experiencing difficulties, especially with legal issues, business partnerships or financing. Such issues have resulted in some farms closing down such as Vilmar (rose exports), which had also received support under ADEM. In the view of ADEM, business and institutional environments (including labor laws, taxes, penalties and incentives) are not conducive to businesses prospering.

Vanduzi also received support under ADEM. Suitable farmer associations were identified in accordance with the needs of the company. Within these associations contact farmers (11) were identified, who underwent a six-month training course in crop production (Training of Trainers) and then returned to the associations. Financing was provided to the associations to start production.

Outgrower schemes can complement commercial farming activities, but at present smallholder farmers are not well organized to share in existing opportunities. Especially lacking are a business mindset and an understanding of the power of collective action, and assets, water, and financing. There is a need for skills training, inputs, and irrigation facilities, taking a commercial approach, as opposed to the tendency among smallholder farmers to please donors. Many smallholder farmers are dependent on rainfall, with low production volumes (for example, less than 300 kg/ha for paprika). A study has been done on development of irrigation, and some schemes have started the construction of small dams.

3.5 CONSTRAINTS TO THE DEVELOPMENT OF OUTGROWER SCHEMES

Constraints emerging from interviews with a range of companies and several support organizations can be summarized into two main categories:

- Business and institutional environment:
  - Lack of a clear government vision and commitment, supported by adequate strategies;
  - Weak regulatory environment in relation to the screening and monitoring of companies with short-term agendas undermining private sector efforts;
  - Lack of affordable input and trade financing (working capital);
  - A weak legal system, which is slow, complex and costly;
  - Over-protective labor laws;

  - Complicated and non-transparent licensing procedures;
  - Lack of focused, market-related research (such as determining areas most suitable for certain crops); and
  - Lack of qualified and skilled staff.

- Attitude and capacity among smallholder farmers:
  - Tendency among smallholder farmers to divert inputs (especially fertilizers) to other crops, resulting in low productivity levels and quality of the produce and non-repayment of credits. Because of this, companies tend to follow risk-averse strategies, minimizing input provision to smallholder farmers;
  - Non-adherence by smallholder farmers to formal agreements with the companies, as illustrated by high levels of side selling of the produce; and
  - Lack of business acumen, including budgeting and planning skills, among smallholder farmers; and
  - High cost of extension services, especially also since government extension staff lack technical knowledge and skills for non-traditional crops.

From the perspective of smallholder farmers, constraints relate to:

- Lack of access to credit and inputs, notably chemicals and fertilizer;
- Lack of technical support and/or inadequate extension services;
- Lack of transparency in the relationships with the private sector (e.g. contracts, pricing, grades, weights, pack-out rates);
- 'Low' or fluctuating/declining prices for produce.

Constraints as expressed by the different parties are interlinked: diversion of inputs results in lower production levels, making it difficult for farmers to pay off credits and still make a profit on the production of the crop. Farmers have a tendency of translating this into the complaint of 'too low' prices being paid for their produce, and resort to side selling of the crop to avoid repayment of credits (strategic default). Diversion of inputs, side-selling of the crop and non-repayment of credits result in companies choosing risk-averse strategies, including minimizing the provision of inputs, and scaling down extension support. This again leads to farmers complaining about the lack of credits, inputs and technical support, and contributes to smallholder production remaining stagnant at low levels.

It is important to realize that fluctuating and sometimes declining prices of the high-value export crops that the majority of outgrower schemes focus on are highly influenced by developments on international markets.

It is in these areas that NGOs promoting smallholder-private sector linkages could play a crucial role, by making these mechanisms understood especially by the smallholder farmers. However, there appears to be reluctance among NGOs to take such responsibility.
Criticisms by the private sector and non-NGO support institutions on the functioning of NGOs were numerous:

- The smallholder situation in Mozambique is complicated. There is a tendency to associate smallholders with the cooperatives of the past, bringing out negative connotations. Many smallholder associations do not realize that their common focus is a common interest of production of a particular crop, as opposed to merely being recipients of NGO and/or donor funds;

- There is a focus on top-down formation of associations, with associations comprised of farmers with different interests. There is a tendency of NGOs to work in isolation of the needs of the agro-industry;
- There is a need for coordination between donors/NGOs to avoid duplication of efforts, such as one NGO focusing on paprika, and another on cotton, while targeting the same farmers;
- NGOs are seen to be involved in capacity building activities, without the necessary focus on addressing issues such as appropriate technology adoption or reduction of dependency on rain-fed production through investments in infrastructure for smallholder irrigation facilities;
- The smallholder sector attracts much attention from the many NGOs, at the expense of the emerging group of semi-commercial Mozambican entrepreneurs, who could create a better continuum. Larger companies have access to international financing or to the commercial financial sector (the latter with limitations), but there is nothing in place for the semi-commercial entrepreneurs;
- NGOs create market distortions or are involved in creating subsidized competitors to the private sector;
- No planning for the sustainability of projects once NGOs exit. NGO support has a limited lifespan of 2-3 years during which immediate results are expected at the expense of the development of a long-term vision and corresponding strategies; and, most critically,
- Development and implementation of NGO programs and projects without any interaction with the private sector.

Crop rotation is neglected by both NGOs and the private sector. These promote specific crops, where it is necessary to understand how different crops will be rotated with each other, whereby it should be recognized that maize will always play an important if not central role.

Proposals for agricultural development should not only look at different combinations of cash crops, but also include alternatives such as bamboo and tree crops. Different companies would then each provide its own specific technical input.

4 OUTGROWER MODELS IN ZAMBIA AND MALAWI [1]

Centralized outgrower schemes as described in Section 2.3.1 can be divided into three distinct models, and can be found in Zambia in the paprika, cotton and horticultural sectors:

- The processor employs its own field staff mobilizing and managing the outgrower smallholder farmers;
- The processor uses local agents or other intermediaries, who work on a commission basis, and are the link to the outgrowers;
- The processor is linked to cooperative societies or associations, which manage the individual member outgrowers.

4.1 THE PAPRIKA SECTOR

4.1.1 Zambia

Paprika was first introduced to Zambia in 1993 when Cheetah Zambia Ltd. established operations, initially focusing on commercial production, but with also smallholder and emergent farmers around Lusaka and along the line of rail being attracted to paprika as a cash crop. Cheetah Zambia started its operations as a trading company buying from farmers that were contracted to grow and sell paprika to the company, and then exporting dried paprika to established international markets in mainly Europe and South Africa for further processing.

Support for smallholder paprika production began in earnest only in 1997/1998, especially through such donor-supported initiatives as the Cooperative League of the USA (CLUSA). Cheetah Zambia and CLUSA worked closely together to promote smallholder paprika production, especially in the Mumbwa and Chibombo Districts in Central Province.

Various other companies, NGOs or individuals were involved in promoting smallholder paprika outgrower schemes at one time or another - the CLUSA program in Eastern Province, Africare and Kalingwiza Enterprises Ltd. in Eastern Province, Agricrops Ltd. in Western Province, CONASA in Southern Province, and ZAHVAC members such as Enviro Oil & Colorants, Biopest, Mipachima and White Rose. For various reasons most of these have ceased to operate such schemes.

When considering the paprika industry in Zambia it is important to distinguish between those with processing facilities, and others that do not and are or were promoting smallholder paprika production through outgrower schemes and for their activities and/or exports are or were dependant on the two key players, Cheetah Zambia and until recently the ZAHVAC group of companies, of which Enviro Oil and Colorants was the most important.

Cheetah Zambia is a Dutch associate, privately owned commercial operation that has been active in Zambia for well over 10 years, and which has received only limited donor support in the past. The Cheetah group of companies is also operating in Malawi and Mozambique. The

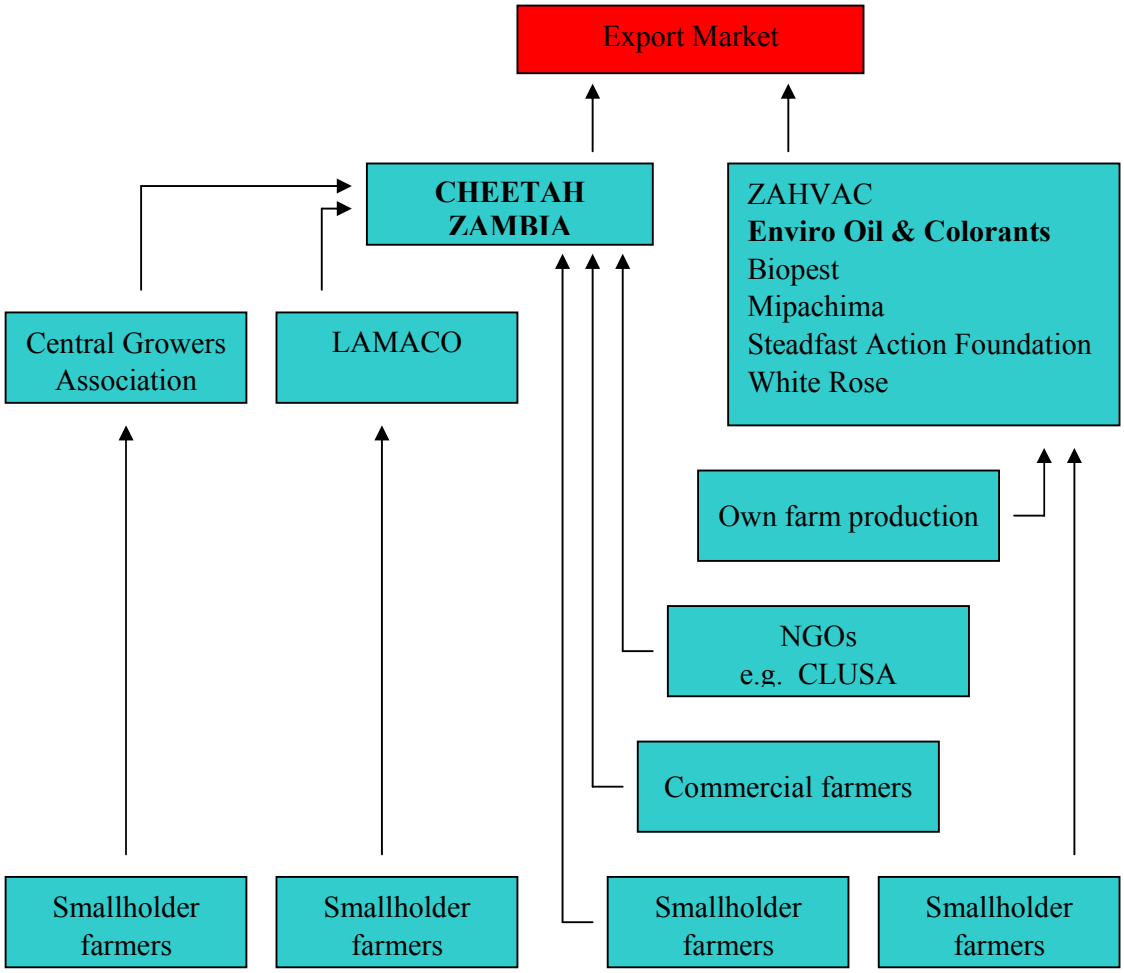
[1] *The information in this section is partly based on a series of interviews conducted in 2005 for the World Bank Outgrower Case Studies (ABD, 2005), complemented with up-dated information collected during the current mission.*

three Cheetah companies in 2002 processed 2,500 ton of paprika, of which approximately 70percent was smallholder-produced.

In similar brief, Enviro Oil and Colorants is a Zambian domiciled grouping that has been dominating the umbrella organization ZAHVAC. Until recently ZAHVAC received substantial donor support. Other members of ZAHVAC were Biopest, Mipachima, Steadfast Action Foundation and White Rose. All these five members of ZAHVAC are also high profile within the Zambian community. Smallholder paprika production under the ZAHVAC umbrella has been in the range of 200-300 ton per annum.

The sector became highly polarized into two camps surrounding the two main players, partly because of differences in donor support. Most of the companies under ZAHVAC ceased operations when donor support ceased, or are continuing their activities on a much-reduced scale. Because of lack of donor funding the secretariat of ZAHVAC has effectively been disbanded. One member expressed the view that ZAHVAC had outlived its purpose and is defunct, while another characterized ZAHVAC as being dormant, pending donor funds becoming available again. Players that are or were active in the Zambian paprika industry are shown in Figure 1.

Figure 1: The Paprika Industry in Zambia



The number of smallholder farmers involved in paprika production, whether directly contracted by, or linked to the companies mentioned above through agreements with collaborating partners, has fluctuated considerably over the years.

4.1.2 Malawi

In 1995, two years after establishing its operations in Zambia, Cheetah Zambia introduced the paprika crop into Malawi through collaboration with a local company, Press Agriculture. Press Agriculture organized a paprika outgrower scheme under a smallholder tenant system. Press Agriculture owned the land, and also provided all inputs to the tenants, cultivating an average area of 1.5 acres (0.6 ha) each. Paprika was grown in a 'controlled environment'. Under the arrangement, tenants were obliged to sell the crop to Press Agriculture. In 1997, because of criticisms on the tenant system, Press Agriculture pulled out of paprika production. The smallholder farmers left the estates, but took their skills in paprika production home with them.

In that same year Cheetah Malawi Ltd. had been established, and smallholder farmers continued to grow paprika in collaboration with this company, albeit on their own land this time. Meanwhile the Government of Malawi, through the Ministry of Trade and Private Sector Development and the Malawi Export Promotion Council, had been looking for an alternative export earner next to tobacco and had identified paprika as such a crop. Interest among smallholder farmers was investigated and a group of farmers convened in 1997 to explore the possibilities of 'standing on their own'. An association was formed, a constitution drawn up, and in 1998 the Paprika Association of Malawi (PAMA) was registered.

Smallholder paprika production under Cheetah Malawi began in earnest in the 1999/2000 season, with good numbers of smallholder farmers being contracted in 2001/2002. According to the records, 50,000 farmers obtained seed. However, only 20,000 farmers delivered paprika during the marketing season, shedding doubt on the number of paprika-producing farmers. It is believed that many farmers taking seed on credit were expecting that Cheetah Malawi would also provide chemicals and fertilizers, and when these inputs were not forthcoming, did not grow the crop.

The 2001/2002 season was a very wet season, with consequently many disease problems in the smallholder paprika, resulting in a lower average quality of the produce, and accordingly lower average prices paid to the farmers. Another factor that played was that the Malawi Kwacha for years had been almost level against the US Dollar at USD 1 = MKW 75-80, whereas the internal inflation had been 20-30percent. Whereas the prices for the various paprika grades had been rather constant over these years, farmers started realizing that they could not buy the same anymore from the proceeds of their paprika sales. Another factor with a negative impact was that the working capital that Cheetah Malawi had at their disposal was not sufficient, as a result of which farmers had to wait up to 3 weeks before they received their payments.

All these issues together resulted in disappointments and discontent with the farmers, resulting in a significant reduction in the number of smallholder farmers involved in paprika production in the following 2002/2003 season. Since, the number has steadily been rising again.

4.1.3 Major Players within the Paprika Industry in Zambia and Malawi

4.1.3.1 Cheetah Zambia Ltd.

Cheetah Zambia initially focused on paprika production by commercial farmers, but over the years the company has also established contract outgrower schemes for the production of paprika by smallholder farmers. Initially this was in collaboration with donor-assisted programs, but the company became more involved in directly contracting smallholder farmers through its own outgrower schemes. The main reason for this was the perceived unreliability of some of the partners that Cheetah Zambia collaborated with.

Before the start of the marketing season in 2000 it was learned that CLUSA in Central Province was awarding the paprika production in one of the Districts in which it was operating to Cheetah's main competitor. During the 2002 marketing season it was discovered that Agricrops Ltd. was delivering at least part of the paprika crop to the same competitor, despite having an exclusive contract with Cheetah Zambia.

A partnership with CLUSA in Eastern Province (1,200-1,400 smallholder farmers) came to and end after the 2002/2003 season when the CLUSA program itself came to an end, with the Producer Owned Trading Company (POTC), being CLUSA's exit strategy, unexpectedly deciding to focus entirely on smallholder groundnuts and sunflower production because these crops were conceived as having a better return for the POTC as compared to paprika (Box 4).

A partnership with Kalingwiza Enterprises Ltd. (also operating under the name of Eastpro Spicenet Enterprises Ltd.), also based in Eastern Province (400-600 smallholder farmers), was successful one season, but failed altogether in the following season, with not a single kg of paprika being delivered to Cheetah Zambia.

In 1999/2000, Cheetah Zambia had only 218 smallholder farmers contracted directly, but was linked to over 3,100 smallholder farmers through collaborating partners such as CLUSA in Central Province (Mumbwa and Chibombo Districts) and Agricrops Ltd. in Western Province (Kaoma District). In following years, the number of directly contracted farmers grew to approximately 2,500 smallholder farmers in 2001/2002, and further to approximately 5,000 smallholder farmers from 2004 onwards, with additional farmers linked to Cheetah Zambia through new partnerships.

Cheetah Zambia's Extension and Procurement Department provides technical assistance on paprika production to both smallholder and commercials farmers, striving for increased yields and improved quality. The Department is also responsible for certified seed production, in collaboration with the Seed Control and Certification Institute (SCCI), and procurement of the paprika.

Cheetah Zambia has also invested in handling facilities, a processing plant, and a fully equipped laboratory providing quality assurance management for all of Cheetah's operations in Zambia, Malawi and Mozambique. It has a well-established laboratory with state-of the-art equipment, carrying out essential chemical and microbiological analyses on paprika.

Box 4: Producer Owned Trading Company

The Producer Owned Trading Company (POTC), located in Chipata, recently transformed from a development project into a functioning business. It has its origin in a NGO-supported project with a strong development focus and was trying to move toward a full fledging commercial operation. It had more than 6,000 smallholder members, 'inherited' from the NGO program.

The transformation took place with financial support from a number of partners in an initiative under the USAID-Global Development Alliance, and included Volunteer Service Overseas, HIVOS (US$ 250,000 grant for construction of warehouses and purchase of oil expellers), Twin Trading, and Cooperative Business International. Research was being conducted to identify and price machinery for cleaning, sorting, blanching and bagging of POTC products, to be established in Nampula as a joint processing center together with the POTC in Ikuru, Mozambique.

In the transformation process the POTC had been forced to make some radical changes. The official launch of the POTC in 2004 was the appropriate time to lay off many of the staff employed previously under the NGO program as it was realized that the elaborate set-up of this program could not be maintained by the POTC. Staffing was reduced from 38 to 13 (including security guards), with staff cost reduced from approximately US$ 16,000 per month to US$ 4,000 per month. Total overhead costs were reduced from US$ 21,000 to US$ 7,000 per month. Extension services were no longer provided to the members. The POTC also ceased the provision of agricultural inputs on credit because of poor credit recovery rates (at the end of September 2004 the credit program had US$ 40,000 in unpaid loans) and the high cost of administrating input distribution and credits. One exception was to be made for sunflower seed, which was to be distributed once every three years free of charge (simply budgeted as an expenditure) to ensure sufficient raw materials for the oil factory. To further cut costs, farmers were refunded all equity that they had in their savings account with the POTC, and the savings program ended, although POTC would strive to link the farmers with existing credit unions or similar savings facilities.

POTC bought sunflower and ground nuts from its member smallholder farmers. Due to cash flow problems in the first year of operation, only 400 ton or 60percent of the planned volumes of sunflower could be purchased, and 500 tons or 80percent of the planned volumes of groundnuts. As a result of short-term cash shortages side- selling was a significant problem. It was acknowledged that POTC members were not that loyal, but it was hoped that this would change once it would be possible to pay dividends to the farmers.

Of the purchased sunflower volumes, only 40 ton came from POTC's membership, the rest having been purchased from Eco-Sun Oilseeds Ltd. based in Katete District in Eastern Province and working with 4,000 smallholder farmers. Its owner, a Peace Corps Volunteer, left Zambia in 2005 and agreed to cede his company to POTC, including physical assets such as warehouses and purchasing depots.

POTC products were sunflower oil and cake, peanut butter and snack nuts, and groundnuts. Sunflower oil was sold locally and the cake was sold for animal feed in nearby Malawi. The long-term strategy was to increase sunflower operations (including the possible establishment of feed mill in Chipata using sunflower cake as main primary ingredient) to a minimum of 900-1,000 ton, which was considered to be the minimum necessary for making the sunflower operations viable. Groundnuts have been sold domestically but there was some potential for export via Fair Trade markets in Europe. POTC also believed that there was a large untapped market for peanut butter and perhaps snack nuts, and feasibility studies to explore the markets in Lusaka, Eastern province and nearby Malawi were carried out. It was also hoped to expand the export of groundnuts through fair trade channels.

However, POTC could not compete with a recent flooding of the local market with cheap palm oil from Malaysia, and sunflower operations came to an end. The situation for POTC became critical when the prices for groundnuts slumped, and the company could no longer fulfill its obligations to the banks. The POTC is currently in the process of liquidating its fixed assets (acquired through donor assistance) to settle its debts. There is still some hope that the POTC can be restructured into a much smaller and leaner company focusing on fair trade markets.

4.1.3.2 Cheetah Malawi Ltd.

Whereas Cheetah Zambia initially focused on commercial paprika production, with smallholder paprika production only gaining importance at a later stage, paprika production in Malawi has focused on smallholder farmers from the very beginning. The number of smallholder farmers involved in paprika production in Malawi, although varying from year to year, has always been higher in Malawi as compared to Zambia. However, it should be noted that because of land pressure the average area under paprika production per individual farmer in Malawi is lower as compared to Zambia.

Working with a much larger number of farmers has had its own problems. To facilitate delivery of the produce by smallholder farmers to the company a large network of depots is required, which has not always been easy to control. Initially grading, receipting and payments were all done at the depots, and admittedly, there have been instances where procurement staff employed by the company turned out to be paying some farmers on the basis of B-grades while recording the paprika as A-grade, or had been disadvantaging the farmers in other ways. In one instance it was also found out that extension officers based in Msuzu in the north of Malawi stole US$ 20,000 by not paying the farmers. Eventually all farmers were compensated.

Since then a tracking system has been developed which has significantly improved the operations. Also, the person paying the farmers is no longer the same as the person grading the produce; these responsibilities have been separated. Procurement staff employed for the marketing season is clearly instructed on the risks they take by trying to steal from the farmers or the company, but even so every season a number of these temporary staff end up in prison after trying to beat the system.

The basis for paprika production in Malawi are the Cheetah clubs, groups of 15-25 farmers, that are the vehicle for input distribution, dissemination of technical advice, and paprika procurement. In 2001/2002 some 20,000 smallholder farmers delivered paprika to Cheetah Malawi. For reasons explained before (Section 4.1.2) the number of contracted farmers was much lower in the following 2002/2003 season, with only 7,000 farmers contracted.

Since then the number of contracted farmers has been steadily rising again, with 15,000 smallholder farmers contracted for the 2005/2006 season. This is despite the introduction of a commitment fee towards the value of seed inputs. Until then farmers were provided with seed inputs on full credit.

Apart from seed farmers receive embedded services including extension support, packaging materials, transport of their produce, and a guaranteed market. In 2005/2006, some 95percent of smallholder paprika farmers in Malawi obtained their seed from Cheetah. The remainder received the seed from the Paprika Association of Malawi, which started seed distribution for the first time. Cheetah Malawi has until recently been collaborating closely with the Paprika Association of Malawi. However, due to recent events the relationship between Cheetah Malawi and PAMA has deteriorated (Box 5).

Box 5: Paprika Association of Malawi

The Paprika Association of Malawi (PAMA) was established after the Government, through the Ministry of Trade and Private Sector Development and the Malawi Export Promotion Council, identified paprika as an alternative export earner next to tobacco. Interest among smallholder farmers was investigated and a group of farmers convened in 1997 to explore the possibilities of 'standing on their own'. An association was formed, a constitution drawn up, and in 1998 PAMA was registered as a Trustee organization. Activities of PAMA were initially carried out on a voluntary basis without external funding. In 2000 DANIDA was approached through the Malawi Export Promotion Council, and DKK 2,000,000 was made available for PAMA over a period of 3 years. Cheetah Malawi was the Technical Adviser to PAMA and a signatory for all expenditures. This changed in 2003 when the EU came forward with additional funding for PAMA. A Steering Committee with representatives from the Government and the private sector was to oversee the PAMA management, but the private sector has never been represented on the committee. Nevertheless, Cheetah Malawi continued to provide active assistance to PAMA until the 2005 marketing season.

At the annual Buyer/Seller meeting PAMA announced that other buyers, who had not made any investments in the production of paprika, were invited to procure paprika in Malawi, and that farmers would be free to sell their paprika to the buyer of their choice. This ignored the fact that all inputs and extension support to paprika smallholder farmers in the 2004/2005 season had been made available by Cheetah, the company thus risking not being able to recover its investments. Worse, the action by PAMA was an open invitation to farmers to ignore the contracts that they had signed with Cheetah, and in fact an encouragement to side-sell.

Whereas Cheetah indicated that it would welcome other genuine players to the paprika market in Malawi, the company emphasized that it should be a level playing field, aimed at increasing the production base, with other companies making investments similar to those being made by Cheetah. The role of PAMA in this would be to provide criteria and guidelines on conditions to be met for other players to operate in Malawi, i.e. a Code of Conduct covering issues such as agreements between farmers/processors and grading standards, and ensure adhere thereto by both parties to the agreements. Another important role for PAMA would be to not just negotiate prices between sellers and buyers that are reasonable to the farmers, but more importantly to also provide the necessary explanations to the farmers on how prices are being derived. The role of PAMA in extension to promote paprika production would also remain important.

A recent mid-term review of PAMA revealed many weaknesses in the organization, with little capacity in its Secretariat and the Board of Trustees, a history of poor judgements, little or no ownership by the farmers, and heavy dependency on donor funding with no efforts having been made to become more self-sustainable. It also transpired that the PAMA management had the intention to become the major paprika marketing and export organization, being a reflection of the personal ambitions of the General Manager of PAMA.

The mid-term review expressed serious reservations about PAMA establishing such marketing company. Firstly it is questionable if the PAMA organization has the vision, skills, knowledge and capacity for this. Misconceptions appeared to exist over something as simple as the foreseen level of overhead charges involved (unless of course it was assumed that a donor would heavily subsidize this activity). Secondly, PAMA as a producer representative organization and buyer of paprika would likely be facing serious conflicts of interest. Thirdly, any donor support to such marketing company would effectively be a subsidy not being received by competitors. As such it would be a disincentive to private sector investment including foreign direct investment.

It appears that PAMA would have to make a clear choice on what they want to be: a representative organization for farmers, or a substitute for the private sector. If PAMA intended to become the latter, then any donor support would result in the creation of a competitor in the paprika industry, with the benefit of being highly subsidized. It was concluded that this should not and could never be the purpose of any donor support. It was therefore strongly recommended that if PAMA were to forward a request to the EU for support to the creation of such a marketing company, that such request was rejected.

In the end the choice would be for PAMA to make, but irrespective of the way PAMA would choose to go, improvements in its basic functioning were urgently required. Before PAMA could make a choice, EU funding which had been on halt for 3 months already was suspended indefinitely. As PAMA had not made efforts to become sustainable, it meant that the organization had to fire all staff, and activities stopped.

Options for further growth of the paprika production base are:

- Increase in the number of smallholders (rather than an increase of the area under production by individual smallholders because of land pressure);
- Improvement of production per unit area by smallholders; and
- Utilization of currently under-utilized large estates.

Cheetah Malawi will continue to work with smallholder farmers, with or without PAMA, but has also initiated commercial paprika production in the 2005/2006 season under contract with commercial farmers who are turning away from the production of burley tobacco. The advantage of commercial production over smallholder production is that volumes can be budgeted. Higher prices can be paid to commercial farmers as they produce paprika with higher ASTA, while the investment cost for Cheetah is much lower.

In collaboration with an international NGO, a trial is being implemented in which a commercial grower has its own outgrower scheme of smallholder paprika farmers. If this trial is successful, it will be tried to replicate the model with other commercial farmers. One important aspect is the introduction of irrigation for smallholder farmers. What is hoped for is a replicable model.

Cheetah Malawi, in collaboration with the National Smallholder Farmers Association of Malawi (NASFAM), is working on a proposal to establish an oleoresin extraction factory at a cost of US$ 3,500,000, which would bring much-needed added value. With the renewed investment Cheetah has made in the paprika production base, the volumes expected this season would already justify such investment.

Cheetah Malawi suggested that rather than financially supporting organizations such as PAMA, the EU and other donors should possibly consider going through the private sector, in the form of 'result contracts'. Much more could be achieved at a much reduced expense: less overhead costs, with only the activities themselves (extension, monitoring, research including variety testing, and development of a Code of Conduct for the paprika industry) being funded.

4.1.4 Description of Paprika Outgrower Schemes in Zambia and Malawi

4.1.4.1 Outgrower network organization and management

Smallholder farmers contracted by Cheetah Zambia or Cheetah Malawi are organized in groups or clubs of on average 20-25 farmers, although the size may actually vary from 5-50 members or more. Invariably the main reason quoted for organizing the farmers in groups is that it would simply not be economical to service each and every farmer individually. The groups or clubs are the vehicle for distribution of inputs, dissemination of technical advice, and procurement of the crop.

Farmer groups in Zambia are mostly mere interest groups, with a common interest in growing paprika. Members of the farmer groups are rarely formally linked to each other through an association or cooperative. Only in the case of the Central Growers Association (Box 6), all individual farmers are members of the association itself, but the groups under the association are not registered separately.

Box 6: Central Growers Association

Central Growers Association (CGA) is an independent producer association established in 1997 when the Tobacco Association of Zambia (TAZ) stopped supporting smallholder farmers because of high default rates.

The objectives of CGA are to protect the farmer interests, procure inputs (including delivery of such to the farmers), arrange for markets, and sell on behalf of the farmers. CGA is operating in five zones: Kabwe, Mkonchi, Mkushi-West, Serenje and Lupia (near the border with DRC).

Currently 803 smallholder farmers are producing tobacco, of which approximately a quarter is female. Most smallholder farmers (95 percent) grow from ½ - 1 ha, some grow up to 5 ha, and a very few up to 20 ha. Tobacco production has been the backbone of CGA since its establishment.

CGA signs individual contracts with its members, who are grouped in clubs (on average 20 members per club, if the club grows too big, it is split in two new clubs). Clubs themselves screen new members. Peer pressure and monitoring are important to control defaults. At the moment there is a 100 percent repayment of credits. There are 6-7 clubs per zone. Each selects its own chairman and secretary. Every club also has a contact farmer (which could also be the chairman or secretary, but not necessarily).

All clubs within a zone together select two representatives who sit on the Board of CGA. The chairman of CGA must be a grower himself and is elected for a 3-year period. CGA employs 26 permanent staff and about 300 seasonal workers. All marketing is done on behalf of the farmers by the management.

In the 2002/2003 season CGA expanded its support to the production of paprika, initially involving 50 farmers. The number of paprika growers has steadily increased to 398 in the 2004/2005 season, and further to 612 in the 2005/2006 season.

For the 2003/2004 season paprika yields totalled approximately 12,000 kg. It was claimed that a buyer was found in Zimbabwe, who had indicated to be willing to buy the crop at US$ 1.75 per kg for whole pod paprika for the production of paprika powder. However, this buyer let CGA down, and CGA concluded negotiations in 2005 with Cheetah Zambia for sale of the crop, albeit at a loss as the quality of the paprika, having been stored over a long period of time, had deteriorated.

Only seed and extension support are provided to the paprika farmers, other inputs will have to be secured by their own effort. Yields range from 500-800 kg/ha depending on the level of inputs. To achieve yields above 1 ton/ha, the full range of inputs is required.

Source: Interview notes

In Malawi, PAMA has been promoting the formation of formally registered associations, which have their roots in the Cheetah clubs. The associations are mostly considered to be very weak, and have not been able to advance much beyond the stage of simple registration.

Group or club leaders, also referred to as farmer facilitators or contact farmers, are the link with the companies. Selection of a group leader is mostly an interactive process between the company and the group. Group leaders must be approved by the company (they must be literate and be able to keep a minimum of administration), but at the same time the group leader must be accepted and trusted by the farmers.

The Cheetah companies each employ a core team of extension officers, who interact with the group leaders on a regular basis. An Extension Supervisor/Coordinator coordinates and oversees the functioning of the extension officers from the respective company headquarters. When there are large numbers of farmers contracted by a company in a certain area, and especially if other companies are operating in the same area and there is a fear of side buying

of the crop, the Cheetah companies may additionally employ locally recruited Field Assistants to more closely supervise production and marketing of the crop.

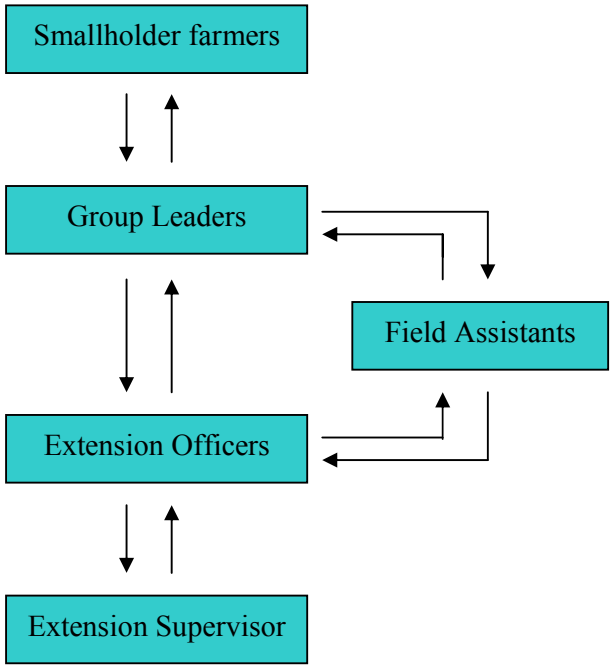
The first interaction between extension officers and group leaders would be at the time of mobilizing and contracting individual farmers for the up-coming season, whereby the group leaders have the responsibility for selection and contracting. Throughout the season extension officers interact with the group leaders at times closely associated with the production cycles that are distinguished in the production of paprika, i.e. nursery preparation, field preparation and transplanting, field management including pest and disease control, pre-harvest preparations, and harvest and post-harvest handling.

At these critical times throughout the season, meetings are organized with the group leaders to highlight the most important aspects of the various stages of paprika production, followed by field demonstrations to one or more groups at a time.

Group leaders play an important role also at the time of marketing of the crop. Through the group leaders the extension officers are informed about the volumes that the individual farmers within the groups have ready for sale.

The Cheetah outgrower network organization is illustrated in Figure 2.

Figure 2: Paprika Outgrower Network Organization



Information flow and communications follow the same channel, with extension officers announcing dates for meetings and field demonstrations, announcing price settings for the crop, dates at which and locations where the companies will be buying from the farmers, and any other information that may be relevant.

Group leaders are not in the employ of the Cheetah companies, although they may receive support from the companies either through the provision of bicycles for carrying out their tasks or through a bonus for every kg of paprika delivered to the company by contracted farmers.

In 2005/2006 Cheetah Zambia changed its approach more towards the system used by Dunavant in the cotton sector (Section 4.2.3), with group leaders becoming more like distributors, with commissions being paid for recruitment of farmers, credit recovery, and volumes of paprika in an effort to improve on credit recovery rates and delivery of produce by farmers who had received their inputs from the company.

However, contrary to Dunavant the Cheetah companies will always look for a more direct interaction with the farmers to be able to exercise a degree control over the quality and quantity of paprika produced. EU standards are becoming more stringent all the time (aflatoxins), and the companies cannot rely on third parties being in charge of the production base as it feared that the companies will then be out of business in no time. Paprika is a specialized crop, and requires control and supervision.

4.1.4.2 Group membership requirements

There appear to be no strict criteria for the selection of group members, and in principle anyone who feels attracted to growing paprika is accepted. However, in 2003/2004 Cheetah Zambia introduced a contribution from farmers towards the value of seed inputs, followed by Cheetah Malawi in 2005/2006 after agreement had been reached with the Paprika Association of Malawi (PAMA). The commitment fee for seed inputs in Malawi amounts to MKW 150 for old growers, and MKW 250 for new growers (out of a total value of MKW 500 per packet of seed; the credit balance is converted to US$ at the prevailing exchange rate, and back to MKW again at the start of the marketing season).

In 2005/2006 Cheetah Zambia also introduced the concept of membership, which entitles contracted farmers for further inputs such as chemicals at discounted prices and on partial credit. The idea behind the introduction of contributions towards the value of inputs and the concept of membership is that only the more committed farmers will be attracted to the production of paprika.

4.1.4.3 Contract design and viability

Cheetah issues its group leaders with contract forms that are to be signed individually by the group members. The contracts make provision for recording the inputs provided to the individual farmer, any down-payments made and balances due.

Central Growers Association has individual contracts in place for its farmers involved in tobacco production, but has not yet developed a similar contracting mechanism for paprika.

In practice, contracts signed with individual farmers are difficult to enforce under the current judicial systems in Zambia or Malawi. Collateral is not provided for and side-selling is rife in

areas where there is competition between buyers despite production agreements being in place. In Malawi, the Paprika Association of Malawi went as far as bringing in buyers from outside the country during the 2004/2005 marketing season, and informing the farmers that they were free to sell their paprika to the buyer of their choice, completely ignoring the fact that the majority of smallholder farmers had received their seed inputs and further embedded services from Cheetah Malawi. In fact, PAMA was encouraging farmers to ignore the agreements in place, promoting side-selling.

4.1.3.4. Input provision (service models), costs and payment modalities

The Cheetah companies provide certified seed (on partial credit) and chemicals (cash payment only in principle) to the individual smallholder farmers, but no fertilizers as this is considered too risky with probable defaults because of the prevalent culture of running away from repayment of loans. This policy of not supplying fertilizer is also substantiated by the opinion that the farmer should be successful at producing the crop without applying fertilizer. It is important to apply the correct management to the crop, before being able to reap the possible benefits of fertilizer application. Farmers are encouraged to apply manure, or if they insist on applying fertilizer, to obtain this through other channels.

Seed distribution normally starts the 1st or 2nd week of September. In 2005/2006, a problem was created in Malawi when PAMA announced on the radio that farmers should not obtain seed from Cheetah but instead wait for PAMA to start distributing seed, which was claimed to be higher yielding and to have fewer disease problems. PAMA has a weekly program on the radio, which is a powerful tool, but appears to be used inappropriately.

However, no seed was distributed by PAMA until the 2nd week of October, when the organization admitted that it had failed to procure any seed and requested help from Cheetah Malawi, which is when Cheetah Malawi distributed its seed. Meanwhile PAMA was assisted in obtaining 1,000 kg of certified seed from Cheetah Zambia. PAMA had also promised the farmers chemicals and fertilizers (against a collateral of MKW 5,000), but had failed to deliver.

In high-density areas, it would be possible to sell paprika seed from the shelf, which would be at a higher cost to the farmer, but he would then be free to sell to whomever he wishes. Cheetah would have no problem with this.

The Cheetah companies are in a position to obtain agrochemicals, packed in quantities suitable for smallholder production, in large quantities from chemical service providers, and thus can make the chemicals available to the smallholder farmers at more affordable prices.
The cost of paprika production per ha at different management levels, as provided by Cheetah Zambia, is shown in Table 1, together with the possible margins.

Table 1: Cheeta Zmbia Ltd. cost of production and margins for 1 ha paprika

Budget for 2003/2004 season (in US $)		CHEETAH ZAMBIA Ltd							
F.O.T (Delivered Lusaka)		**Artifical drying+ Irrigation**		**Production under Irrigation**		**Rainfed Production**		**Small-scale Production + inputs**	
Yield (kg/ha)			4,000.00		3,000.00		1,600.00		800.00
Yield Paprika skin (kg/ha)			2,880.00		2,160.00		1,152.00		576.00
Yield Seed kg/ha)			1,120.00		840.00		448.00		224.00
Price Paprika (300 ASTA)			1.35		1.35		-		-
Price Paprika (275 ASTA)			0.00		0.00		1.13		1.10
Price Seed (28% seed)			0.12		0.12		0.12		0.12
Revenue Paprika			3,888.00		2,916.00		1,298.88		633.60
Revenue Seed			134.40		100.80		53.76		26.88
Total Revenue			**4,022.40**		**3,016.80**		**1,352.64**		**660.48**
Direct input costs			**2,384.32**		**1,901.71**		**998.72**		**317.40**
Margin			**1,638.08**		**1,115.09**		**353.92**		**343.08**
GM % Costs			**68.70**		**58.64**		**35.44**		**108.09**
Item	**Price $**	**quantity**	**costs**	**quantity**	**costs**	**quantity**	**costs**	**quantity**	**costs**
Seed (kg)	35.00	1.0	35.00	1.00	35.00	1.0	35.00	1.0	35.00
Fertilisers									
Compound WV or C (kg/ha)	0.30		0.00		0.00		0.00	-	0.00
Compound D (kg/ha)	0.30	450.0	135.00	450.00	135.00	400.0	120.00	350.0	105.00
Maxi Pot. (kg/ha)	0.33	-	0.00	0.00	0.00	-	0.00	-	0.00
Super Phosphate (kg/ha)	0.27	-	0.00	0.00	0.00	-	0.00	-	0.00
Urea (kg/ha)	0.30	150.0	45.00	150.00	45.00	150.0	45.00	150.0	45.00
AN (kg/ha)	0.30	150.0	45.00	150.00	45.00		0.00	-	0.00
Potassium Nitrate (kg/ha)	0.70	150.0	105.00	150.00	105.00	-	0.00	-	0.00
Potassium Sulphate (kg/ha)	0.45	200.0	90.00	200.00	90.00	150.0	67.50		0.00
Calcium Nitrate (kg/ha)	0.50		0.00		0.00		0.00	-	0.00
Potassium Chloride (kg/ha)	0.33		0.00					100.0	33.00
Trace elements (kg/ha)	3.80	6.0	22.80	6.00	22.80	2.0	7.60	-	0.00
Chemicals									
Methyl Bromide (tin)	4.00	10.0	40.00	10.00	40.00		0.00	-	0.00
Roundup (lt/ha)	9.50	-	0.00	0.00	0.00	-	0.00	-	0.00
Lasso (lt/ha)	14.00	2.0	28.00	2.00	28.00	-	0.00	-	0.00
Ronstar (lt/ha)	19.60	2.0	39.20	2.00	39.20	-	0.00	-	0.00
(EDB (14 lt sandy soil)	4.30	-	0.00	0.00	0.00	-	0.00	-	0.00
Vydate (lt/ha)	32.50	-	0.00	0.00	0.00	-	0.00	-	0.00
Karate (lt/ha)	30.00	0.6	18.00	0.60	18.00	0.6	18.00	0.5	15.00
Lannate (kg/ha)	10.00	1.2	12.00	1.20	12.00	0.8	8.00	-	0.00
Methamidophos (lt/ha)	8.00	2.0	16.00	2.00	16.00	-	0.00	-	0.00
Thuricide (kgha)	30.00		0.00		0.00		0.00		0.00
Confidor (1 application) (lt/ha)	100.00	0.6	60.00	0.60	60.00	-	0.00	-	0.00
Copper oxychloride (kg/ha)	2.80	-	0.00	0.00	0.00	10.0	28.00	6.0	16.80
Copper hydroxide (kg/ha)	5.25	8.0	42.00	8.00	42.00	-	0.00	-	
Dithane M45 (kg/ha)	4.70	4.0	18.80	4.00	18.80	20.0	94.00	4.0	18.80
Sulphur (Wettable) (kg/ha)	2.00	7.5	15.00	7.50	15.00	3.5	7.00	-	0.00
Benomyl (kg/ha)	12.50	0.7	8.75	0.70	8.75	-	0.00	-	0.00
Labour									
Nursery & Cropping (md)	1.10	180.0	198.00	160.00	176.00	100.0	110.00	family-	
Harvest & Handling (md)	1.10	112.0	123.20	100.00	110.00	85.0	93.50	labour	
Management									
Manager (md)	70.00	3.0	210.00	3.00	210.00	2.0	140.00	family-	
Supervisors (md)	3.50	25.0	87.50	20.00	70.00	15.0	52.50	labour	
Machinery									
Fuel & Oil + R & M (lt/ha)	2.00	90.0	180.00	90.00	180.00	30.0	60.00	-	0.00
Irrigation									
Electricity + R & M (per ha) ovh	45.00	5.0	225.00	4.00	180.00	-	0.00	-	0.00
(100 mm/season/ha = 1)			0.00		0.00	-	0.00	-	0.00
Electricity + R & M (per ha) drip	35.00	-	0.00	0.00	0.00	-	0.00	-	0.00
Depreciation (per ha)	270.00	-	0.00	0.00	0.00	-	0.00	-	0.00
Drying									
Artificial drying (unit)	83.33	1.0	83.33	0.00	0.00	-	0.00	-	0.00
(cost/year) (1 unit for 24 ha)									
Coal (tonnes/tonnes paprika)	70.00	4.0	280.00	0.00	0.00	-	0.00	-	0.00
Dry racks (50 m²/ha)	30.00	-	0.00	1.00	30.00	0.8	24.00	0.8	24.00
Packing									
Hessian (3 m²/100kg papr.)	0.92	30.0	27.60	22.50	20.70	12.0	11.04	-	0.00
(bales can be re-used 4 times)									
Twine (per roll)	9.70	2.0	19.40	1.00	9.70	0.3	2.43		0.00
90 kg polypropylene bags	0.40	-	0.00	0.00	0.00	-	0.00	20.0	8.00
Transport									
Cost $ / tonnes /100 km	12.00	5.1	61.20	4.1	49.20	2.3	27.60	1.4	16.80
Interest 9% of variable costs over7 months		0.05	113.54	0.05	90.56	0.05	47.56	-	-
Total costs			2,384.32		1,901.71		998.72		317.40

Note 1: prices are indicative only and subject to change
Note 2: methyl bromide is no longer part of the chemicals recommended by Cheetah.

The different production levels as shown in Table 1 can be described as follows:

- *Irrigated production with artificial drying facilities*

  With these facilities available, maximum yields (5 ton/ha) can be obtained. The crop can be planted in August and the first flush will be harvested end of January (during the rains). The advantages of an early crop are that the plants are exposed to more heat units before the rains start (a stronger plant can develop), and the development of more flushes before the cold season starts (colder weather induces lower quality paprika).

- *Irrigated production without the availability of artificial drying facilities*

  Without artificial drying facilities, the crop can only be planted in October and the first flush can be harvested in March. The pods will be dried in the sun. Yields of 2.5 ton/ha (overhead irrigation) to 3-4 ton/ha (drip irrigation) can be achieved. An irrigated crop will produce several flushes and may be harvested over a period of 6 months.

- *Rain-fed production with medium inputs*

  The crop is preferably grown under irrigation, but can also be produced under dry-land conditions in those areas with considerable rains (800 mm or more). The crop can be planted in the nursery in October and transplanted in November (after the first rains). Since it is uncertain whether the rains will last long enough for the second flush, input management should concentrate on having as high a production in the first flush. The budget yield is 800 kg/ha.

- *Rain-fed production with minimum inputs*

  For emergent and small-scale farmers who do not have a large budget for inputs, paprika can still be a profitable crop. With minimum inputs (seed and chemicals only) and enough rain (800 mm spread over 4-5 months) it should still be possible to achieve yields of 400-600 kg/ha. With an additional input of fertilizer yields of 800 kg/ha or more can be expected. It is very important that the plants are transplanted immediately after the first rains.

Companies such as Enviro Oil and Colorants and Biopest used to supply their farmers with all inputs (seed, chemicals and fertilizers) on credit, but reported that recovery of loans had been poor as inputs were used on other crops or were sold. Enviro Oil and Colorants claimed that after 4 years of poor credit recoveries the total of outstanding loans amounted to ZKW 630,000,000. In later years the companies also restricted the provision of inputs to seed and to a limited extent also chemicals.

Central Growers Association only provides seed (on credit) to their farmers; other inputs are to be secured by the farmers themselves. Although it was mentioned that there are some problems with farmers selling the inputs made available for tobacco production, they claim not to have any problems with defaulting because the credit to members is based on group

responsibility, and they do not anticipate any problems with the recovery of credits for inputs made available for paprika production.

4.1.4.5. Extension services and costs

Cheetah Zambia employs its own extension staff, as was customary for other companies in Zambia, despite the high costs involved. Cheetah Zambia employs 7 extension officers, with support of 5 local Field Assistants in the more important production areas. Government extension officers are viewed as ineffective and not having the specialized knowledge needed to provide support to the farmers in paprika production. Also, the extension officers play an important role during the time of marketing of the paprika, and the company wishes to exert control to ensure that the crop produced by contracted farmers is not diverted elsewhere.

Cheetah Zambia estimates the cost of an extension officer, equipped with a motorcycle, at approximately US$ 800 per month, which includes salaries, field allowances, fuel and running costs for the motorcycle. Locally employed Field Assistants, who are provided with a bicycle, cost approximately US$ 100 per month. Further costs are incurred for an extension supervisor or coordinator and administrative personnel, and vehicles. Cheetah Zambia estimates an overhead cost into their warehouses of US$ 0.35-0.40 per kg of paprika at the current smallholder production volumes.

Cheetah Malawi initially worked with government extension workers, who were however moved around frequently to new Extension Planning Areas (EPA) where they also introduced paprika. As a result Cheetah Malawi ended up working in 70percent of the EPAs in Malawi, many of which with only a few farmers, which was stretching the company's resources. Cheetah is now concentrating its efforts in fewer areas with the highest potential; working with Cheetah Field Assistants who assist the company-employed Cheetah Extension Officers. Field Assistants are selected and monitored by the farmers, and receive a small commission from the company, based on their performance.

The Cheetah companies provide extension support corresponding with the six cycles distinguished within the production of paprika: seed distribution and nursery establishment; field preparation and transplanting; field management; pre-harvest operations; post-harvest practices; and marketing issues (pricing, location of depots, grading, etc.)

Central Growers Association employs 3 extension officers to provide advice to the paprika growers, while the tobacco extension officers that are also employed by the organization (5 in total) have received additional training in paprika production (management aspects of tobacco and paprika production are similar) to assist when one or more of the paprika extension officers are not available.

4.1.4.6. Field practices and production volumes

Cheetah Zambia projects an estimated 400-600 kg of paprika per ha under rain fed conditions with minimum inputs (seed, chemicals) but good management skills for the crop: certified seed, timely transplanting of healthy seedlings only, following recommended plant populations (60,000-80,000 plants/ha), field management including weeding and pest and disease control, and proper harvest and post-harvest handling of the crop. With a full package of inputs, including fertilizer, yield projections are in the range of 800-1,200 kg/ha. Higher yields have been obtained, but it was also admitted that such averages have not been achieved recently due to unfavorable weather conditions.

Central Growers Association claimed yields of 500-800 kg/ha under minimum input management, and mentioned that to achieve yields of above 1,000 kg/ha, the full range of inputs (seed, chemicals, fertilizers) would be required.

Reports from individual farmers varied greatly, with yields ranging from 70-385 kg/lima under rain-fed conditions with minimum inputs, corresponding with 280-1,540 kg/ha (1 lima = 0.25 ha).

4.1.4.7. Purchase prices and payment modalities

Cheetah Zambia has a 3-tier price system. The first is based on the color content or ASTA level (American Spice Trade Association) for deliveries over 1,000 kg made directly to the processing plant in Lusaka and mainly applies to commercial production involving larger volumes, although smallholder farmers have also been benefiting (Box 7). Testing for ASTA level is rather expensive and the reason for only testing larger deliveries. In international marketing the color content is the final determining factor for the value of the paprika.

Box 7: ASTA Levels

The ASTA method is an internationally accepted standard developed by the American Spice Trade Association for measuring the color content of paprika using a spectrophotometer. It provides an indication for the amount of oleoresin that can be extracted from a batch of paprika. The ASTA level can be expressed as a measurement of either the whole pod (i.e. including the seed percentage), or of the skin only. The range of ASTA levels found in different paprika varieties may differ and are determined by genetic variations. However, the expression of ASTA within any given variety is more dependent on a complex interaction of inputs, management of the crop, and weather conditions. Most smallholder crop consequently has on average a 15-20percent lower ASTA and therefore lower value as compared to commercially produced paprika. Pods of smallholder crop are usually also smaller, with less favorable skin/seed ratios.

Deliveries of less than 1,000 kg are paid on visual grade of the paprika, with the higher grades receiving better prices:

- A-grade: dark maroon / purple without damages
- B-grade: dark maroon / purple with maximum 25 percent spots or marks
- C-grade: red
- D-grade: orange/red

Although it is often assumed that paprika of a higher visual grade also has higher color content, this correlation is not absolute and the company does take a risk by buying on visual grade, which is reflected in the grade prices.

Cheetah Malawi has not been using payments based on ASTA as all paprika production has been by smallholder farmers, individually producing quantities that were well below the 1,000 kg threshold. This may change now that Cheetah Malawi has also embarked on paprika production with commercial farmers.

For deliveries less than 1,000 kg, both Cheetah Zambia and Cheetah Malawi distinguish between deliveries to the processing plants in respectively Lusaka and Lilongwe, for which 'factory' prices apply, and purchases made in the field through the localized depots or collection centers, for which 'farm-gate' prices apply. As an example prices paid by Cheetah

Zambia in the 2003/2004 season are shown, at the then exchange rate of US$ 1 = ZKW 4,800 (Table 2).

Table 2: Visual grade prices for paprika deliveries < 1,000 kg 2003/2004

Grade	Factory (US$)	Factory ZKW	Farm Gate ZKW
A	0.85	4,080	3,200
B	0.70	3,360	2,500
C	0.55	2,640	1,800
D	0.40	1,920	1,100

The average farm-gate price paid by Cheetah in the 2003/2004 season was approximately US$ 0.53 (equivalent ZKW 2,550), i.e. just above the B-grade price, as compared to US$ 0.67 (equivalent ZKW 3,200) for smallholder deliveries directly to the factory in Lusaka, i.e. just below the B-grade price. The average farm-gate and factory prices show that the grading in the field and at the factory was similar, with a slightly better average grade in the field, being an indication that farmers were fairly treated with respect to the grading of their produce.

Prices for farmers as expressed in US$ have remained stable over the years, despite sometimes declining prices on the international markets. Expressed in the local currencies, whether in Zambia or Malawi, this implies that prices paid to the farmers have been increasing from year to year, reflecting depreciations of the respective currencies against the US Dollar.

Smallholder farmers contracted by the Cheetah companies have a free choice in delivering directly to the processing plants in Lusaka or Lilongwe, or selling their produce at the lower farm-gate prices paid at the depots and collection centers, which is a partial reflection of the additional overhead costs (transport charges, depot rents, personnel cost) incurred by the companies.

In the 2004/2005 marketing season there was a problem in Malawi with the differentiation between factory and farm-gate prices. During the annual PAMA buyer/seller meetings held before the start of marketing of the paprika, agreement was always been reached on the respective factory and farm-gate prices. However, during the 2005 buyer/seller meeting only an agreement on the factory gate price was reached at the end of the day. Two weeks later, PAMA unexpectedly announced on the radio that the factory prices agreed upon at the meeting were to be implemented over the entire country, i.e. pan-territorial. This decision was prompted by the fact that other buyers, who had been invited to the paprika marketing but unlike Cheetah Malawi had not invested anything in the production of paprika, were willing to pay the higher price wherever they purchasing paprika

Collection of a levy was also imposed on the buyers. Cheetah Malawi started doing this in May at the start of the marketing season, paid the levies collected to PAMA, but stopped after the announcement of the pan-territorial prices by PAMA. The levies collected were paid to PAMA, but the percentage that PAMA was supposed to give back to the associations has not been paid yet. Farmers in Dedza District, being the highest paprika production area in Malawi, refused the deduction of levies altogether.

Pricing depends on developments on the international market. Cheetah Zambia provides minimum pre-planting ASTA and grade factory prices, expressed in US$. Payments during the marketing season for deliveries made to the factory are either in US$ (if the total value of the delivery exceeds US$ 1,000) or in ZKW at the prevailing exchange rate. Purchases in the field are always in the local currency.

Cheetah Zambia determines the equivalent local currency prices at the beginning of the marketing season. Because of the possible detrimental impact of government interventions, notably significant re-valuations of the local currency against the dollar shortly before the start of the marketing season, the company has been prompted to wait as long as possible with announcing the farm-gate prices, to not unexpectedly be facing much higher equivalent US$ prices.

The merit of this cautious approach was demonstrated by the unexpected and sharp appreciation (35-40percent) of the Zambian Kwacha against the US Dollar in November 2005. As a consequence, prices to be paid to the farmers will likely have to be reduced by at least 30percent in the 2006 marketing season.

Farmers have no influence on price levels, but at the same time any necessary reductions in price levels prompted by lower prices on the international markets in the past have been difficult if not impossible to implement, as this could easily have resulted in farmers turning away from the crop. This would not have been in the interest of the company as it would imply the loss of part of its production base. It remains to be seen what the effects will be of the price reductions in the 2006 marketing season.

Other companies such as Enviro Oil and Colorants and Biopest have been following the prices as set by Cheetah, usually inflated by a few hundred Kwacha. Farm-gate prices mentioned by farmers contracted by these other companies for the 2004/2005 season were A-grade ZKW 3,500, B-grade ZKW 2,500, and C-grade ZKW 2,000 (no mention was made of a price for D-grade).

Beneficiaries from donor-funded organizations with cheap financing have been inflating market prices to the disadvantage of commercial outgrower companies who consequently have been facing viability problems and increased side-selling. Similar problems have been experienced with donor-funded NGOs who have been collaborating with Cheetah Zambia. A notable example is that of CLUSA in Eastern Province. This organization delivered the paprika grown by the smallholder farmers under its program in bulk to Cheetah Zambia, and was paid against ASTA levels, resulting in an average price of approximately ZKW 3,800 per kg of paprika in 2001/2002. This price was passed on to the farmers with a small deduction for transport costs, and no deductions made for other overhead costs. Comparatively, the Cheetah farm gate price in the same season was ZKW 2,300 on average. There was thus a gross market distortion by CLUSA.

Central Growers Association, in anticipation of higher prices from a Zimbabwean buyer, who however failed to materialize, had been paying an average price of ZKW 3,500 to their paprika farmers for the 2003/2004 crop. In 2005, CGA eventually negotiated with Cheetah for a price for the 2003/2004 crop which covered the price paid to the farmers, but not the overhead costs that had been incurred, estimated by CGA to be US$ 0.35-0.40/kg of paprika.

The crop had been stored for a long period of time and had lost a considerable part of its color content and therefore of its marketable value.

In the field, paprika is usually purchased with cash on the spot after the buyer (mostly an extension officer from one of the companies) and the farmer have agreed on the grade, after which the paprika is weighed and the corresponding value determined. This process is repeated for every bag of paprika offered for sale by the farmer.

4.1.4.8. Crop marketing arrangements and logistics

Cheetah Zambia and Cheetah Malawi have set up depots in the areas where they are operating, with satellite buying centers or collection points where farmers bring their crop at designated times. Farmers take the crop to the depot or buying centre/collection point by bicycle, ox cart or any other means of transport. The crop that has been purchased may be stored temporarily at the buying centre/collection point, or sometimes with one of the group or club leaders, but is usually transported as quickly as possible to the main depots where it can be stored more safely. Transport from the buying centers to the depots can be by ox cart, pick-up or small truck, either rented or owned by the company.

Once volumes in the main depots are sufficient to warrant the transport by larger trucks (12-30 ton) to the processing facilities in Lusaka or Lilongwe, such trucks are chartered as and when the need arises. Onward transportation of the crop from buying centre/collection point to the depot and onward to the processing facilities is provided by the buyers at own cost.

4.2 THE COTTON SECTOR

Cotton did not reach any significant importance in Zambia until the late 1970's, when Lint Company of Zambia (LINTCO), a parastatal organization was established by GRZ to control the whole cotton sector in Zambia, supplying all inputs, extension services, credit facilities, technology and equipment, and procuring and processing all cotton produced.

In 1991, as had previously happened in many other African countries, the agriculture sector was liberalized, resulting in the privatization of LINTCO. In 1996, London based Lonrho Plc established Lonrho Cotton Zambia Ltd and procured three of the LINTCO ginneries, making it the largest ginning company in Zambia. To meet requirements, Lonrho established an outgrower program providing inputs and extension services to the farmers, resulting in a rapid increase in the number of smallholder farmers producing cotton, attracted by pre-financing of inputs, accessible market, pre-planting price guarantee and relatively favorable pricing. In 1998/1999, Lonrho invested over USD$3 million into 88,000 smallholder farmers.

Growth in the cotton sector was threatened because of an increasing number of private sector companies competing for a limited amount of cotton, resulting in large scale side-buying and side-selling, with the company having supplied the inputs and other support being unable to recover credits and no cotton to process. This detrimental activity was one of the factors involved in the decision by Lonrho Cotton to pull out of Zambia in 2000 having sustained repeated heavily losses through:

i) inability to recover loans;
ii) insufficient crop to optimize the ginning capacity; and
iii) falling cotton prices preventing them from recovering their losses.

Improved horizontal coordination between cotton companies operating in Zambia has reduced side-buying and side-selling, although it is suspected that it is still happening to some degree, involving all companies. In 2004, Zambia produced 172,000 ton of seed cotton equating to more than US$ 50 Million in export earnings.
All seed cotton produced in Zambia is ginned locally with no export or import of raw product. The market for smallholder farmer produced cotton is increasing due to the higher quality of hand picked cotton in comparison with mechanically harvested cotton. None of the ginneries in Zambia are running at full capacity.

4.2.1 Major Players within the Cotton Industry

Currently the cotton industry is dominated by four major companies; Dunavant (Z) Ltd, Clark Cotton (Z) Ltd, Continental Ginnery and Zambia-China Mulungushi Textiles, which is coming out of its rehabilitation phase and into its expansion phase. All companies procure their cotton from smallholder farmers through support programs and contracts. It is estimated that currently 95percent-97percent of total cotton production in Zambia is produced by approximately 260,000 smallholder farmers on approximately 254,000 hectares. Of the four companies, Dunavant is the largest.

4.2.1.1. Dunavant (Zambia) Ltd.

Dunavant S.A. of Geneva is a subsidiary of Dunavant Enterprises Incorporated of Memphis, Tennessee, USA. Dunavant entered the cotton market in Zambia in 2001, buying Lonrho Cotton and incorporating Dunavant (Z) Ltd, their first entry into Africa. In total in 2001, Dunavant was handling over 4 million bales of cotton per year through operations in 27 countries world-wide.

In Zambia Dunavant operates an outgrower system with approximately 200,000 smallholder farmers (up from 150,000 in the previous 2004/2005 season) contracted in Central, Western, Southern and Eastern provinces, where 65percent of all cotton production takes place. In the 2003/2004 season 113,000 ton of cotton was processed, with initial expectations for the 2004/2005 season of approximately 125,000-135,000 ton having to be adjusted downwards to 100,000 ton due to the drought conditions.

Expectations for the 2005/2006 season are that a volume of 150,000 ton of cotton will be produced by smallholder farmers contracted by Dunavant, although this figure may vary greatly as it is difficult to predict the impact of the appreciation of the Kwacha against the US$. Through adverts and Dunavants' network of distributors, farmers have been informed that the price to be paid for the cotton may be as much as 25percent lower than in the previous season, and a significant number of farmers may have abolished the crop. Certainly the effect of the appreciation of the Kwacha will be felt in the coming season, with possibly a large number of farmers deciding not to grow cotton anymore.

Dunavant operates small estate farms but does not consider this as core business or economically viable for anything other than seed cotton production. Dunavant contracts some commercial farmers for seed production and multiplication for onward distribution to the smallholder farmers.

Total ginning capacity within Dunavant stands at about 110,000 ton, measured over the period May-December, with the opportunity to extend this period. The only processing Dunavant does is ginning, it does not have any spinning or textile operations. Of the lint

produced, 15-20percent is sold locally in Zambia; the remainder is exported, mostly directly to spinning companies in South Africa. The cotton seed is crushed into oil locally and the majority is exported to South Africa, cotton seed cake is sold on the local market to the stock feed industry and even cotton shells have a destination as litter in the local chicken industry.

Dunavant finances inputs and crop procurement through borrowing on the local and international market and through internal financing. The company is most affected by interest rates, inflation and exchange rates as well as the stringent tax regime.

4.2.1.2. Continental Ginnery Ltd.

Continental Ginnery was and is in blanket manufacturing, and then 6-7 years ago branched into cotton ginning. The ginnery has a capacity of 10,000 tons (over a 5-6 months period); the break-even volume would be at 6,000-7,000 ton. In 2005 the ginnery processed 5,600 ton, which was still considered economical. Continental Ginnery is content to stick with ginning, and not really interested to branch into spinning as well.

Initially the company was operating its smallholder outgrower schemes in Southern Province only, but has more recently also expanded its activities to Eastern Province (Petauke, Sinda, Katete). Although it is more expensive, because of the distances involved, it is also necessary to obtain the necessary volumes. Also, production in Southern Province alone is too unreliable because the weather is more unpredictable, with more frequent droughts. Continental Ginnery claims to be working with approximately 16,000 farmers. Continental Ginnery would like to expand to a production of 20,000 ton of seed cotton, which would involve some 30,000 farmers. The main constraint is the availability of financing.

The company would prefer to work with strong farmer groups that can stand on their own, but it may still take a long time before such a situation is reached. Continental Ginnery considers a change from a farming attitude to a business attitude among smallholder farmers very important. Although a lot of donor funding is made available for capacity building among smallholder farmers through NGOs, not much of this actually reaches the farmers. In this respect the government also needs to change its thinking, such as the Fertilizer Support Program, which needs to be comercialized.

Continental Ginnery is operating in the same areas as Dunavant and Clark Cotton, sometimes resulting in side-selling backwards and forwards to a lesser degree, but this is not considered a serious problem anymore. In the past allocation of concessions has been discussed, but this was never implemented.

Financing for inputs and crop has to be borrowed. For the 2004/2005 season US$ 65,000 was borrowed from the government Poverty Reduction Strategy Project (PRSP) through the Cotton Development Trust, at a 10 percent interest rate. Re-payment is into a revolving fund, but the funds are not necessarily revolved to the companies. The funds were mostly used for financing the inputs other than seed, which was obtained through the company's own system. The company absorbed the cost of input distribution, estimated at US$ 10,000.

Borrowing from the commercial banks is more expensive, but necessary for crop financing, with the cash lay out being highest in June, July and August. The company used its overdraft facility of US$ 65,000, at a 12.5 percent interest rate. Sometimes the banks try to lend in local currency, which would be even more expensive.

Continental Ginnery mentioned a conversion rate for hand picked cotton of 38-40 percent; as compared to only 33 percent for mechanically picked cotton. Grades for lint are A (85 percent), B (10 percent) and C-E (5 percent total). A-grade lint fetches US$ 1.20 per kg delivered Northern Europe (e.g. Liverpool). African cotton is very much in demand for its texture and cleanliness and attracts a US$ 0.02 premium. The international market for cotton lint is artificially low due to the US subsidies to its own cotton farmers. Continental sells its cotton lint mainly to Cargill Cotton in the UK, and to local spinning companies. The cottonseed is sold to South Africa.

4.2.2 Description of Cotton Outgrower Schemes in Zambia

The most interesting model operating in the cotton sector, now being followed by more companies in an attempt to secure the crop that they have pre-financed, is the 'Distributor System of Credit and Extension Management', or as it is mostly referred to, the 'Dunavant' Distributor Model, as it was pioneered in Zambia by Dunavant, adopted from their operations in Cameroon, West Africa. The idea of the model was to streamline input credit and technical support, and to reduce the risk of credit finance to large numbers of smallholder farmers, which physically and economically cannot be managed by a company due to the associated high management time and costs.

4.2.2.1. Outgrower network organization and management

Dunavant employs 4 Regional Operations Managers, one based in each of the Provinces in which Dunavant operates. The Regional Operations Managers manage the production, loan systems and credit recoveries in their respective areas. They interact with the Distributors through their field staff and are responsible for all production activities within their region.

The Regional Operations Managers are assisted by 8 Area Managers to oversee the activities of the credit/shed managers and distributors in their area. They are responsible to ensure that company protocol is being met and activities are being undertaken correctly. Their role is to manage and monitor the Distributor system, oversee field activities and to report back to the company through the Regional Operations Managers.

Dunavant further employs 65 Area Credit/Shed Managers, and contracts approximately 1,400 distributors. The role and responsibilities of the Area Credit/Shed Managers and Distributors are shown in Box 8.

Box 8: Role and Responsibilities of Area Credit / Shed Manager and Distributors

Dunavant Area Credit Shed Managers

- manage and monitor the distributors, including distributor record keeping;
- coordinate and facilitate between the company and the distributors;
- receive inputs from the company and disburse these to the distributors;
- assist with technical support and advice to the distributors;
- disseminate information from the company to the distributors;
- monitor product deliveries; and
- oversee loan recovery.

Dunavant Distributors

- Collect and pay the company a fee of ZKW 1,500 per bag of cotton planting seed, which should be collected from all farmers to whom inputs are being distributed;
- Submit stock reports in line with Dunavant requirements;
- Keep detailed accounts for inspection;
- Obtain credit from the company for inputs;
- Store inputs prior to disbursement, usually in small self-built sheds or homes;
- Mobilize the farmers for planting based on history, membership and loan recovery performance;
- Distribute the loan in the form of inputs; seed, chemicals, sprayers and for some designated trial farmers, fertilizer;
- Provide extension services, training and technical support to the farmers;
- Report any problems that may occurs that s/he cannot advise upon;
- Coordinate harvesting schedules;
- Supervise picking;
- Coordinate the delivery of the produce to village grading and storage sheds;
- Oversee weighing;
- Grade produce;
- Record produce weight and grade against the smallholder farmers name and ID number from his/her national registration card; and
- Coordinate transhipment with Dunavant to regional storage depots

Source: ABD, 2005

Distributors are not employees of Dunavant. To become a distributor, an individual must be an experienced and proven cotton farmer, domiciled in the locality of the group. S/he must have a track record of supply to Dunavant (or Lonrho previously), be literate, debt free and hold acceptable collateral. Applicants are screened and invited to apply to the company to become its representative. Should the applicant be successful, s/he is contracted legally through an 'Agreement for Micro Credit Financing' with Dunavant to supply inputs and technical support to his/her farmers and is allocated one or several groups.

The Dunavant Distributor model is illustrated in Figure 3.

Figure 3: Dunavani Distributor Model

REGIONAL OPERATION MANAGER (4)

AREA MANAGERS (8)

CREDIT /SHED MANAGERS (65)

DISTRIBUTORS

INTEREST GROUPS

FARMERS

Distributors interviewed supported from 88-305 farmers. Dunavant offers training to the newly appointed distributor in crop husbandry, pest management, administrative systems, credit recovery and farmer management. In the first season as a distributor, Dunavant will advance cotton seed and chemicals for disbursement, whilst setting certain goals. Dependent on the loan recovery and ability to meet the goals during the first season, Dunavant will enable the distributor to have access to other inputs, equipment and a bicycle on loan.

The main aim of the extension and support service as it has been set up by Dunavant is to increase yield to secure the loan. The role of the distributor is to ensure that there is enough cotton crop to repay the loans, supervise picking, grading, deliveries and payment. Dunavant provides a bicycle to each distributor, once he or she has qualified, to assist in the logistics of the implementation of tasks.

The distributors are contracted on a commission basis, based on loan recovery and crop volume produced. The commission structure is five tiered (Box 9).

Box 9: Dunavant Commission Structure for Distributors

- 5.0 percent of loan recovery less tax when 65 percent has been recovered;
- a further 7.5 percent of loan recovery less tax when 85 percent has been recovered;
- A further 12.0 percent of loan recovery less tax when 100 percent has been recovered;
- ZKW 5.00 less tax for every kg for bales correctly graded; and
- ZKW 5.00 less tax for every kg of cotton delivered above the volume required to cover the credit.

Notes: i) the percent payments area percent of the amount recovered, not originally disbursed
ii) all commission payments are in addition to all previous payments
iii) tax is withholding tax at 1 5percent.

Source: ABD, 2005

Should the distributor fail to recover the full credit amount in one season, any outstanding balance will be recovered from elements of the commission systems or carried forward to the following season. Should the distributor fail to recover and repay more than 50 percent of the outstanding loan amount, he will be legally pursued for the balance and struck off as a distributor in accordance with the Agreement for Micro Credit Financing.

Continental Ginnery has not been following the Dunavant Distributor model. The smallholder outgrower schemes under Continental Ginnery are supervised by 25 extension officers equipped with bicycles, and a further 6 route clerks equipped with motorcycles. The 16,000 farmers are organized into groups (70-80 farmers per group). One extension officer oversees 3-4 groups.

4.2.2.2. Group membership requirements

Under Dunavant the smallholder cotton farmers are formed into village-based common interest groups of 20-90 members, but usually from 50-60, that are specific to cotton production. Each group selects a committee to represent their needs and requirements, to organize deliveries and collections, and to negotiate with the distributor and company on their behalf. A group leader will be chosen as their key person: this leader will be an experienced local farmer democratically voted for by the group members to represent their interests with Dunavant and the distributor. The group leader's responsibilities are to assist the distributor to mobilize farmers, allocate inputs, manage crop harvesting and secure the crop from side-buying.

The majority of the interest groups under Dunavant are informal and unregistered and used purely as an efficient way to manage the farmers; no interviewees mentioned any membership fees to belong to these groups. If a new farmer wishes to join the group, s/he must apply to the group leadership, and upon their approval the group leader will nominate the potential new farmer to the distributor for acceptance. The group members attend regular meetings throughout the season and occasional training sessions.

Continental Ginnery considers it important to organize farmers into groups, which has the advantage of peer pressure mechanisms. Farmers register through the extension officers. Farmers are being screened through the Ginnery Association to see if they have any outstanding credits with other companies, but also through information provided by the groups themselves. Group leaders/contact farmers receive a commission on performance, based on loan recovery (from 60 percent upwards) and volume, usually 5 percent of revenue.

4.2.2.3. Contract design and viability

Dunavant does not have contracts with individual farmers due to the vast numbers involved and the high cost of management of individuals. All legally binding documents are between Dunavant and the Distributor, and is called the 'Dunavant Agreement for Micro Credit Financing' (Box 10).

Box 10.

Clause 1: The agreement appoints the named individual to act as the sole Agent of the company in a specified area for the allocation, distribution recovery and collection of inputs used in the production of seed cotton. The Agreement specifies that the inputs provided to the Distributor for disbursement are for the sole purpose of seed cotton production. The provision of inputs under this micro-finance agreement is done on the basis that the total production of seed cotton resulting from the use of the distributed inputs is sold to Dunavant meaning that the Distributor agrees to provide Dunavant with seed cotton to the value of the loan amount and the full balance of the crop grown by the Distributors' farmers.
Clause 2: The contract is for a specified period of time, usually one season but can be terminated by the company at any time, for any reason at their discretion. If the contract is terminated 'the Distributor shall immediately settle all previous and existing liabilities with the company', which would be difficult for the distributor, if the contract is terminated prior to crop harvest.
Clause 3: The Agreement confirms and explains the commission payments as described in section 2.1.5.3 of this document and specifies that it is for seed cotton recovered and verified respectively from the Distributors territory, a clause, one assumes, to discourage side buying.
Clause 4: Any previous unpaid credit from the Distributor will be carried over to the next season for recovery in addition to the current loan disbursement plus interest at a rate charged by the company, applicable at the discretion of the company.
Clause 5: Sets the dates for reconciliation of credits, deliveries and stocks for commission calculation.
Clause 6: States that if the Agreement/contract is terminated, the company ceases to be liable for the payment of the recovery commissions, a clause that makes the distributors uncomfortable as the Company could decide to terminate the contract at any time for undisclosed reasons leaving the Distributor without income and provokes doubt and uncertainty amongst the Distributors.
Clause 7: Entitles the company to secure a charge against the collateral offered by the Distributor at the commencement of his/her posting to secure the credit provided. This security is in addition to any of the subscription fees collected and paid to the company. Unfortunately the schedule listing the goods appropriate for use as collateral was not available for viewing by the team.
Clause 8: All goods and equipment supplied by the Company to the Distributor to assist in the facilitation of the tasks, remains the property of the Company, thus is considered a loan throughout the duration of the contract and must be returned on completion of the contract. This includes all inputs and the bicycles supplied by Dunavant.
Clause 9: Specifies all tasks and responsibilities to be undertaken by the Distributor; collection of annual subscription fees; promote and extend the interests of the Company, act loyally and faithfully, obey orders and instructions from the company; submit weekly stock reports incorporating date and credit sales information, stock movements, description and quantity of commodity received, issues to farmers and their registration numbers and the current balance held; not engage as an agent to any other organization; disclose any other agency interests held on commencement of the contract; refer any interest from farmers outside of the territory to the Company; keep full accounts; allow access to accounts to the Company; submit returns; defray all expenses; divulge Company information and not act as an agent for any competitor company within one year of the termination of the contract.
Clause 10: States the terms for termination of the contract; breach of contract; bankruptcy; prevention to perform duties; prejudicial conduct.
Clause 11: States that upon termination of the agreement the Distributor will cover all expenses and will return all property to the Company.
Clause 12: Covers the Company for any breach in contract on their behalf.
Clause 13: States that the agreement is the only understanding between the Company and the Distributors and that all commissions and payments are subject to tax.
Clause 14: States that any disputes arising will be resolved by negotiation and then if not resolved, forwarded to the Jurisdiction of the High Court of Zambia, and that the Agreement is interpreted and enforced within the laws of Zambia.

Box 10: Dunavant Agreement for Micro Credit Financing
Source: ABD, 2005

The agreement appoints the named individual to act as the sole Agent of the company in a specified area for the allocation, distribution, recovery and collection of inputs, and specifies that the inputs provided to the Distributor for disbursement are for the sole purpose of seed cotton production.

The provision of inputs under this micro-finance agreement is done on the basis that the total production of seed cotton resulting from the use of the distributed inputs is sold to Dunavant, meaning that the Distributor agrees to provide Dunavant with seed cotton to the value of the loan amount as well as the full balance of the crop grown by the Distributors' farmers.

Enforcement of the clause referring to the full supply of seed cotton proves particularly difficult as many farmers interviewed considered that only the cotton totaling the input loan deficit belonged to Dunavant; the remainder they were entitled to 'tout' on the market place looking for the best price available.

4.2.2.4. Input provision (service models), costs and payment modalities

Dunavant makes the inputs available to the distributors for further distribution to his/her farmers, with the full legal responsibility for credit recovery placed upon the distributor.

Dunavant also offers inputs for direct cash sale. However, this is not encouraged as it offers the company no 'ownership' of the crop produced. It is estimated that less than 1 percent of the farmers pay cash for inputs because of financial restrictions and the availability of credit.

Continental Ginnery distributes seed and chemical inputs to some 40 depots the company operates. Fertilizer is not supplied by the company as it will be diverted to maize. The depots are mostly simple sheds, which are also used for collection of the cotton crop: 25 in Southern Province, and 15 in Eastern Province. From the depots inputs are distributed to the contact farmer in each group and from there onwards to the individual farmers. Sprayers, at a cost of US$ 50 are also issued on loan to the outgrowers, one sprayer per 5-6 farmers. Seed inputs per ha (20 kg) cost US$ 6.00; chemicals (including Folibur) cost US$ 9.00 per ha.

4.2.2.5. Extension services and costs

Training of distributors by Dunavant is ongoing and coordinated with regular field staff meetings for information dissemination. As Dunavant has almost totally abolished its own extension service, it is imperative that the distributors are well trained and able to disseminate technical support in a simple and effective way to the farmers.

The distributors in turn train the farmers and disseminate the information that they have learned through the monthly group meetings and individual field visits and inspections. Farmers interviewed requested increased training in specific areas such as pest and disease control.

Dunavant estimates that the direct cost of running this outgrower scheme through the Distributor System totals ZKW 1 billion per annum, approximately US$ 225,000 at previous years' exchange rates (US$ 325,000 at the current prevailing exchange rate). Most of this cost is related to the training of distributors. It does not account for the cost of crop and input finance.

Continental Ginnery estimates the running costs for its outgrower schemes at US$20,000 per year. It is considered not very cost-effective, but there is no alternative as there is no commercial cotton production in Zambia, all of it is by smallholder farmers. Cotton is considered too labor intensive for commercial production and far more suited to smallholders due to the availability of family labor. The benefit to the companies of working with smallholder farmers is better and cleaner cotton, because it is all hand-picked. Smallholder production gives about 80 percent A-Grade, 10 percent B-grade, 5 percent C-grade, and 5 percent D-Grade. Cleanliness is the major factor in distinguishing grades.

4.2.2.6. Field practices and production volumes

There are over 200,000 farmers producing seed cotton for Dunavant, with production areas from 0.25 to 20 hectares, with an average of approximately 1.2 ha per farmer. Average yield in 2003/4 was 530 kg/ha, although a number of farmers interviewed achieved between 1,800 kg and 2,200 kg. Many farmers only allocate a small area of their total land area to cotton as food security takes priority over cash crop production.

Dunavant insists that farmers practice conservation farming techniques and plant maize on an area at least equal to their cotton production area. Dunavant stocks maize seed for sale at its rural depots along with fertilizers and chemicals and also promotes crop rotation with a legume crop for soil nitrogen fixation.

Continental Ginnery estimates that in a good year a farmer may have a net profit of US$ 200/ha, based on an average production of 800 kg/ha. Some semi-comercialized smallholder farmers produce up to 3-4 tons/ha when having access to irrigation and when applying fertilizers.

4.2.2.7. Purchase prices and payment modalities

Uniform prices are agreed to in meetings between the major players in the cotton industry in Zambia prior to the start of the marketing season, mainly to avoid farmers being tempted to side-selling, although not all companies necessarily adhere to the agreed prices. Prices are derived from international market prices by deducting all costs involved. Cotton prices in 2004/2005 were approximately ZKW 200 lower as compared to the previous season as a result of declining prices on the international markets. Prices for the different cotton grades at the farm gate are uniform regardless of transport distance to the ginnery or depots.

In 2004/2005 Dunavant and Continental Ginnery applied the same prices for the different grades of cotton: ZKW 1,220/kg for A-grade; ZKW 1,170/kg for B-grade; and ZKW 1,120/kg for C-grade. Continental Ginnery used a fourth D-grade, at ZKW 1,020/kg. Farmers contracted by Dunavant to grow seed for distribution to the smallholder farmers were paid a premium of ZKW 235 on top of the A-grade price.

Prices for the farmers are set by the companies, which they relate to world market pricing. This is difficult for the farmers to understand. The lack of transparency and certainty in the pricing system causes deep mistrust, discourages farmers and adds to the loan default issue. Neither the farmers nor their representing organizations are involved in the pricing system, and thus do not understand how the ‘per kg’ price is achieved. In real terms, each company negotiates different contracts and selling prices, has varying processing and overhead costs, obtains its crop finance from different sources incurring different terms and conditions and costs, and thus arrives at a different bottom line to base the price for the farmers on. These

variances and costs are not documented for the farmers to see. The practice of deducting input costs at source from gross revenue sometimes also adds to the confusion and mistrust through lack of clear understanding on behalf of the farmers and lack of clear explanation from the companies. Different companies charge different rates for the inputs dependent on their procurement power and loan interest rates or may calculate and charge-out different handling and administrative fees and services to the farmers.

These issues coupled with limited or no understanding of why the world market prices fluctuate and limited access to information, particularly in a format that can be understood by the farmers, leads to uncertainty, a feeling of exploitation, poor loan recovery and unwillingness to expand areas. The uncertainty in world market prices has been reflected in the cotton sector in Zambia by Dunavant failing to offer a pre-planting price for the 2004/2005 season as they were uncertain about how low the international market price would go. This in turn has led to mistrust and uncertainty among the farmers, with some of them being concerned that this was a sign that Dunavant was planning to depart from Zambia.

For the 2005/2006 season Dunavant also did not announce a minimum pre-planting price. It is expected that prices for the different grades of cotton will have to be reduced by 25 percent in view of the recent appreciation of the Kwacha against the US$.

The farmers deliver to a local depot where their crop is weighed, graded and recorded by the Distributor. The farmers are then informed of the value of their crop based on the three grades. The farmers are given a Goods Received Note indicating the amount owed, minus the credit repayment outstanding for inputs. The crop is then shipped to the Dunavant storage sheds and the payment information is delivered to Dunavant for processing. Dunavant makes cash payments to the farmers at the end of each month, accompanied by the National Guard for security reasons, from the storage sheds where farmers come to collect their net cash payment and are given payment slips indicating all deductions. If a farmer makes multiple deliveries, all credit recovery will be made prior to any net payments to the farmer.

Continental Ginnery pays cash when buying from farmers, since otherwise there is a risk that the crop will disappear into parallel systems. When buying, the crop is graded and an invoice is raised for the corresponding value. Payment is done within one week, at which time the crop is handed over in exchange for the cash. The company provides its farmers with a registration number and will only purchase against this number. Loan recovery is the biggest problem facing the company when working with smallholder farmers.

4.2.2.8. Crop marketing arrangements and logistics

Dunavant organizes the transport from its local collection points to its central depots; and from there to the ginneries. Similarly, Continental Ginnery takes responsibility for the transport from its buying centers to the ginnery in Livingstone. Continental Ginnery estimates that the transport cost from the depots to Livingstone amounts to an average of US$ 0.07/kg.

4.3 THE EXPORT VEGETABLES SECTOR

The export of non traditional horticulture and floriculture crops commenced in Zambia in the mid-1980s through a small number of commercial producers who obtained funds from the EU Export Development Program. The development of horticulture focused on exports of mangetout, fine beans, baby carrots, baby corn and other crops to the UK. Horticulture and floriculture products have led the growth in agricultural exports from Zambia over the past 10

years. In the latter part of the 1990's year on year growth of horticultural and floricultural exports exceeded 40 percent on average and amounted to US$ 63 million in 1999 (US$ 20 million for vegetables and $43 million for flowers), yet in 1994 exports were valued at only US$ 8 million. In the period 1995-2002 production of roses increased by 152 percent and production and export of vegetables by 238 percent. Performance has significantly declined since 2002, with rose production declining due to strong competition, low market prices and high production costs.

Although the market for export vegetables from Zambia has developed through trade with Europe, it still remains a minor part of the vegetable production industry within the country. The majority of vegetables grown in Zambia, both by commercial and smallholder farmers, are for home consumption and the domestic market. The export vegetable industry was dominated by two major corporations, Agriflora Ltd and York Farm Ltd.

4.3.1 Major Players within the Export Vegetables Industry

Agriflora was a main player in the export vegetables and coffee sector in Zambia until it went into liquidation in 2004, leaving a large gap in the outgrower export vegetable sector as at the time it was the only company to procure export vegetables from outgrower smallholder farmers. Agriflora was a key component in the development chain in input provision, service provision, loan recovery and technical assistance, as well as a market for baby corn, mangetout, beans and peas produced by smallholder farmers.

Agriflora was dealing with 10 cooperatives and over 200 farmers, providing a full service from seed to harvest. The farmers and cooperatives managed the cultivation, harvesting, and transport to the factory. Upon bankruptcy, the farmers were left with no market for their crop and unpaid debts where Agriflora had not honored its agreement with the Zambia Agribusiness Technical Assistance Centre (ZATAC), the donor-funded organization which supplied finance to the smallholder farmers for irrigation.

With the demise of Agriflora the only remaining company where the outgrower export vegetable farmers could turn to was York Farm.

4.3.1.1. York Farm Ltd.

For 15 years York Farm has been supplying the UK supermarket chain 'Tesco' with fresh vegetables. York Farm has large estate farms, focusing on the production of peas, baby corn, fine beans, sugar snaps, baby carrots and mangetout. York Farm also out-sources some of the production of baby corn to four commercial farmers. York Farm is fully accredited with EUREPGAP certification, allowing it to supply into the UK and EU markets. Accreditation requires compliance to a number of standards, which York Farm strictly adheres to on its farms, and is beginning to insist on from its suppliers.

4.3.2 Description of Export Vegetables Outgrower Schemes in Zambia

York Farm, although engaging smallholder farmers, cannot really be considered as a company running an outgrower scheme. From their own admission, all they wish to be is a market for the smallholder farmers. They will inform the farmers of the quantities, delivery schedule required and the price that they are willing to pay but will not take on the role of input or service supplier.

4.3.2.1. Outgrower network organization and management

York Farm does not deal with individual farmers on any scale, the agreement is made with the apex organisation of smallholder vegetable export associations, the Lubilima Agricultural and Commercial Cooperatives Union (LACCU), which in turn organizes the local associations to mobilize farmers according to supply and demand. LACCU has 7 affiliated primary cooperatives, which are formally registered and have a total membership of 536 farmers, although currently only 85 supply baby corn to York Farm.

Initially the seven cooperatives had mobilized farmers within a 50-100 km radius of Agriflora to produce the required crops against a contract with the company, with the company providing all inputs (seed, chemicals, fertilizer) as well as technical advice. By the end of 2001, the farmer cooperatives were supplying raw material to Agriflora. However, sourcing of commercial finance for inputs and credit provision became difficult for Agriflora in 2002 and they withdrew this provision of inputs service. The cooperatives sourced subsidized finance for this role through the NORAD funded Support to Farmers Associations Project (SFAP).

The development of an apex organization was required to manage the supply chain directly with suppliers and markets and to represent coherently the cooperatives with external bodies and enable them to source further donor funding for development. LACCU was established in 2004.

4.3.2.2. Group membership requirements

To join LACCU, a farmer must apply to his/her local cooperative; the application is processed locally and costs ZKW 20,000. Once accepted, the farmer buys 1 or 2 shares at ZKW 10,000 in the cooperative and the farmer details are forwarded to LACCU

4.3.2.3. Contract design and viability

The contractual agreement with York Farm is limited to the supply schedule of 35 tons of baby corn per week during the dry season over a period of 32 weeks. The contractual agreement stipulates quality standards required and the price to be paid. It is a simple outsourced crop supply agreement with no support services or credit facilitation.

Whereas the outgrowers also produced mangetouts and fine beans for Agriflora, the contract with York Farm is limited to baby corn, which is a relatively easy crop to manage with less likely difficulties with pests and diseases and chemical misuse as less chemical application is required. The latter is important as the farmers are not yet certified to EUREPGAP standards and York Farm is not willing to risk its own accreditation. The company applies strict quality controls to all crops, externally and internally produced.

An additional reason for outsourcing the production of baby corn is that it is the most land and water intensive crop to produce. The availability of land and water is one of the main constraints faced by York Farm. Baby corn offers the lowest profit per hectare compared to the other crops produced, making it economically more attractive for York Farm to focus on higher value products.

4.3.2.4. Input provision (service models), costs and payment modalities

York Farm does not supply any inputs. Farmers have to finance their own inputs, purchasing the seed and other inputs commercially, as well as their capital investments. York Farm

considers that its area of expertise is in the management of its own farms and the marketing of the produce, not the management of farmers, credit provision and information transfer.

4.3.2.5. Extension services and costs

As is the case for inputs, York Farm does not supply and training or extension support.

4.3.2.6. Field practices and production volumes

The average yield produced for baby corn is 6 ton/ha, with some farmers reaching as much as 7.5 ton/ha.

4.3.2.7. Purchase prices and payment modalities

The contract with York Farm offers a price based on a 'pack out' rate, meaning they re-grade and only pay for the export quality crop. On average, the farmers get paid for approximately 13 percent of the bulk delivery weight, once the poor grades and outer layers are removed. This is an improvement to previous deliveries to Agriflora where on average they were only paid for 6 percent. Grading is based on the length, maturity and diameter of the cob plus the split in the grain. In 2005 the price set by York Farm was at GBP 1.10/kg, decreasing to GBP 1.00/kg and further to GBP 0.90/kg as the season progresses and York Farm is able to produce sufficient quantities of baby corn in-house.

York Farm pays LACCU directly within 30 days of delivery, with LACCU making all relevant deductions including credit repayments, and paying the net revenue to the cooperatives for further disbursement.

The effect of the recent appreciation of the Kwacha against the US$ and other major currencies implies that the outgrowers will in effect receive much less in local currency, making it questionable if they will be able to continue producing economically.

LACCU estimates the cost of production per hectare for baby corn to be ZKW 4.8 million, although this is slightly in excess of the costs quoted directly by farmers. The average yield produced is 6 ton/ha. At a pack-out rate of 13 percent the gross income would be US$ 1,587/ha (GBP 1.00 = US$ 1.85). There are no tax deductions from this amount; however LACCU retains 1 percent for administration charges and K10-15,000 for transport services.

At the previous exchange rate of US$ 1 = ZKW 4,800 production cost was equivalent to US$ 1,000/ha, leaving a net profit of approximately US$ 587/ha. However, at the current exchange rate of US$ 1 = ZKW 3,200 the production cost is equivalent to US$ 1,500/ha, leaving virtually no profit.

4.3.2.8. Crop marketing arrangements and logistics

Farmers deliver to the cooperative depot where the crop is weighed, graded, recorded and stored briefly before delivery to York Farm. USAID, through support from ZATAC provided LACCU with a truck to enable them to deliver to York Farm.

4.4 THE TOBACCO SECTOR

Total tobacco production in Zambia is somewhere between 50,000,000 and 60,000,000 kg of tobacco. This figure includes also burley tobacco, grown mostly in Eastern Province by smallholder farmers and directly controlled by the big companies, e.g. StanCom, Universal, and Dimon.

Virginia tobacco production in Zambia has peaked in the last two years with the arrival of farmers from Zimbabwe, who are financially supported by Universal, but this now seems to have stabilized and no further expansion or growth is expected. Some problems are emerging with commercial farmers not being able to pay back.

4.4.1 Tombwe Processing Ltd.

The tobacco processing factory (Tombwe Processing) was privatized from GRZ/Tobacco Association of Zambia (TAZ) in 1996. Tombwe's Managing Director had been with TAZ since 1992. His ambition was to revive the factory and keep the processing in-house. Tombwe Holdings was established in which the Managing Director, TAZ and a German investor are shareholders.

Initially the concept was that TAZ would supply the raw material to the factory, and Tombwe would concentrate on the processing. However, for various reasons TAZ weakened itself and could not expand the production base. Tombwe and others merchants (StanCom, Universal) took it upon themselves to ensure the production base. This was mostly through commercial production.

Commercial production of Virginia tobacco for Tombwe involves 35-40 commercial farmers, with whom mostly long-term relationships exist. Tombwe is employing a full-time extension officer for the commercial tobacco production. Most of the commercial farmers with whom Tombwe works, are fully financed by the company (inputs, tractors, crop finance), with only a few that are fully self-financed.

Financing is expensive in Zambia, but Tombwe is obtaining in-season financing from Europe with a 1-year repayment. Financing for capital investments is available in Zambia in the form of lease agreements. This type of financing is directly between the bank and the commercial farmer, whereby Tombwe provides a guarantee.

Tombwe also 'inherited' smallholder tobacco production from TAZ, involving some 200 farmers divided over two smallholder outgrower schemes. In 1999/2000 Tombwe exited because of the high cost involved. The smallholder tobacco outgrower schemes were taken over by Universal, but despite all their (financial) backing they also could not make it work. After Universal pulled out, the same two schemes came back to Tombwe again. A third, smaller scheme has been added since.

Smallholder production of Virginia tobacco in 2003/2004 amounted to approximately 25 percent of the total production. For 2004/2005 expectations were that 3,500 ton of Virginia tobacco would be produced by commercial farmers linked to Tombwe, and 1,000 ton by smallholder farmers. Commercial and smallholder produce are blended to meet international standards.

Tombwe is making its money by processing tobacco, but has an interest in securing its production base. Processing capacity is 10,000,000 kg per year. When Tombwe started, the volume processed was approximately 2,500,000 kg, which had increased to 6,500,000 kg in the 2003/2004 season. This includes processing for other merchants such as Stancom and Universal. These companies would prefer to move their produce to their processing facilities

in Malawi and Zimbabwe, but are also under political pressure to have some of their processing done in Zambia at Tombwe.

For Tombwe the focus is now more on improving quality and yields, particularly for smallholder production; after that there may be a further expansion again. Even so, Tombwe would rather have an additional 10 commercial farmers producing 100 tons of tobacco each. Being involved in smallholder production is partly political and social, but in the end if it is not viable smallholder production will be stopped, as Tombwe has done in the past.

4.4.2 Description of Virginia Tobacco Outgrower Schemes

Because of the previous failed experiences working with smallholder farmers by both Tombwe and Universal, it was re-thought how to approach the outgrower schemes when the smallholder outgrower schemes came back under Tombwe once more..

Smallholder farmers (0.5 – 12.0 ha) only manage to produce tobacco if all inputs (seed, chemicals, and fertilizer) are provided on credit. The value of these inputs amount to approximately US$ 0.80/kg of tobacco, in addition to which there are the inputs for barns, flu pipes (Virginia tobacco), twines, and storage (roofing sheets). The latter inputs are not seasonal but usually recovered over a three-year period.

Eventually a commercial farmer was accepted in Southern Province who was put fully in charge of the outgrower schemes there. Tombwe provided this Scheme Operator with all inputs (valued at US$ 100,000 for 200 farmers) on credit, while he was to take full responsibility from there. For the Scheme Operator this included physically monitoring the application of fertilizers to ensure that the fertilizer was used for the tobacco, and not diverted to other crops. Any farmer who would fail to repay his loan would be the Scheme Operator's problem, not Tombwe's.

The Scheme Operator is incurring his own costs in operating the scheme, collection of the crop, and running a risk. To cover all of this, Tombwe pays the Scheme Operator a commission of US$ 0.20 per kg of tobacco, while Tombwe also pays the transport costs to Lusaka. This adds up to a total of approximately US$ 0.40 per kg of tobacco, which is reflected in the price paid to the smallholder farmers. The pricelists for various grades for smallholder produce are standard US$ 0.40 lower than the pricelists for the same grades for commercial produce. If a commercial farmer would receive, for example US$ 2.00 per kg of tobacco for a certain grade, then the smallholder farmer receives US$ 1.60 per kg of tobacco of the same grade. The only further deductions made are those for inputs obtained on credit.

There are no guaranteed pre-planting prices given, the pricing being dependent on the international markets. In the 2003/2004 season the price paid to commercial farmers averaged US$ 1.75 per kg, and US$ 1.35 for smallholder production. After deduction of the costs of inputs (US$ 0.80 per kg), the smallholder farmers were left with a net benefit of US$ 0.55 per kg of tobacco. This may appear rather low, but it is up to the individual farmer whether he wants to grow tobacco for this money or not. It is a natural selection process of farmers that continue to produce tobacco.

The fertilizers applied to tobacco are similar as for maize, and Tombwe also provides additional urea fertilizer for maize to avoid that the (more expensive) special urea blend used on tobacco is being diverted to the maize. Not all farmers qualify for fertilizers on credit;

three categories of farmers are being distinguished (A, B and C), depending on their performance. If a farmer performs well, he is further motivated by being graduated to a higher category, entitling him to additional inputs.

The lesson is that you cannot win from behind your desk in Lusaka. In the view of Tombwe, employing extension officers is not effective since they tend to protect the interests of the growers or otherwise work against the interests of the company. In the view of Tombwe, outgrower schemes only work if you can identify somebody who can make it work for him self.

The outgrower scheme in Southern Province has grown from 200 to 500 and subsequently to 700 smallholder farmers, all producing flu-cured Virginia tobacco. This rapid increase in numbers has created some problems, the Scheme Operator not having sufficient capacity to monitor the 700 farmers efficiently despite now employing 3 staff. There is a need for him to improve his monitoring.

Tombwe pays an advance lump sum to the Scheme Operator, which in turn enables him to pay the individual farmers, usually within one week from delivery. Firstly the outstanding loans are being recovered. The farmers receive their first cash payments the moment the loans have been fully recovered. If this is not done, the surplus production will disappear into other systems. To facilitate the buying process, Tombwe assisted the Scheme Operator in the construction of a buying shed that is built on his land. Tombwe still owns the shed, until it has been fully paid.

The disadvantage of the payment system is that it will not really be known until the end of the marketing season if the full amount of the credit extended to the Scheme Operator will have been paid back. However, if individual farmers do not fulfill their obligations and fail to deliver their crop or not pay back their loans, the Scheme Operator, who bears the ultimate responsibility for the credit, may seize a cow, goat or some roofing sheets from the concerned farmers, something that could never be done from Lusaka.

Smallholder production under the outgrower scheme in Southern Province has increased from approximately 125 tons to 500 tons of tobacco in the 2003/2004 season[2].

Tombwe directly administrates a second scheme involving 300 farmers with a production of 300 tons of Virginia tobacco in the 2003/2004 season. Local Scheme Operators are still responsible and are being supplied with inputs from Tombwe, but the actual administration is done from the Tombwe offices. Every week a truckload is being collected and brought to Lusaka, graded, and the price determined accordingly. Payment is being made within 24 hrs.

Many farmers follow the truck to Lusaka to await their payment, and are paid an extra ZKW 10,000 to assist with their accommodation. The Scheme Operator again works on a

[2] 125,000 kg at an input cost of US$ 0.80 per kg amounts to a total of US$ 100,000, the figure referred to earlier – increase in production appears to have resulted largely from an increase in the number of farmers, and possibly from a slight increase in the average area under production, and not so much from an increased production per ha.

commission, and if individual farmers do not pay back, any differences are taken from the commission of the Scheme Operator.

What a Scheme Operator may do to protect himself against any defaults is to organize the farmers into groups of for example 10 farmers. If something goes wrong, the Scheme Operator may withhold part of the payments to a group until the individual farmers within that group have cleared all their loans (peer pressure). In the second outgrower scheme mentioned above, it means that the Scheme Operator will advise Tombwe to hold on to (part of) the payments for that particular group.

A third outgrower scheme is to be found near Lusaka, involving 250 farmers producing 100 ton of air-cured Burley tobacco in the 2003/2004 season. Burley tobacco is of much lower value than Virginia tobacco, and consequently the Scheme Operator model would not work. Farmers have been organized in small groups, and are being monitored by staff from Lusaka. This outgrower scheme will not be expanded.

From all the smallholder farmers, 5 are now being considered as (semi-) commercial in their own right. This is the ultimate step.

5 OUTGROWER SCHEMES ANALYSIS

5.1 PAPRIKA

Paprika is a relatively new crop for smallholder farmers, introduced into Zambia and Malawi barely ten years ago and only more recently into Mozambique. It is a crop to which relatively high quality standards apply, requiring good management practices. Whereas it is a crop well suited for smallholder production, it requires a high level of supervision from outgrower companies to ensure that quality standards and requirements are met.

The paprika sector, whether in Zambia, Malawi or Mozambique, uses a centralized outgrower model in a linkage-dependent relationship with smallholder farmers, employing its own extension staff. The outgrower schemes are characterized by relatively high extension cost and low production volumes and or yields by individual smallholder farmers who primarily grow paprika under rain fed conditions with at times unfavorable weather conditions. High default rates by smallholder farmers are hampering the development of the sector.

Farmers are invariably organized into groups or clubs of 20-25 farmers on average as a vehicle for input distribution, dissemination of technical support, and marketing arrangements. It is considered uneconomical to work with farmers individually. However, individual contracts are put in place, even though these are difficult to implement in case of defaults or side-selling. Individual contracts at least provide some form of a legally binding agreement between the two parties and provide an opportunity for better monitoring and evaluation of the performance of individual farmers, providing a track record. Groups are mostly mere 'interest groups', i.e. have a common interest in growing paprika, and are rarely established formal cooperatives or associations.

Development of the paprika industry in Zambia has been hampered because of donor and or government support having been biased towards politically connected players in the industry. Typically, most of the donor supported companies under the ZAHVAC umbrella ceased operations when donor support came to an end. If at all governments are genuine in their efforts to support development in the agricultural sector there is a need to properly screen candidates before any external support is provided, looking at for example the track record of the companies, business plans, the availability of audited financial accounts, and willingness to make investments.

5.1.1 Viability of Smallholder Outgrowers

Smallholder farmers depend heavily on external support provided by the outgrower companies. There are no known examples of smallholder farmers involved in paprika production who secure their inputs independently, grow the crop using their own resources, and then sell the crop to the company of their choice. The relationship between the smallholder farmers and the private sector is linkage-dependent.

Efforts by Cheetah to make inputs for the new season available at the time when farmers are selling their paprika crop, and encourage farmers to use some of the proceeds from the sales for securing the inputs (in particular seed and chemicals) for the following season, have met with limited but increasing success.

For the more traditional crops, including staple foods such as maize but also cash crops such as cotton and tobacco, the government has historically provided all inputs on credit to the farmers. Donors and NGOs alike have been continuing this, and now farmers are expecting

the same from companies. Simultaneously, a culture of non-repayment of credits has developed, with no remedial action being taken to improve this situation. The legacy of this is at the core of many of the problems faced by the private sector industry in promoting smallholder outgrower schemes: on the one hand there is a need to boost production by making a wider range of inputs available to smallholder farmers, on the other hand there is the risk of increased exposure of the companies in view of the prevailing high default rates.

Probably the biggest challenge facing any outgrower promoter (not only for paprika, but also for other crops such as cotton, vegetables, tobacco) is a change in attitude among the smallholder farming community (as well as the donor community!) to view farming as a business activity, and not as a philanthropic activity, which is perpetuating a culture of dependency on hand-outs and a poor probability of sustainability in the future.

5.1.2 Crop Quality Constraints

Smallholder paprika crop is generally of a lower quality than commercially produced paprika. ASTA levels of commercially produced paprika range from roughly 330 ASTA in the early season to 220 ASTA towards the end of the season, whereas the range for smallholder production (with exceptions) comparatively is more in the range from 280 ASTA to 160 ASTA or even lower, largely because of a lower level of input management.

Paprika for oleoresin extraction requires a minimum of approximately 250 ASTA, making it necessary to blend higher and lower qualities of paprika to meet minimum export quality standards. The relatively low ASTA level of smallholder paprika, coupled with the small volumes produced, reduces the opportunities for smallholder farmers or groupings to enter into direct export contracts with serious players on the international markets.

Smallholder paprika production in Zambia does not only suffer from a potential disadvantage in terms of color content as a result of lack of inputs and/or poor management of the crop in the field, but also in other quality aspects. With increasingly strict tolerance levels for aflatoxin and microbiological contamination levels for entry into the EU and USA markets, the low focus of some companies in avoiding high contamination levels through harvest and post-harvest handling of the crop by smallholder farmers, may result in Zambia gaining a bad reputation in this respect. Close monitoring of crop quality is essential.

On the other hand, the relative lack of pesticide use by smallholder farmers is an advantage in terms of the risk of unacceptable pesticide residue levels. However, if pesticide usage were to increase, this will require more attention.

5.1.3 Constraints to Production Volumes

Smallholder paprika production is limited in volume, while yields of individual farmers are well below potential. Smallholder paprika production is largely rain fed which carries an inherent risk that production is suffering from unfavorable or adverse weather conditions, as shown in recent years.

Inputs provided are usually limited to (certified) seed, and sometimes chemicals. Whereas it would possibly be in the interest of the companies to expand provision of inputs to smallholder farmers and thus increasing the yield potential and their production base, the opposite has been happening.

Fertilizer inputs are rarely provided as this is considered too risky. The underlying problem is fertilizer inputs are often diverted to other crops or sold, and that many farmers are running away from their obligations under the outgrower arrangements, resorting to side-selling of the crop rather than delivering the crop to the company that has provided the inputs on credit, and thus increasing the risks for the companies.

It is also argued that in first instance it is important that farmers get the management of the crop right before being able to reap the possible benefits of fertilizer application., whereby it must be taken into account that paprika is mostly being grown as a rain fed crop, carrying the inherent risk of investments in fertilizer not paying off.

Actual production volumes have often been significantly lower than initial projections based on the number of contracted farmers and the amount of seed issued. The most notable difference has been recorded in Malawi. According to the records, 50,000 farmers obtained seed in the 2001/2002 season, whereas only 20,000 farmers delivered paprika during the marketing season, shedding serious doubt on the number of paprika-producing farmers. It is believed that many farmers taking seed on credit were expecting that Cheetah would also provide chemicals and fertilizers, and when these inputs were not forthcoming, did not grow the crop.

In general there has been a lack of selection criteria for farmers, with any farmer wishing to grow paprika being accepted. At the same time there is always a 'natural' selection of better farmers, with less motivated or less successful farmers giving up on paprika production.

To overcome such problems and to better be able to do the necessary planning and decide on allocation of resources, contributions or down-payments to the value of inputs have been introduced, in the expectation that only the more committed, more business-oriented farmers are attracted to the production of paprika.

In the same vein, memberships have been introduced entitling farmers to discounts on inputs. Another strategy being followed is that farmers that have consistently been delivering paprika to the company by whom they were contracted, can graduate and become entitled to more inputs.

5.1.4 Viability of Extension and Marketing Arrangements

Outgrower companies in the paprika industry employ their own extension officers, who are assisted by locally recruited field assistants. The transaction costs are high, especially because of low production levels by individual farmers and the issue of side-selling, coupled with a wide geographical distribution of those same farmers. Government extension officers are viewed as ineffective and not having the specialized knowledge needed to provide support to the farmers in paprika production. Also, the extension officers play an important role during the time of marketing of the paprika, and the company wants to exercise as much control as possible to ensure that the crop produced by contracted farmers is not diverted elsewhere.

Cheetah will always aim for direct interaction with the farmers to be able to also exercise control over the quality of paprika produced. EU standards are becoming more stringent all the time (aflatoxins), and a company like Cheetah cannot rely on third parties being in charge of the production base as this poses risk to the company. Paprika is a specialized crop, and requires control and supervision.

Cheetah Zambia mentions a transport cost of between US$ 0.05 and US$ 0.07 per kg of paprika for the various areas of production, depending on the volumes and distance to its processing facilities in Lusaka. Both Cheetah and Central Growers association report a similar overhead cost of US$ 0.35-0.40 just for extension and procurement of the paprika crop at current production levels. An increase in smallholder production volumes would directly translate into a significant reduction in overhead costs, which could eventually even result in an improvement of the prices paid to farmers.

Meanwhile companies have realized that too wide a geographical distribution of smallholder farmers is stretching their resources, and efforts are being made to concentrate on fewer production areas with the highest potential. Mechanisms are also put in place to curb side-selling by transferring more responsibilities to group leaders, for which they receive a commission based on recruitment of farmers, credit recoveries and volumes along the lines of the Dunavant Distributor Model, without loosing control over production volumes and quality.

In collaboration with an international NGO, Cheetah Malawi is implementing a trial in which a commercial grower has its own outgrower scheme of smallholder paprika farmers. If this trial is successful, it will be tried to replicate the model with other commercial farmers. One important aspect is the introduction of irrigation for smallholder farmers. What is hoped for is a replicable model.

5.2 COTTON

Smallholder cotton production in Zambia has a history of well over 40 years. The parastatal Lint Company of Zambia, and later Lonrho Cotton Zambia Ltd, provided all inputs, extension services and credit facilities resulting in a rapid increase in the number of smallholder farmers producing cotton from the late 1970s onwards, attracted by pre-financing of inputs, accessible market, pre-planting price guarantee and relatively favorable pricing. However, large scale side-buying and side-selling resulted in the inability to recover credits and secure enough produce to keep its activities profitable, and contributed to the withdrawal of Lonrho from Zambia in 2001, heaving sustained repeated heavy losses.

The major player in the cotton industry in Zambia, Dunavant, introduced a centralized outgrower model in a linkage-dependent relationship with smallholder farmers, using local agents called Distributors as the link to the outgrowers. The model was introduced to cut back on extension cost and in first instance designed to reduce the risk of credit finance to large numbers of smallholder farmers by improving credit recoveries, and with that to increase the volumes of cotton. Distributors are not employees of Dunavant, but are contracted on a commission basis, based on loan recovery and crop volume produced. Dunavant does not have contracts with individual farmers due to the vast numbers involved and the high cost of management of individuals. All legally binding documents are between Dunavant and the distributor.

The main differences between the outgrower models used in the paprika and cotton sectors are illustrated in Box 11.

Box 11: Comparison of Outgrower Models

Model 1 (Paprika)	**Model 2 ('Dunavant model' - Cotton)**
Extension Staff, responsible for recruitment of farmers, provision of inputs and extension, credit recovery and crop collection	Area Managers, having a supervisory and monitoring role; and Shed/Credit Managers
Group leaders as intermediary link with farmers, receiving small commission on crop volumes	Distributors as intermediary link with farmers, receiving substantial commission based on credit recovery, crop volumes, and correct grading
Individually contracted farmers with no collateral	Distributors provide collateral, and are fully responsible for selection of farmers, provision of inputs and extension, credit recovery and crop collection
Characterized by low credit recoveries (<50 percent), with little or no judicial recourse	Characterized by high credit recovery rates (>85 percent), if only because of distributors being in a position to exercise peer pressure
High incidence of side-selling	Much reduced incidence of side-selling
High transaction costs per farmer or per kg of produce	Much reduced transaction costs per farmer or kg of produce
Stagnant or reduced number of farmers reached	Increasing numbers of farmers mobilized

Whereas the Distributor Model has been successful in dramatically improving credit recoveries and increased volumes of cotton, the latter has been achieved mainly by an increase in the number of outgrowers, with yields by individual smallholder farmers who primarily grow cotton under rain fed conditions with at times unfavorable weather conditions still remaining low. Improved horizontal coordination with other players in the cotton sector has contributed to a reduction in the phenomenon of side-buying and side-selling, and thus in default rates.

Distributors organize farmers in groups of on average 50-60 farmers. Groups are the vehicle for input distribution, dissemination of technical support, and marketing arrangements. As is the case for paprika, groups are mostly mere 'interest groups', i.e. have a common interest in growing cotton, and are rarely established formal cooperatives or associations.

Unless there are some major changes in policy in the major producing countries, it is unlikely that the recent trend of decreasing prices will change significantly enough to have a positive effect on production and processing Zambia, or even across Africa. Thus, for companies in the cotton sector the focus will have to be on streamlining the supply chain, improving operating efficiencies, increasing yields and returns, and reducing costs.

5.2.1 Viability of Smallholder Outgrowers

At farm level, increased yields and returns on investment is the only way that smallholder farmers are going to achieve long term stability and profitability. The current cotton yield produced by smallholder farmers in Zambia of around 500 kg/ha will not cover the increasing costs of inputs and reduction in prices, rendering many smallholder operations unprofitable.

The most economical development would be to increase the yields of the current farmers up to 800 kg/ha which has been demonstrated as achievable without irrigation: in some cases farmers have achieved over 1,000 kg/ha. An increase in supply to satisfy the demands of the ginneries would assist in a further reduction of side-buying and credit defaults. This increase in production demands significant investment in training to improve crop husbandry techniques, increased input provision requiring credit finance, improvements in varieties and potentially the introduction of irrigation systems.

5.2.2 Crop Quality Constraints

The quality of the seed cotton delivered to the ginneries depends mainly on careful harvesting to ensure the reduction of excess moisture, trash and other contaminants which are difficult to remove during the ginning process and may damage the spinning quality of the fibre. The cotton produced in Zambia is all hand-picked, which increases the quality of the cotton and is proven to be the most efficient method of harvest.

Parasites, poor harvesting techniques and storage can have a detrimental effect on the color of the produce, which is one of the three factors governing the quality of cotton, the other factors being purity and fibre length. Purity is mainly determined by the content level of leaves, trash and foreign matter. Fibre length is characterized by the 'average length of the longer one-half of the fibres' and is determined by the variety of seed used, although ginning processes can also affect this.

Hand-picked cotton is considered to be of a better quality than mechanically harvested cotton. Continental Ginnery (see Section 4.2.1.2) reported an average conversion rate for hand picked cotton of 38-40 percent against an estimated conversion rate for mechanized cotton of only 33 percent. The grades for lint are classified as A – E, with smallholder hand-picked cotton yielding A-85 percent, B-10 percent, and C-E-5 percent. African cotton is very much in demand for its texture and cleanliness and attracts a US$ 0.02 premium.

5.2.3 Constraints to Production Volumes

Due to the large numbers of cotton smallholder farmers and the continuous expansion of the schemes, one has to assume that the crop is profitable for the farmers in the current climate, although it has been indicated by the companies that production levels would decrease significantly if the companies were to stop providing inputs on credit.

Dunavant makes inputs available to the distributors for further distribution to his/her farmers, with the full legal responsibility for credit recovery placed upon the distributor. The provision of inputs under the micro-finance agreement with the distributor is done on the basis that the total production of seed cotton resulting from the use of the distributed inputs is sold to Dunavant, meaning that the distributor agrees to provide Dunavant with seed cotton to the value of the loan amount as well as the full balance of the crop grown by the distributors' farmers..

Enforcement of the clause referring to the full supply of seed cotton proves particularly difficult as many farmers interviewed considered that only the cotton totaling the input loan belonged to Dunavant; the remainder they were entitled to 'tout' on the market place looking for the best price available. A typical example is one farmer who mentioned that he would be welcoming more competition, meaning that with more companies operating in the same area it would give him the opportunity to off-set his credits with the company that provided him with the inputs (and qualify again for inputs on credit in the following season), but selling the rest of his production to whoever was offering the best price.

The low yield attained by many farmers of 500 kg/ha or less reduces the profitability for the smallholder farmer. An increase in yield to an attainable 800 kg/ha would significantly increase net profitability to the farmer for no additional financial input, but purely through good practice and crop husbandry techniques. As for the provision of fertilizers, the same reservations exist as in the paprika sector: diversion of inputs, increased risk of farmer default, and unpredictable weather conditions that may result in crop failure.

Yield increase through improved production techniques is the key to the development of the cotton farmers and increase in profitability without further investment such as irrigation, which would be beneficial but only if farmers can initially demonstrate good agricultural practices under rain fed conditions. Without good practices, irrigation systems will serve only to increase the farmers' debt.

Continental Ginnery mentioned that one of the constraints the company is facing, is not knowing if they were recruiting the right type of farmers for lack of proper selection criteria.

5.2.4 Viability of Extension and Marketing Arrangements

As Dunavant has almost totally abolished its own extension service, it is imperative that the distributors are well trained and able to disseminate technical support in a simple and effective way to the farmers. Dunavant offers training to newly appointed distributors in crop husbandry, pest management, administrative systems, credit recovery, and farmer management.

The controlling element by the companies in the cotton industry is proving to be viable in the present environment, and the financial burden on the companies to pre-finance the inputs, although heavy, is crucial to the sustainability of their industry in the current climate. The lack of commercial capacity and informality of the grower groups constrains their ability to procure inputs independently. Increased self-sufficiency of smallholder farmers may however not necessarily be in the direct interest of the companies as it would remove their claim on the cotton produced, and thus their ability to plan their business and negotiate forward contracts.

Several models for outgrower schemes in the cotton industry have been tried and tested and in most part failed due to poor credit recoveries and low production volumes. The model employed currently by Dunavant seems to be effective in increasing production (through an increase in the number of farmers) and reducing the constraints faced by the industry of side-buying, but has had less impact in increasing yields.

Nevertheless, the Dunavant distributor model is deemed as a successful example that is being introduced in several forms for other crops by other companies - for example for paprika by Cheetah Zambia

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5.3 EXPORT VEGETABLES

The export vegetable sector works with a limited number of farmers who are not necessarily representative for the smallholder farming sector. Most of the export vegetable farmers are individuals retired early from government service or the private sector, and much better educated than the average smallholder farmer. Not surprisingly, the majority of farmers interviewed showed to be much more business minded, are capable of planning of activities and budgeting for the crop requirements, and have a clear sense of their obligations under contractual agreements with other parties.

Export vegetable production by smallholder farmers was introduced by Agriflora. The link between the company and the farmers was that of the nucleus estate model, with cooperative societies or associations managing the individual member outgrowers. Agriflora was assisting the farmers with inputs, technical advice, and facilitating investments in irrigation facilities and cold storage through collaboration with other supporting organizations.

After the demise of Agriflora farmers could only turn to York Farm, which however only provides a market for the farmers, the market being limited to baby corn. York Farm does not provide any direct support to the farmers. Farmers have to finance their own inputs, purchasing the seed and other inputs commercially, as well as their capital investments. York Farm considers that its area of expertise is in the management of its own farms and the marketing of the produce, not the management of farmers, credit provision and information transfer. York Farm also does not supply any training or extension support.

York Farm does not deal on any scale with individual farmers or the cooperatives they belong to; the agreement is made with the apex organization of smallholder vegetable export cooperatives, (LACCU), which in turn organizes the local cooperatives to mobilize farmers according to supply and demand. From a linkage-dependent relationship under Agriflora the relationship has changed to one that is linkage-independent as far as the processor is concerned. However, the smallholder farmers remain heavily dependent on donor support.

5.3.1 Viability of Smallholder Outgrowers

Smallholder export vegetable production is heavily supported by donor subsidies and it has to be questioned whether as a business it is viable. Certainly in its current situation, it would not survive in a business environment.

Overall, the viability of the smallholder export vegetable industry relies on the ability of the export companies to meet the price and market constraints that the supermarkets in the UK and Europe are imposing. The high cost of transportation from Zambia and cost of production could in fact render the industry void and cause investors to relocate to other countries. The development of the export vegetables sector relies heavily in Good Agricultural Practices (GAP).

The opportunity for growth, which would potentially lead to an economically viable smallholder business, is very dependent on the smallholder farmers and their organizations being able to meet set standards and accreditation, at costs that are well above the

affordability of the farmers to cover, and thus requires external assistance from donors. ZATAC has been devising a strategy in partnership with other organizations to assist the cooperatives with EUREPGAP certification.

There is a wealth of external support for LACCU, which can have both positive and negative connotations. Whereas it can be said that the organization has built up a strong support network to facilitate the development of the organization and its members, it could also be said that the organization has become so donor-dependent that smallholder export vegetable production has become distorted and unsustainable. It seems that LACCU makes no provision in its administration to charge farmers for the services currently being provided, nor for any of the future requirements, more so relying on donors to provide assistance when required. To date, this strategy has worked, but is not sustainable and it has to be questioned what is seed capital for development, and what is subsidy.

5.3.2 Crop Quality Constraints

Until recently the lack of accreditation was considered the main constraint to the development of the outgrower export vegetables sector, with the main opportunity lying with the doors that could be opened should accreditation to EUREPGAP be achieved. It was reasoned that other constraints would become irrelevant as the market would disappear when consumers and retailers were to implement stricter controls.

To obtain this accreditation, the infrastructure constraints of LACCU, in the form of cold storage, pack houses and reliable transportation would have to be met. Once acquired, the issue of the constraints of production could be addressed. There was confidence that the standard of education and business ability amongst the farmers growing export vegetables was high and could be exploited to develop the industry further through specific industry training.

However, in view of the recent appreciation of the Kwacha against the US$ it has become questionable if smallholder export vegetable production will remain profitable, and farmers may be better off producing for the domestic vegetable market. If smallholder domestic vegetable suppliers could reach the standards required by the supermarkets and negotiate long term contracts, this growing market would offer them a primary channel for their produce, enable them to plan production and budgets and would build up this sector of farmers considerably.

It is a matter of confidence and image that has to be improved to open up this market channel, but it should be realized by the smallholder farmers that they may have to compete with commercial farmers. Transparency from the supermarkets as to standards and requirements is also a pre-requisite for the development of this sector. If a simplified version of EUREPGAP accreditation was introduced locally and farmers were trained to meet these standards, supermarkets would have more confidence in supply and would be able to provide supply contracts.

5.3.3 Constraints to Production Volumes

The main constraint to production volumes is not that yields are low as indicated for crops such as paprika and cotton, but, as members of the cooperatives mentioned, that the market share given by York Farm is too low. LACCU reported to be delivering 35 ton of baby corn per week, while one cooperative estimated that it could already produce 10 ton per week.

The other complaint by farmers was that the baby corn has to be grown during the cold (dry) season, during which it does not grow well, while costs for irrigation are high. Farmers would prefer to grow mangetout, beans and sugar snaps, but these crops will not be bought by York Farm.

5.3.4 Viability of Crop Marketing Arrangements

Other than in the paprika and cotton industries, a company like York Farm is not interested in providing inputs and other support to the smallholder farmers to increase the production base. To the contrary, farmers involved in the export vegetable outgrower scheme would be in a position to produce much more than what York Farm is offering as market share.

Farmers are themselves responsible for procuring the necessary inputs, and LACCU in collaboration with ZATAC is making efforts to establish tripartite arrangements, with input suppliers to make inputs available on credit, and ZATAC providing a guarantee.

Farmers deliver to the cooperative depot where the crop is weighed, graded, recorded and stored briefly before delivery to York Farm. USAID, through support from ZATAC provided LACCU with a truck to enable them to deliver to York Farm.

5.4 TOBACCO

The production of Virginia flue-cured tobacco by smallholder farmers in Zambia is an example of a nucleus estate outgrower model with a Scheme Operator in charge who himself is not the processor but a commercial grower, assisted with inputs from the processing company, Tombwe Processing.

The Scheme Operator receives a commission for every kg of tobacco to cover his expenditures and risks, while the company covers the transport costs. This is translated into a standard lower price for smallholder produce as compared to commercial produce, and farmers have the simple choice whether that price is attractive enough for them to grow tobacco or not.

For the smallholder farmers it is yet another example of a linkage-dependent relationship with inputs being provided on credit. Not all farmers qualify for fertilizers on credit. Three categories of farmers are being distinguished, who, depending on their performance, are entitled to different input packages. If a farmer performs well, he is further motivated by being graduated to a higher category, entitling him to additional inputs and support.

For the processing company lessons from the past were that the working directly with smallholder farmers was too costly and problematic. Employing extension officers did not work because these were not necessarily representing the interests of the company, but tended to side with the farmers or otherwise work against the interests of the company. In the view of Tombwe Processing outgrower schemes only work if intermediaries are identified who are entrepreneurial in their own right.

The Scheme Operator is fully responsible for credit repayment to the processing company. If he fails in this, any shortfalls are deducted from his commission. The Scheme Operator, in case individual farmers do not pay back their credit or fail to deliver the crop, may seize a cow, goat or some roofing sheets from the concerned farmers, something that would be difficult to do if the farmers would be linked directly to the processing company.

What a Scheme Operator may further do to protect himself against any defaults is to organize the farmers in groups of e.g. 10 farmers. The Scheme Operator may withhold part of the payments to a group until the individual farmers within that group have cleared all their loans, thus bringing in an element of peer pressure.

The smallholder produce is generally of lower quality than commercial produce, and the processor blends the two to meet international standards. For the processing company being involved in smallholder production is partly political and social, but in the end if it is not viable smallholder production will be stopped, as Tombwe has done in the past. There are no guaranteed pre-planting prices given, the pricing being dependent on the international markets.

5.5 PRICING

Farmers have no say in the setting of price levels, but at the same time any necessary reductions in price levels prompted by lower prices on the international markets in the past have been difficult if not impossible to implement, as this could easily have resulted in farmers turning away from the crop. This would not have been in the interest of the companies as it would imply the loss of part of the production base. As for Zambia, however, significant price reductions will be unavoidable in 2006 in view of the appreciation of the Kwacha against the US$, and it remains to be seen what the short-term and long-term effects of this will be.

In the paprika sector there usually is a distinction in pricing for deliveries of the produce to the processing plant (factory price) or to local depots/buying centers (farm-gate price), with farmers having a free choice to deliver to either of the two. It is mostly not realized that the farm-gate price is often subsidized, not truly reflecting extension costs and cost of establishing a network of depots, hiring staff, and transport. Prices for smallholder paprika produce are lower than for commercially produced paprika not only because of a lower quality, but also because the investment cost in smallholder production is much higher.

In the cotton sector, uniform prices are being applied irrespective of where the crop is being delivered and the distance to the ginneries, with only a differentiation for different grades.

Smallholder farmers, therein often supported by NGOs, expect companies to announce pre-planting prices, which is more often than not impossible because of uncertainties over the development of international market prices or macro-economic instability. Absence of pre-planting prices, coupled with limited or no understanding of why and how international market prices fluctuate and how companies derive the price they pay for the produce, and limited access to information, particularly in a format that can be understood by the farmers, leads to uncertainty and a feeling of exploitation..

Development of a transparent pricing system could alleviate some of these constraints. NGOs could play an important role in explaining pricing systems to the farmers. However, mostly NGOs tend to side with farmers, often wanting better prices and raising expectations with farmers even when this is not justified.

5.6 ROLE OF NGOS AND DONORS

At best companies react ambivalent towards the role of NGOs. Whereas NGOs are seen as being able to play an important intermediary role in smallholder-private sector linkages,

experiences have often been negative. It is felt that NGOs are mostly insufficiently aware that there presence is of a temporary nature only and lack proper exit strategies, are not always very reliable, and tend to side with farmers without being aware of the needs and constraints of the private sector. Many donor funded NGO activities and projects/programs are developed without any interaction with the private sector.

NGOs taking up a marketing role on behalf of smallholder farmers have been instrumental in creating market distortions, while some NGOs have gone further by establishing subsidized marketing companies competing with the private sector, with the intend to directly export rather than building a stronger local industry. Invariably such initiatives mostly failed.

Rather than financially supporting NGOs, donors should possibly consider providing direct support to the private sector, in the form of 'result contracts'. Much more could be achieved at much lower costs as there will be no duplication of overhead costs with only the activities that are to be implemented being funded, for example extension, monitoring, research including variety testing, and development of a Code of Conduct for private sector companies working with smallholder farmers, covering issues such as contractual agreements between farmers/processors and grading standards.

6 LESSONS LEARNED AND RECOMMENDATIONS

6.1 LESSONS LEARNED

The constraints to outgrower schemes identified in Mozambique or in Zambia and Malawi are not that different between the countries. The most important are:

- Low production volumes by smallholder farmers
- Low quality of smallholder produce
- Defaulting by smallholder farmers
- High costs for provision of extension services

Individual companies involved in outgrower schemes have been addressing the constraints in ways that are often crop specific, and relate to the specific quality requirements applicable to the crop in question. The most demanding crops are export vegetables and tropical fruits, followed by paprika and tobacco, and cotton. The relationship to the end uses of these crops is obvious. Export vegetables and tropical fruits are for direct human consumption, while paprika and tobacco are still being processed before being consumed in one form or another. Cotton, unlike the other crops, is not being consumed. In view of the quality requirements it is not surprising to see that not all of these crops are equally suitable for production by smallholder farmers.

Vegetables and tropical fruits for export require high management levels, and are most suitable for commercial and semi-commercial production. Examples of outgrower schemes for these types of crops indicate that the nucleus estate model, involving a central processing plant with at least part of the production under own management to guarantee a minimum throughput, is the most commonly used. Business-minded semi-commercial or emerging farmers, often with a higher education, can be linked to the nucleus estates, receiving technical training and support from the nucleus estates. Quality requirements for semi-commercial produce are as stringent as for commercial production. The number of farmers that can through the nuclear estate model is limited, and in that sense the possible impact on smallholder agricultural commercialization is limited as well. However, the involvement of semi-commercial or emerging farmers may have other spin-off effects, notably in the creation of employment in rural areas, while contributing to generation of export earnings.

Paprika and tobacco are crops that are also subject to certain quality criteria, albeit less stringent than for vegetables and tropical fruits for export. The centralized outgrower model is commonly used, allowing the processing companies to exercise some form of control over crop husbandry practices by smallholder farmers. In Virginia tobacco production, for example, the processor has appointed local Scheme Operators to exercise control over the production base and quality of the produce. In paprika production, however, processors work with their own extension staff, albeit for the same reasons. Both crops are suitable for smallholder farmers, although companies are looking to concentrate on fewer areas with the highest potential to reduce overhead costs, especially those related to extension. Quality of smallholder produce is usually lower than commercial produce, requiring blending of the two to meet export quality requirements. Efforts are being put in place to attract only the more committed farmers through the introduction of contributions to the value of inputs or the concept of membership, with members being entitled to discounts on inputs made available by the companies. In building a stronger relationship with farmers, the companies also aim to

reduce the diversion of inputs and high default rates, both of which have been hampering the accelerated development of these sectors.

Cotton is the least demanding of the four crops. A centralized outgrower model is being used, but direct control over the production base and crop quality standards has been released partly through the appointment of intermediaries. Dunavant in Zambia developed the 'Distributor' model, with local agents from within the communities being appointed who are responsible for the recruitment and selection of farmers, input distribution, credit recovery, and crop collection. The distributors are not in the employ of the company, but work on a commission basis. The model is especially suitable when very large numbers of farmers are being involved in production, as is the case for cotton, and become difficult to manage for the companies. The Distributor model has been very successful in reducing farmer default, with credit recovery rates of over 90 percent being achieved.

The one element that the various models have in common is that they are all based on linkage-dependent relationships, with the companies providing inputs and technical support to the smallholder farmers, in return for access to the smallholder produce. To facilitate working with smallholder farmers, the companies have organized them into small 'interest' groups or clubs, with the common interest being the production of a certain crop. Rarely the groups are formally registered associations or cooperatives, which is important to take into consideration when designing donor-financed support programs.

A comparison of main characteristics of outgrower models for the different crops is provided in Table 3.

Table 3: Main characteristics of outgrower models for export vegetables and fruits, paprika and tobacco and cotton

Export vegetables and fruits	Paprika and Virginia tobacco	Cotton
• No compromise on stringent quality requirements	• Blending of different qualities possible	• Least demanding in respect of quality
• Nucleus estate model most suitable	• Centralized outgrower model with own extension staff or local Scheme Operators	• Centralized outgrower model with local agents
• Semi-commercial farmers	• Smallholder farmers	• Smallholder farmers
• Limited number of growers involved (few up to a several hundred)	• Intermediate number of growers involved (few thousand up to several ten-thousands)	• Large number of growers involved (ten-thousands up to several hundred-thousands)
• Close to central processing plant	• Concentrating on fewer areas with highest potential	• Widespread production over large parts of the country

Elements of the various outgrower models are not mutually exclusive. For example, the use of local Scheme Operators by Tombwe Processing in Zambia can be compared to the collaboration with a commercial farmer by Cheetah in Malawi. Both the scheme operators and the commercial farmer work closely with a number of smallholder farmers. Similarly, a variation on the use of distributors who work on a commission basis as developed by Dunavant in Zambia in the cotton sector is now also being introduced by Cheetah in Zambia and Malawi in the paprika sector for their group/club leaders and the locally recruited Field Assistants.

In conclusion, there is not a single outgrower model that is 'the best' and would suit all crops, as different crops have different requirements. Nor are the outgrower models static; changes are being made all the time to address certain constraints.

In first instance these changes have been and are focusing on reducing default on credits. Little or no attention has been placed on increasing yields. Instead, outgrower schemes have focused on increasing the number of farmers or land areas under production to reach production volumes necessary for meeting capacity requirements. Increasing yields per unit area is, however, becoming ever more important in view of declining prices for the commodities on international markets and increasing costs for inputs. In the paprika industry there is now a shift towards focusing more on fewer areas with the highest potential, and attracting more commercially-oriented farmers who have demonstrated ability to properly manage the crop, have the means to at least contribute towards the cost of inputs, and eventually may be able to grow the crop on a self-sustaining basis.

If an outgrower scheme is to succeed and eventually become a self-sustaining, income generating supply chain, focus has to be placed on ensuring that the right caliber producers are contracted, and there is a need for developing selection criteria to ensure that potential participants in outgrower schemes meet minimum standards. Selection criteria could include land availability, location and conditions, agricultural knowledge and experience, basic business-awareness and willingness to learn. Minimum acceptable production standards relating to yield and quality should also be developed, with farmers repeatedly failing to meet these standards being removed from the scheme to increase its sustainability. Whereas this is already happening to some extent through 'natural' selection of farmers, this issue may have to be approached much more pro-actively. Developing selection criteria and production standards will also assist in assessing what level of support is required to facilitate further development.

For farmers to be able to make informed decisions on which crops to grow, it is important to develop transparent pricing systems. The role and responsibilities of donor-funded NGOs in supporting the development of smallholder-private sector linkages need to be reviewed. Too often NGOs have been operating in isolation of the private sector, with sometimes creating market distortions or being responsible for the establishment of subsidized competitors of the private sector, rather than being mere facilitators. Government or donor support (through NGO type intermediate organizations) to the private sector should not result in distortions to the detriment of commercial operators, as has happened in the paprika industry in Zambia. Rather than continuing in this way, funds for smallholder mobilization and capacity building could be given into the custody of the industries, with a more business-oriented approach towards issues such as farmer capacity building, extension, and marketing. There could still

be a role for NGO type of organizations, but their agenda should be more dictated by the private sector and should be more demand-driven.

6.2 RECOMMENDATIONS FOR OUTGROWER BEST PRACTICES

The various outgrower schemes have different modalities in terms of the type and number farmers, their spatial distribution, contract arrangements, delivery of technical support (extension services), marketing mechanisms, and quality requirements. Hence, to recommend a single best practice outgrower model that suits all of these diverse scenarios will be difficult, if not impossible.

However, it is possible to extract relevant elements from the various outgrower models that need to be incorporated into models suited to the specific conditions of different industries. Any model should promote the move away from donor-dependency and distortion towards self-sufficient, economically viable supply chains, incorporating producers, service providers and processors, each party knowing and recognizing its roles and responsibilities and undertaking them in a responsible, profitable and sustainable fashion. Outgrower schemes are not an end-goal in itself but should in many cases be seen as a transition phase from linkage-dependent relationships between producers and processors towards linkage-independent, self-sustainable farmers and/or farmer groups.

For outgrower models to succeed there must be ideally a demand-driven approach for all services. Processing or buying companies, representing the markets, must be able to demonstrate a sustainable demand for their product prior to commencing the development of an outgrower scheme. Producers must demonstrate a desire to participate in outgrower schemes, and for commercial development and income generation. There should be a demand from local service providers to be involved in schemes, providing inputs and services on a commercial basis. Finally, there should be a demand and active support from local authorities to see the development of outgrower schemes in the area, to minimize disruptions and problems at a later stage.

6.2.1 Elements of Outgrower Best Practices

Important elements that need to be in incorporated in outgrower models, and are to be taken into account when for example considering financial support to outgrower schemes, are:

- Criteria for grower selection
- Registration of growers and maintenance of records
- Contracts
- Input supply and loan recovery
- Extension services
- Marketing arrangements
- Pricing mechanisms
- Payment modalities
- Group development facilitation

Each of these elements is discussed in more detail in the sections that follow. However, even if all of these elements are adequately addressed, outgrower arrangements may still fail if the issue of side-selling and defaulting by smallholder farmers is not being addressed adequately. Often it is not realized that side-selling only occurs because there are companies or

individuals that are involved in side-buying, thus providing an opportunity to farmers to side-sell. Rather than trying to address the problem by improving mechanisms to follow-up on defaulting farmers through legal recourse or punishing farmers by excluding them from continued participation in outgrower arrangements, it should be tried to address the problem from the other side, that is, by making it much more difficult for companies or individuals involved in side-buying to continue operating. In the end, the number of companies and/or individuals involved in side-buying is much smaller than the number of smallholder farmers involved in side-selling, and it should not be too difficult to identify such companies and/or individuals. As far as companies are concerned, incorporation of the issue of side-selling and side-buying into a Code of Conduct could be a first step towards adressing this problem (see Section 6.2.2).

Criteria for grower selection

There often appear to be no strict criteria for the selection of farmers, and in principle any farmer who is attracted to growing paprika is accepted. If an outgrower scheme is to succeed and eventually become a self-sustaining, income generating supply chain, focus has to be placed on ensuring that the right caliber producers are contracted. To ensure that potential participants in outgrower schemes meet minimum standards there is a need to develop selection criteria. Selection criteria could include land availability, location and conditions, agricultural knowledge and experience, basic business-awareness and willingness to learn. Minimum acceptable production standards relating to yield and quality should also be developed, with successful farmers being entitled to more comprehensive input packages. Simple mechanisms that may enhance farmer selection are a contribution to the value of inputs, or membership fees which entitle farmers to inputs at discounted prices.

Registration of growers and maintenance of records

To ensure good and transparent management practices it is imperative that clear, detailed information regarding personal details, registration number, location, credit provision, and previous crop history of individual farmers is being recorded. Computer programs should be designed to facilitate monitoring the performance of individual smallholder farmers, providing a basis for e.g. assessing the eligibility of farmers for higher input packages through tracking their performances. This management information could be linked to GIS aerial mapping systems in more developed outgrower schemes.

Contracts

Contracts or agreements between companies and farmers should be transparent and comprehensive, incorporating as a minimum personal details of the individual farmer, identification and registration number, area contracted, period of agreement, quality requirements, grades and their descriptions, input costs and repayment modalities, extension provision, and obligations and responsibilities of the two parties to the contract or agreement.

Contracts and agreements must be understood by the farmers, and how these affect them. This may require translation of the contract or agreement into the local language. If necessary, the company or a third party must provide a degree of training and capacity building amongst the farmers to ensure that they understand and accept the terms of the contract. There is need for a balanced contract design with risks, incentives and enforcements modalities being fairly applied for all parties.

Copies of the contract or agreement must be made available to the farmer. The company should keep a record of all contracts, if only for monitoring purposes.

Input supply and loan recovery

Conditions that apply to the provision of inputs, the range of inputs made available, their cost, farmer contributions towards the value of inputs, interest charged and repayment modalities must be clearly stipulated. Management information systems must enable companies to record all inputs supplied on credit against the producers' number, as well as deductions made against crop delivery. Timely delivery of inputs and other services needs to be properly planned and must respond to farmers' needs, creating incentives for farmers to honour contracts. The better and broader the range of services offered, the closer the relationship between farmers and business, and the more the farmer will lose by breaking the relationship.

Group leaders or distributors play an important role in facilitating and managing input distribution at field level.

Extension services

There may be a need for companies to perform a full training and extension needs analysis to establish a base line to enable them to plan the implementation or expansion of extension services to smallholder farmers, who should be involved in the process to ensure that their needs are being addressed where feasible. The costs of extension services are usually reflected in the prices paid without this being clearly understood by the farmers, who often believe that the extension services received are free of charge. It is imperative that farmers are charged for the service in a clear and transparent way to ensure that they monitor the service and receive value for money.

Provision of extension services should ideally be linked closely to distinct periods that can be distinguished in the crop cycle, for example mobilization and registration of farmers including input distribution, nursery preparation and establishment, field preparation and transplanting, field management including control of pests and diseases, pre-harvest preparations, post-harvest handling and storage hygiene, and marketing arrangements.

Marketing arrangements

Depending on the spatial distribution of smallholder farmers it may be necessary to establish a network of depots and buying centers during the marketing period to facilitate delivery of the produce by farmers, whether throughout the marketing period or at designated times. It is important that staff positioned at these depots is well trained in grading procedures, and closely monitored to ensure adherence to such grading procedures.

Grading standards should be clear and transparent to the farmers. When possible, visual grading aids should be made available. Farmers need to be well trained in grading of the produce.

When there is a differentiation in prices paid at the factory gate or at the depots/buying centers (farm-gate price), farmers should have a free choice in where to deliver their produce.

Pricing mechanisms

Farmers often expect a minimum pre-planting price for the crop they wish to grow. However, in view of uncertainties with regard to developments on the international markets or macro-

economic policies of governments, this is often impossible for the outgrower companies. Absence of pre-planting prices, coupled with limited or no understanding of why and how international market prices fluctuate and how companies derive the price they pay for the produce, and limited access to information, particularly in a format that can be understood by the farmers, leads to uncertainty and a feeling of exploitation. Development of transparent pricing systems could alleviate some of these constraints.

Payment modalities

Payment to farmers should be as prompt as possible. This may be when the produce changes hands, but at least no more than one month after the transfer of produce has taken place. Any transaction should be properly recorded, indicating grades, corresponding weights and prices, total value of the delivery, and any deductions for inputs or, if applicable, other services provided.

Group development facilitation

It would simply not be economical for outgrower companies to service each and every farmer individually. Group approaches to farmer organization means reaching economies of scale and thus reducing transaction costs, which is beneficial for both farmers and companies. By working through farmer groups or clubs, companies can reduce their cost on delivery of services, whereas farmers can reduce transport costs to bring their produce to the company buying their crop, or negotiate better prices when delivering in bulk. Groups are the vehicle for distribution of inputs, dissemination of technical advice, and procurement of the crop.

Farmer groups or clubs are usually mere interest groups, with a common interest in growing a certain crop. Members of the groups are rarely formally linked to each other through an association or cooperative. Groups usually have on average 20-25 farmers, although the size may actually vary from 5-50 members or more. Group or club leaders, also referred to as farmer facilitators or contact farmers, are the link with the companies. Selection of a group leader is mostly an interactive process between the company and the group. Group leaders must be approved by the company (they must be literate and be able to keep a minimum of administration), but at the same time the group leader must be accepted and trusted by the farmers.

Good communication and close monitoring remain particularly critical issues, especially with export products involving European and Northern American markets, where there is a need to ensure quality and traceability of produce. When communication between agribusiness and farmers is weak, group members can still monitor each other. More generally, good communications to foster good company-farmer relationships and a sense of trust has a positive effect by reducing strategic farmer default. Peer pressure mechanisms with groups can further contribute to a reduction of farmer default by eliminating potential defaulters.

6.2.2 Development of a Code of Conduct

The objective of a Code of Conduct would be to promote ethical and transparent trading between buyers (processing and procurement companies), service providers, and smallholder farmers, with the aim of establishing minimum standards of service and transparency. Most elements of outgrower best practices (Section 6.2.1) could be captured in a Code of Conduct.

The objective of the Code of Conduct can be achieved by:

- Ensuring that the agricultural inputs supplied by a service provider are both adequate and appropriate. These inputs must be accompanied by extension services to ensure their safe and economical application;
- Ensuring that open and transparent marketing services are available for the contracted production, including transparent pricing mechanisms and where possible, minimum pre-planting prices;
- Increasing capacity of smallholder farmers to become more efficient and competent commercial producers;
- Developing self-reliance and sustainability;
- Fostering safe and responsible agricultural practices; and
- Discouraging farming activities that have a detrimental effect on the environment.

Participation in the Code will be voluntary. It is envisaged that outgrower companies and smallholder service providers that sign up to conform to the Code of Conduct, will be certified after having been audited by independent auditors, with reviews being carried out at regular intervals to ensure that they continue following the code.

The benefits of introducing this system could be wide, provided that the body implementing the code is professional and impartial. The code requires all parties within the supply chain to undertake to operate within the code. All contracts will be written in accordance with the code. It would also be beneficial if the code provided a basic outline contract, approved by an attorney, to be used when producers and service providers are contracted.

This development and introduction of a Code of Conduct must be supported by discussions with the judicial system to ensure that contracts and agreements are enforceable, a problem that is currently faced by most outgrower companies. This would include the issue of side-buying and side-selling.

A Code of Conduct would include several sections, incorporating the relevant issues being faced by the various parties involved in outgrower schemes:

- A commitment to fair and ethical trading
- The contract between the producer and service provider
    - language and style of the contract
    - basic terms and conditions
    - implementation of the contractual agreement
- The quality and type of services provided
    - marketing
    - inputs
    - extension advice and training

In addition, the Code of Conduct could also address issues such as:

- Employment conditions for service providers
- Protection of the environment
- Commitment to safe working practices

The Code of Conduct could be used as a guideline to design agreements that are tailored to meet the specific requirements of each industry, within the parameters outlined in the code.

Adhering to the Code of Conduct could possibly assist companies in exporting to the EU and other developed countries because of compliance with increasingly stringent conditions.

6.2.3 Role and Responsibilities of Donors/NGOs

Experiences in working with NGOs from the perspective of the private sector have not always been positive. At times NGO's have a tendency to masquerade as agribusiness enterprises, cross-subsidizing their business activities with donor funding. Other negative experiences relate to the creation of market distortions to the disadvantage of commercial outgrower companies, or failing to provide for appropriate exit strategies. In such instances the private sector is in effect directly undermined, resulting in a less sustainable industry once the NGO pulls out.

Despite these criticisms it is believed that donors and/or NGO's still have a role to play in:

- Facilitating group formation,
- Assisting in reducing transaction costs,
- Adding value at producers' level through promoting quality control and/or processing,
- Promoting savings by farmers, and
- Promote understanding of the role and use of credit.

It is very important that NGO's, or any other facilitator, should be operating complementary to the functions undertaken by the private sector, and not take over those functions. The role of each partner should be clearly defined and understood when an intermediary partner gets involved in building new, or strengthening existing, market linkages between smallholder farmers and private sector companies. It is essential that agribusiness companies are closely involved in the design of any programs that have such linkages as objective, if only to ensure that mobilization and capacity building of farmers does not become an objective in itself, without any relation to the concerns and needs of the private sector.

Roles and responsibilities of each partner should be defined as follows:

Farmers

- Grow the crop on their land
- Sell the crop to the company
- Repay company loans
- Contribute to the costs of services provided by the companies
- Contribute to the costs of services provided by facilitators
- Join producer groups for consultation, negotiation, training, and economies of scale in input and output distribution

Companies

- Demonstrate the production opportunity
- Recruit and contract farmers
- Supply production inputs (crop financing)
- Support production (extension)
- Purchase the crop (provide a guaranteed market)
- Process and market the end product

Facilitators

From the company perspective

- Support existing farmer-company linkages (attitude change)
- Assist in producer group formation
- Assist in reducing transaction costs
- Promote quality control (value adding at producer's level)

From the farmer's perspective

- Advise and train farmers (capacity building)
- Facilitate negotiation on contracts and prices
- Mediate between partners where necessary
- Monitor progress

From the facilitators' perspective

- Maintain an impartial role
- Withdrawal from the partnership (exit strategy)!

6.2.4 Role of Governments

Governments have a regulatory/enabling and a development role to play if outgrower schemes are to be successful. One of the main complaints from outgrower companies is that there is a lack of a clear government vision and commitment, supported by adequate strategies.

Regulatory and enabling role

Outgrower schemes depend on either legal or informal agreements between the contracting parties. These agreements in turn have to be backed up by appropriate laws and an efficient legal system. As an example, there should be the possibility of an efficient recourse through the judicial system to address the problem of defaulting on credits through side-selling of the produce.

Side-selling is only possible when there are side-buyers. Whereas it may be burdensome to pursue large numbers of side-selling farmers, a solution could be found in putting appropriate mechanisms in place to discourage side-buying by individuals or companies, which are much fewer in number.

Over-regulation by governments should be avoided. The private sector, particularly those involved with exports, frequently complains about the red tape and the costs involved with complying with excessive bureaucratic regulations and procedures. A simplification of official documentation, for example, could have a positive impact on the outlook of potential investors. Licensing procedures are many, complicated and non-transparent, and companies would be greatly assisted by provision of a clear and comprehensive overview of all applicable licensing procedures, if only to avoid the frustration of repeatedly being penalized. The burden of taxes is another issue that could make it difficult for agribusiness to be competitive and discourages potential investors.
Governments could play an arbitration or dispute resolution role by establishing dispute resolution guidelines for agricultural contracts and/or offer mediating services through an institution that is seen as not having vested interests in matters brought before it.

Other enabling activities to sustain contract farming may include provision of training in technological and managerial skills (in cooperation with NGOs if so wished, but at any time

after a thorough dialogue with the private sector to properly identify the needs), initiation and facilitation of research activities into the products under contract (in collaboration and consultation with outgrower companies), and provision of agricultural extension services to outgrower companies that do not employ their own field staff. The latter may require that government extension staff is trained in crop husbandry practices for the specialized high-value export crops.

At national level, it is a precondition that specialized services are available to provide institutional support to production, processing and marketing. Government services such as phytosanitary controls, plant pathology clinics and research stations are essential, especially for companies that invest in high-value crops for export. There is a need also for focused, market-related research (such as determining areas most suitable for certain crops).

The regulatory environment in relation to the screening and monitoring of companies with short-term agendas undermining private sector efforts is considered weak. The government has a role to play in ensuring that companies involved or proposing to invest in outgrower schemes are *bona fide* and are planning long-term partnership arrangements with smallholder farmers.

The regulatory environment in relation to the screening and monitoring of companies with short-term agendas undermining private sector efforts is considered weak. The government has a role to play in ensuring that companies involved or proposing to invest in outgrower schemes are *bona fide* and are planning long-term partnership arrangements with smallholder farmers.

DEVELOPMENT ROLE

Dissemination of market information, highlighting the products for which there is a commercial demand that can be satisfied through outgrower schemes, is an example of how governments could play a developmental role.

Where contracted farmers are organized into groups, governments can play an important role by carrying out activities to strengthen the managerial capability of these groups enhancing their business performance, the transfer of technology to farmers, and their marketing skills.

As outgrower schemes grow in importance, governments should reallocate development resources towards its promotion by bringing together agribusiness and interested farmers or farmer groups and financially supporting extension services, especially in the initial stages when the investment costs for outgrower companies are high, with returns on investments only seen after 3-4 years or more.

One of the main constraints facing outgrower companies is the availability of affordable working capital for input and trade financing, and governments could play an important role in alleviating this constraint.

7 MECHANISMS FOR FINANCE DELIVERY [3]

Beneficiaries from donor-funded organizations with cheap financing have been inflating market prices to the disadvantage of commercial outgrower companies who consequently have been facing viability problems and increased side-selling.

Rather than channeling donor funds for strengthening smallholder-private sector linkages through NGO-type organizations it has been suggested to consider going through the private sector, in the form of 'result contracts'. Much more could be achieved at a much reduced expense: less overhead costs, with only the activities, such as extension, monitoring, research including variety testing, and development of a Code of Conduct, being funded.

It is important to recognize that the capacity of smallholders to produce crops for markets depends on the interaction of their knowledge and skills; the effectiveness of extension; the available technologies; access to information, credit and finance; and finally access to land (including land tenure issues).

In order to improve the capacity of smallholders to meet the demands of a more commercialized industry and marketing system, specific interventions need to be carried out that facilitates the increased commercialization of smallholders. In essence, a demand driven approach to commercialization will have the most effect. The objective of any donor supported investment strategy should be to increase the degree of smallholder commercialization by promoting the development of a network of well-functioning value chains that are competitive and innovative.

There should be several characteristics to an investment strategy. Firstly, the investment strategy should recognize the key role of networks in the development of value chains. The strategy should facilitate the emergence of a network of well-functioning agricultural value chains and provide institutional mechanisms through which the key stakeholders and their service providers can effectively link to each other by forming partnerships and alliances. Stakeholders participate in a commercial agriculture network when they recognize that participation in the network increases their opportunity to establish mutually beneficial partnerships and alliances.

Secondly, the investment strategy should propose methods for sharing information. Constraints related to limited access to information and access to capital are addressed through improved marketing information services. Sharing information, however, is not going to be translated into higher incomes and more effective services unless complemented by other mechanisms that give stakeholders the means to make investment decisions needed to move to higher levels of commercialization. Demand-driven investments will improve the efficiency of allocation of scarce public resources. The formulation, approval and implementation of demand-driven investments will also contribute to the development of alliances and partnerships between stakeholders and service providers.

Thirdly, the investment strategy should build and strengthen existing capacity of service providers to facilitate the development of commercial agriculture. Improved capacity of

[3] The Section on Mechanisms for Finance Delivery is based on the Smallholder Agricultural Commercial Strategy developed for Zambia (Agrifood Consulting International, 2005).

service providers facilitates the development of commercial agriculture in two ways: by directly providing better services to currently well-organized commercial stakeholders and by mobilizing and organizing currently loosely-organized farmer groups operating at a low level of commercialization.

In order to achieve the overall objective of moving to a higher level of smallholder commercialization, the investment strategy could be organized into several inter-linked components[4], with an envisaged life-span of around 5 years:

1. Commercial Agriculture Network (CAN)
2. Commercial Agriculture Alliance (CAA) and its associated Commercial Agriculture Fund (CAF)
3. Strengthening of the Agriculture Market Information Service (AMIS)
4. Strengthening BDS for Smallholder Commercialization (BDS)
5. Institutional Capacity Development for Commercial Agriculture (ICDCA)
6. Credit Guarantee Facility (CGF)

Different components of the investment strategy address market failures related to the formation of commercial smallholder and agribusiness organizations, provision of information, and investment in new technology and infrastructure. The CAN, the CAA and the BDS components address the failure of diverse commercial stakeholders to organize themselves into larger units and to establish mutually beneficial relationships; the AMIS and ICDCA addresses the failure of supplying and disseminating information to improve production and marketing. The CAF addresses the failure of investing in new technologies and infrastructure providing public good benefits. Finally, the CGF addresses the failure of commercial agricultural operators to access finance for the expansion of their business.

The various components of the project are interlinked and reinforce each other. The CAN members will benefit from association with other network members by developing joint investment proposals for approval by the CAA. The institutional capacity development activities will strengthen the capacity of institutions to provide services to CAA members, farmer groups and small and medium agro-enterprises. The investments approved by the CAA from funds in the CAF will complement investments made possible by the increased credit disbursed to commercial agriculture made possible by the CGF and the improved information and knowledge disseminated by the AMIS.

7.1 COMMERCIAL AGRICULTURE NETWORK

This component envisages the formation of a Commercial Agriculture Network (CAN) to facilitate exchange of information between key stakeholders (smallholder producers, traders and processors) and service providers (research and extension organizations, donors, NGOs, financial institutions, MINAG and associated provincial and district agencies).

Under this component, it is proposed to develop a mechanism to facilitate communication, information sharing and formation of partnerships among and between commercial stakeholders and service providers.
The key outputs of the component would include the following:

[4] Although not included as an integral component, consideration should be given to designing an appropriate monitoring and evaluation system for outgrower schemes.

- A database on network members, bi-monthly bulletins distributed to all network members, agro-entrepreneurship news, semi-annual workshops, a website of the CAN and the formation of partnerships among members of the network;
- Implementation of a Smallholder Service Provider Code of Practice; and
- Development of a set of implementation manuals for Best-Practice models of outgrower schemes and nucleus estate / large enterprise models.

The institutional framework for this component envisages a network manager whose main responsibility is to coordinate and promote the flow of information between commercial stakeholders and service providers. The network component is closely linked to all the other components of the project. The costs of this component would be minimal, at around US$250,000, and includes staff costs as well as office expenses.

7.2 COMMERCIAL AGRICULTURE ALLIANCE [5]/COMMERCIAL AGRICULTURAL FUND

This component envisages the formation of a Commercial Agriculture Alliance (CAA) and the formation of a Commercial Agriculture Fund (CAF) to provide a mechanism for different types of key stakeholders (producers, traders and processors) to work together by formulating and selecting investments that move commercialization to a higher level.

Under this component, it is proposed to develop a mechanism to facilitate the formation of effective value chains and the provision of demand-driven services and investments. The members of the Alliance consist of commercial farmers, traders, processors and their organizations.

The proposed intervention envisages directed investments in demand driven extension services, and technology development. These investments will be co-financed by the Alliance members and by a CAF provided by the project and managed by the CAA. Proposals will be related to technology, infrastructure, marketing, processing and storage, information and capacity development.

Demand-driven extension services would be provided through funding being targeted towards industry-run organizations as well as other institutions or organizations that can show a demand for tailored training courses by smallholder groups. The objectives would be for these organizations to compete for grants to provide training courses to smallholder farmers and groups and their agribusiness counterparts.

Such institutions could provide short training courses (e.g. six weeks, if necessary spread over a six-month period to not unnecessarily disrupt activities in the field) to monitoring and/or extension staff in the employ of private sector companies, and to distributors/group leaders at the intermediary level in aspects of crop technology (to contribute to improved yields), extension methodology and basic book keeping skills. More than anything else, there should be a focus on increasing production through an increase of yields per area of production. To avoid any long-term dependency, such a training facility should be operated

[5] It is noted that the CAA is already in place in the form of the Horticulture Task Force, and could possibly accommodate the CAN.

on a matching grant basis, with both the individual participants and the private sector companies contributing initially e.g. 20 percent and 30 percent of the costs, respectively, to be increased gradually over a number of years, thus also reducing the risk of attracting less serious players. To complement the training at intermediary level, a Farmer Field School model would be particularly beneficial in the industries with large numbers of farmers.

The proposed intervention would also provide grants for industry specific research and development programs to develop appropriate technologies required for smallholder commercialization. An example of this would be research carried out on ways to reduce aflatoxin levels in paprika or stored grain, and the development of mechanisms or technologies for smallholder producers to reduce their aflatoxin levels. These could be organized through industry organizations, or through other research organizations. The competitive grant nature of the intervention would not restrict funding to any particular organization.

The rationale which defines the activity of the proposed private-sector based mechanism of a CAA, operating a CAF, is the weakness of public sector provision to meet the needs of commercial agriculture stakeholders.

Commercial agriculture actors often operate as ineffective agricultural value chains. Most farmers are not organized into entities larger than small groups (of 10-20 farmers); as a result, smallholder farmers, even though engaged in some form of commercial agriculture are unable to achieve the scale economies facilitating technology innovation, and improved access to markets, finance and information. Similar difficulty of organization exists for traders and processors. There is a paucity of service provision by the existing institutions to the main commercial actors. Only relatively weak service and trading linkages exist between these actors themselves.

The purpose of setting up the Alliance/CAF is to enable smallholder farmer, trader and processor members of CAA to secure effective, market-oriented services or investments of their own choosing. The chosen investments will help them to increase their income, profitability and productivity by strengthening their linkages with each other and with other private and public value chain stakeholders.

While strengthening the linkages among the key commercial actors, the Alliance will accelerate the movement from the current low level of agricultural commercialization to a higher level characterized by increased competitiveness and innovation. The success of the Alliance will be a major contributing factor in the growth of income and employment and in meeting the challenges and opportunities of increasing urbanization and integration with international markets.

The key outputs of the component would include the following:

1. Demand-driven investment related to infrastructure, technology, marketing and information, and capacity development. The critical criterion is not in the proposed intervention requiring technical services or investment, but in how that proposed intervention will strengthen value chain management and agribusiness linkages. The proposal should not be funded unless there is a clear link between the proposed investment and improvements in value chain management and agribusiness linkages.

2. Qualifying services or investment programs would not normally be financed by a bank, even to borrowers with substantial collateral, good credit ratings and proven commercial track records. These investments in services or infrastructure would either:
    a. Benefit more than one party by their direct implementation (including smallholder farmers); or
    b. Being risky and innovative in nature, will if successful, probably stimulate imitation by other parties, thus helping to move the commercialization of the agricultural sector upwards to a higher general level.
3. The institutional framework for this component envisages the creation of the Alliance as a legal entity under the Companies Act – a foundation with its governing Board of Directors and Articles of Associations. The Alliance will have a full-time paid Alliance Secretariat (hereinafter referred to simply as the Secretariat) consisting of a General Manager and a small number of skilled professional staff, plus a small additional number of supporting staff. The Secretariat will ensure that proposals by Alliance members are well formulated and programs are well executed. It will perform professional functions related to briefing the Board of Directors and operating the CAF as a co-financing mechanism. The Board will select the Secretariat staff from among candidates responding to public advertisement.
4. Several criteria for membership in the Alliance, management of the CAF, review and appraisal of proposals, monitoring and evaluation and auditing system, etc. have to be developed to provide effective governance and transparency of the Board.

To be eligible for membership in the alliance, the commercial organizations will have to be genuine commercial entities, and not created specifically for the purpose of accessing project funds. To this end, an indicative set of criteria could be that the commercial organizations:

1. Have engaged – with documentary and/or physical evidence to demonstrate such engagement – in for-profit operations within one or more qualifying agribusiness value chains for at least two years.
2. Be already constituted as a legal entity, or otherwise officially licensed or registered as a productive or trading party.
3. Organizations will have properly constituted articles of association, a constitution, and a board of management. Appropriate levels of transparency and governance shall be adhered to, including documentary and/or physical evidence; including minutes of meetings, regular elections, and statements of accounts.
4. Farmer groups should
    a. Have at least 100 current and active members, such membership to be demonstrated by reference to the cooperative's or group's current accounts, proceedings of meetings or activities, or other formal written records.
    b. Be able to demonstrate sales of agricultural products within qualifying agribusiness value chains of not less than US$10,000 in at least one of the two years immediately preceding their application for assistance.
5. Small and Medium Enterprises should:
    a. Have at least 20 full time equivalent employees, such employment to be demonstrated by reference to the enterprises' current accounts or other formal written records, or
    b. In the case of cooperatives or groups, have at least 100 current and active members, such membership to be demonstrated by reference to the

cooperative's or group's current accounts, proceedings of meetings or activities, or other formal written records.

c. Be able to demonstrate sales of agricultural products within qualifying agribusiness value chains of not less than US$10,000 in at least one of the two years immediately preceding their application for assistance.

6. Large Enterprises should:
    a. Have at least 100 full time equivalent employees, such employment to be demonstrated by reference to the enterprises' current accounts or other formal written records, or
    b. Be able to demonstrate sales of agricultural products within qualifying agribusiness value chains of not less than $500,000 in at least one of the two years immediately preceding their application for assistance.

The costs of each individual proposal will of course vary substantially, but an indicative set of costs for each beneficiary group (farmer groups, SMEs and large enterprises) are assumed at US$10,000, US$50,000 and US$100,000 each. These outlays are the cost to the project itself and under the matching grant system the total costs of each proposal could be double this (assuming 50 percent contribution from beneficiaries). Total Fund size would be around US$ 3 million, with a further US$ 100,000 for project management.

7.3 STRENGTHENING OF THE AGRICULTURE MARKET INFORMATION SERVICE

This component envisages the Strengthening of the existing Agriculture Market Information Service (AMIS) to provide a strongly needed service to stakeholders involved in commercial agriculture. This service will expand the AMIS role from just providing market information on prices to a limited audience, to include information specifically required by commercial agriculture and agribusiness on a much wider scale.

Under this component, it is proposed to develop a mechanism to improve access of farmers, traders, processors and service providers to information related to commercial agriculture in the region.

The rationale for this component is the dearth of relevant and organized agricultural market information in the region. Without such information decisions about production, marketing and investment are more difficult and it will be difficult to gain competitive advantage in international or regional markets.

The key outputs of the component would include the following:

1. User needs survey, including willingness to pay for various delivery mechanisms.
2. Radio broadcast of marketing information, database of price, trade and production data that can be accessed via Internet, and enhanced capacity to collect and interpret data.

Advanced analysis of market information and provision of market intelligence to commercialized stakeholders, as well as provision of information tailored towards the specific needs of traders, agribusiness enterprises and their smallholder counterparts are also considered important but it may only be feasible to include this type of outputs at some later stage, outside the scope of the investment strategy under consideration.

Indicative costs of this intervention would be around US$ 250,000, including costs of providing the AMIS with office operating costs, and staff training costs. AMIS staff would be drawn from relevant departments under MINAG, with staff salaries and overheads being paid out of the MINAG budget.

7.4 STRENGTHENING BDS FOR SMALLHOLDER COMMERCIALIZATION

There is a general lack of knowledge among small and medium scale agribusiness enterprises concerning supply chain management and good marketing practices. There are few business development services (BDS) available to small and medium agribusiness enterprises in the rural areas. Most of those that are available are provided by individual professionals, NGOs or donor projects.

The proposed intervention will utilize business development service (BDS) facilitators and providers to increase the capacity of smallholders to increase their level of commercialization. Business Development Services fall into four basic types of services:

1. Transportation/infrastructure;
2. Market/linkages (input, output);
3. Group formation/skills development; and
4. Finance.

In addition to the different types of services offered, BDS organizations themselves are made up of two types; facilitators and providers. Providers of BDS are those organizations which actually provide "physical" services such as finance, transportation and marketing outlets. Examples of these are the Distributors under Dunavant Cotton. Facilitators of BDS are usually NGO type of organizations which act as intermediaries between smallholders and their organizations and BDS providers, market intermediaries or agro-processors. These facilitating organizations usually provide training and skills development to smallholders and assist in the group formation process to create farmer groups and associations. In addition, they are likely to assist in obtaining finance from MFIs, financial institutions or BDS providers. Importantly, BDS facilitators should be seen as temporary institutions, that are dissolved (or move onto new clients), once their goals have been achieved.

The sustainability of BDS depends ultimately on adopting a market-oriented or "user pays" approach. Building a commercial BDS provider sector is extremely difficult, however, in a donor-dominated, subsidized BDS climate. The challenges include finding effective and workable means of gaining acceptance of BDS among rural enterprises; developing a system of market oriented BDS; and initiating a viable system for providing rural BDS facilitators in the interim period while a commercial BDS provider system is being developed.

In most cases, BDS providers are geared to urban enterprises. In rural areas, the availability of business services is limited to individuals or NGOs and private companies providing embedded services as part of their main activities (such as the Distributor Model of outgrower schemes). Rural enterprises or even enterprises in urban centers have hardly any access to BDS for agribusiness development.

When services are available, their quality is not necessarily high. A new small and medium entrepreneur wanting access to a BDS provider is often not aware of where to find the providers. If aware, the entrepreneur is left with few choices available, the quality of which

she or he does not have reliable information. Certification of BDS providers may not available.

The intervention is in development of corporate agribusiness service providers and is undertaken to improve the functions and management of agribusiness. This will be achieved by facilitating individual business service providers to set up corporate organizations so that they can provide technical services to agribusiness stakeholders on a fee-for-service basis.

The rationale of the intervention is the scarcity of sustainable corporate commercial business service providers who address the needs of agribusiness stakeholders. Individual stakeholders providing a variety of services are already operating on a commercial basis and include renting of equipment, spraying of chemicals for plant protection, laboratory testing (for disease), business development services (accounting, feasibility studies, and human resource development), management consulting, and market research for agribusiness enterprises. However, most of these services are provided on individual basis by professionals and technicians. With few exceptions, there are no corporate organizations with the mandated purpose of providing this type of services to agribusiness stakeholders.

This component also envisages the strengthening of Business Development Service facilitators for commercialized smallholders to keep the process of commercial agriculture continuously moving upwards, by facilitating the transformation of loosely-organized farmer groups already involved in low-level commercialization into better-organized and larger farmer groups operating at a higher-level of commercialization.

Under this component, it is proposed a mechanism to facilitate the transformation of farmer groups already involved in commercial agriculture into larger organizations at the higher level of commercialization needed to satisfy the criteria for membership of the CAA.

The rationale for this component is that farmer groups are often small in size, have difficulty in joining with other farmer groups to become larger organizations, and have limited access to markets, information, finance and technology. Some farmer groups have made the transition from subsistence to some form of low level commercialization, particularly in the case of high valued crops.

NGOs and government agencies have sometimes targeted farmer groups with a large proportion of women, poor and disadvantaged groups. In order for these targeted farmer groups already involved in commercialization to be able to meet the more demanding criteria of the CAA they will need to organize themselves into larger groups, such as cooperatives and producer associations. Farmer Field School experience in Integrated Pest Management is an important lesson for a modality of farmer-to-farmer effective extension and social mobilization.

The key intervention to be undertaken is the development of a demand-driven matching grant scheme to promote the development of corporate agribusiness service provider. The objectives of the proposed intervention with respect to smallholder capacity building are to increase smallholders' knowledge and skills in meeting the demands of a more commercialized marketing system by providing demand driven extension services, appropriate technologies, access to information, and credit and finance for farming operations.

The key outputs of the component would include the following:

1. The BDS facilitators will be expected to provide as outputs the following services:
    a. Group formation;
    b. Group governance skills;
    c. Farm planning skills;
    d. Market intelligence training; and
    e. Business skills and contract advice.

2. BDS facilitators will provide training on group formation, including training on group dynamics, conflict resolution, governance, accounting and general business skills. Awareness programs, women leadership programs and organizational skills to benefit targeted groups are part of the various proposed modules. Importantly, the BDS facilitators will work with smallholder farmer groups in farm and financial planning as well as providing training on the utilization of market information and market intelligence. It should be noted that market intelligence is much more than market information (which is generally restricted to information on prices and costs) and incorporates issues such as crop planning and marketing strategy based on the information. As an example, knowledge on prevailing prices is largely irrelevant for farmers of perishable crops who have to sell in a given week regardless of the price. Of more importance is being able to plan for next season's crop.

In addition to the above, BDS facilitators will provide training on business skills to smallholder farmers, including basic accounting and training on contracts. Understanding contractual obligations (for both parties) are important in enabling a higher level of commercialization.

The intervention will not only assist BDS facilitators but also BDS providers in increasing their capacity to link with smallholder farmers and agribusiness firms. Such BDS providers include specialist operations providing specific services (accounting, finance, machinery) as well as BDS providers under Outgrower schemes (for example in the sugar sector).

The intervention will assist individual service providers to specify and access demand-driven investments ('semi-public goods') of their own choosing, which will help them to develop into corporate agribusiness service providers by associating with other individual services providers and developing their own services.

The strengthening of selected business service providers involves the development and implementation of rules and regulations governing the operations of business service providers, and the introduction of improved governance for those business service providers. In conjunction with these activities, an extensive training and capacity development program is required to enable business service providers to organize their operations.

The activities that will be carried out will fall into four categories; matching grant scheme, training, investment, and technical assistance. The specific activities will depend on the actual proposals submitted.

The pool of qualifying agribusiness service provider organizations eligible for technical services and investment funding should be comprised of serious commercial actors, fully capable of contributing significantly to the long-term commercialization of the agribusiness sector through the further development of their own operations and of those other private

enterprises and key non-enterprise stakeholders with whom they already have, or will develop, linkages.

The costs of each individual proposal may of course vary, but an indicative set of costs for each agribusiness service provider is assumed at US$ 50,000. These outlays are the cost to the project itself and under the matching grant system the total costs of each proposal could be double this (assuming 50 percent contribution from each BDS). It is assumed that 3 BDS proposals are selected for funding over the life of the intervention.

In addition to funding the BDS facilitators and providers, funding for training courses and smallholder capacity building needs to be provided by the project. It is assumed that 200 training programs could be funded, each costing US$2,500, with around 50 smallholder farmers trained under each program. In total, some 10,000 smallholders could be trained.

The total cost for this component would be US$ 650,000.

7.5 INSTITUTIONAL CAPACITY DEVELOPMENT FOR COMMERCIAL AGRICULTURE

This component envisages the formation of the Institutional Capacity Development for Commercial Agriculture (ICDCA) component, which strengthens existing capacity and builds new capacity of Public Sector organizations to adequately understand and respond to the needs of commercial agriculture and commercialized smallholders.

Under this component, it is proposed a mechanism to conduct capacity building and strengthening of public sector institutions involved in providing services to commercial agriculture stakeholders.

The rationale for this component is the weak capacity of government agencies, and institutions to meet the needs of commercial stakeholders. There is a need for public sector service providers to build or strengthen capacity in different thematic areas such as value chain management, agricultural marketing extension, planning and managing market infrastructure, proposal and business plan preparation and entrepreneurship.

Awareness programs, women leadership programs and organizational skills to benefit targeted groups are part of the various proposed modules. However, this component argues that there is little point in building or strengthening capacity of individuals and institutions unless that increased capacity is actually put to use and is evaluated as useful by the very beneficiaries for which it was intended.

The key outputs of the component would include the following:

1. Training courses, action research projects and study tours; and
2. The institutional framework for this component envisages a component manager planning, supervising and monitoring the capacity development activities using contract-out services of experts in different thematic areas. Linkages with the agricultural education and training system, industry organizations, research institutes, universities and international organizations will be actively sought.

The cost of this intervention is estimated at around US$ 500,000. This includes the costs of a component manager in addition to training and study tour costs.

7.6 CREDIT GUARANTEE FACILITY

Commercial agriculture stakeholders (farmers, traders and processors) have limited access to finance which is often the result of prospective borrowers being perceived by banks as too risky. Risk is considered high because prospective borrowers might lack adequate collateral or because of inherent risks associated with commercial agriculture. Highly variable prices and production are among the main explanatory factors of the widely held perception of commercial agriculture as a high-risk venture.

Bank managers often regard prospective commercial agriculture clients as more risky than other types of clients. There are not many mechanisms to reduce risk related to commercial agriculture. Crop insurance, contract arrangements and credit insurance are either not available, or when available (for example contracts arrangements between producers and traders/processors) are not well functioning.

Finding ways to reduce risk and transaction costs associated to lending to commercial agriculture will contribute to expansion of credit available to commercial stakeholders. Commercial farmers (individual, groups and cooperatives) and small and medium agro-enterprises are often recognized as an engine of growth and sustainable development. Within the agricultural system, micro and small enterprises are of special importance because they are considered the cradle of entrepreneurship, particularly in environments facing high unemployment and poverty. In order to grow, agro-enterprises need capital. Banks however are concerned to minimize risk and so credit is usually only available when the necessary collateral is provided.

The proposed intervention facilitates access to finance; not through providing lines of credit itself, but facilitating access to existing credit available in the commercial banking sector, which is currently extremely reluctant to expand their portfolio into the agricultural sector, and lend to smallholders in particular. Merely channelling donor funds into lines of credit through the commercial banking sector will do little to reduce the levels of risk facing the smallholder sector.

Institutions in the financial and banking sector may be either unable or unwilling to meet the financing needs of agro-enterprises for a variety of reasons:

1. Limited experience in commercial agriculture and small business appraisal, and particularly, limited knowledge of agro-enterprises.
2. Limited experience in appraising and managing medium term loans.
3. Lack of an adequate system for monitoring the loan portfolio.
4. Limited means of valuing and, when necessary, seizing collateral.
5. Lack of track records of entrepreneurs and enterprises.

Conversely, borrowers face constraints related to:

1. Lack of assets or personal equity to use as loan security/collateral.
2. Lack of any track record or information.
3. Lack of management capability and lack of business planning skills.
4. Lack of trust so that the borrower is unwilling to share financial details with others.

The proposed intervention advocates the use of credit guarantee funds to lower the risk faced by the financial sector in their agricultural portfolios.

The credit guarantee scheme would provide capacity strengthening for bank staff in lending to commercial agriculture and a credit guarantee fund to reduce risks in lending to commercial agriculture stakeholders. These measures together would reduce both the risks and transactions costs that banks and other financial institutions (including microfinance institutions) face in lending to commercial agriculture stakeholders.

Credit guarantee schemes often exist to enable financial institutions to lend start-up capital to micro and small businesses that would not otherwise be able to obtain finance due to lack of collateral and/or absence of a track record. The envisaged credit guarantee scheme operates by a percentage of the loan being guaranteed by the government or an independent financial institution so that in the event of a default, the loss to the lender (bank) is only a proportion of the sum at risk. The borrower usually has to pay higher than normal interest charges, which include an additional insurance-type premium. This premium is paid to the government or independent financial institution to cover the expected losses. A risk shared is a risk reduced, and by sharing the risk, the credit guarantee scheme acts as a "catalyst" enabling the bank to build relationships with otherwise unknown and untried small business clients. The bank nevertheless maintains its integrity by deciding whether or not to lend, even at the reduced risk.

Experience of credit guarantee schemes in other countries indicates that there are difficulties in attaining sustainability especially for state-owned financial institutions which may be unable to resist political pressures that are brought to bear on them. There are also difficulties in demonstrating the extent to which credit guarantee schemes contribute to additional lending to the target beneficiaries (for example SME or commercial agriculture) without incurring adverse selection.

Best practice indicates that credit guarantee schemes should:

1. Strive to keep transactions costs as low as possible (i.e. keep time taken to approve loans to a minimum);
2. Strive for a leverage level of between 5 and 10 (i.e. guarantee volume of 5 to 10 times the loan amount;
3. Function in an environment of no more than 5 percent default rate;
4. Share the risk with lenders, which should assume at least 25 percent of the risk; and
5. Share knowledge with the lender.

Developing local and regional economies' linkages between farmers and growers, agro-enterprise and agro-enterprise associations is one effective way to reduce poverty. By expanding the credit that is provided to commercial agriculture stakeholders, the credit guarantee scheme creates the conditions for fledgling entrepreneurs (including farmers, farmer groups and farm cooperatives) to develop their capacity to manage resources efficiently.

The credit guarantee facility would have two components/outputs:

1. The first component is a straightforward credit guarantee facility operated through the commercial banking sector for small-scale entrepreneurs and medium scale agribusiness firms. Larger agribusiness enterprises have sufficient collateral and access to commercial lines of credit without requiring a credit guarantee facility.

2. The second component is a credit guarantee facility for smallholder farmers operating through BDS providers including BDS providers operating under outgrower schemes (such as the Distributor Model) as well as specialist finance schemes.

In the credit guarantee facility operated through the commercial banking sector there will be two types of cost:

1. The cost of capacity strengthening and related technical assistance and
2. The cost of the fund itself.

Capacity strengthening will involve both staff at the credit guarantee fund and at major commercial banks and financial institutions (including MFI) involved already or interested in being involved in commercial agriculture. About 10 staff will be trained at the credit guarantee fund and about 100 staff at other institutions. Total training and establishment costs are estimated at US$100,000.

Assuming a total loan amount to be guaranteed equal to US$ 1 million, a Credit Guarantee Fund of US$ 100,000 would be required. With a default rate of 4 percent, and coverage of 75 percent of the defaulted amount, in a typical year, the fund will require a liquidity of US$30,000 to compensate its clients. In addition to these compensations, the scheme will have to pay administrative costs (say 1 percent of its guaranteed loans) and will obtain additional income from interest on the fund and from refund of previously defaulted loans. In a bad year, defaulted loans might go up to 12 percent of the guaranteed portfolio, implying a cash outflow of US$ 90,000. It is estimated that a premium of at least 1.5 percent of the value of loan would make the credit guarantee fund sustainable.

In summary, total costs for the credit guarantee facility through the commercial banking sector would be in the order of US$ 200,000.

In the credit guarantee facility operated through the BDS providers again there will be two types of cost:

1. The cost of capacity strengthening and related technical assistance and
2. The cost of the fund itself.

Capacity strengthening will involve staff at the various BDS. The limited number of BDS operators suggests that only around 10 BDS staff will be trained, and that these staff can be trained along with the commercial banking staff above. Total training and establishment costs are estimated at US$ 10,000.

In terms of the cost of the fund and the modalities of operation, further investigation needs to be carried out as to the capabilities of the candidate BDS as well as their access to funds for bankrolling their credit operations. Assuming sufficient capital is available; a credit guarantee fund of US$ 100,000 securing capital of US$ 1 million seems to be feasible (following the same calculations as above).
In summary, total costs for the credit guarantee facility through BDS providers would be in the order of US$ 110,000.

Under the credit guarantee scheme there will be direct and indirect beneficiaries:

1. Direct beneficiaries will benefit through:
    a. The leveraging effect (credit obtained in comparison to the guarantee issued). Expanding access to credit by leveraging US$ 1 million through a credit

guarantee fund of US$ 100,000. This means that for one dollar staked in the credit guarantee fund, US$10 are actually invested in the local economy.

b. An additional number of commercial agriculture stakeholders accessing credit every year relative to the situation when no credit guarantees are in place.
c. Employment creation in commercial agriculture.
d. Additional investment in commercial agriculture (production, trading and processing) will result in increased output.

2. Indirect beneficiaries will benefit through:
    a. Agro-enterprises would generate a domestic demand for agricultural produce and impact on many farmers, traders and suppliers. Agro-enterprises would be linked to primary producers, collectors and/or traders.
    b. Knowledge and experience banks derive from participation in the credit guarantee scheme would tend to enhance their ability to profitably engage in non-guaranteed lending to agro-enterprise/SMEs.

7.7 INDICATIVE BUDGET FOR COMMERCIALIZATION INVESTMENT STRATEGY

The proposed strategy is comprised of three basic types of funding:

1. Direct Funding
    a. Commercial Agriculture Network
    b. Agricultural Marketing Information System
    c. Public Sector Institutional Capacity Building
2. Competitive Grants
    a. Industry-specific training courses
    b. Industry-specific research and development
    c. Industry-specific marketing and infrastructure development
    d. BDS facilitators and providers
3. Credit Guarantee Facilities
    a. Smallholder groups through BDS providers
    b. Small entrepreneurs

Costs for this strategy would be approximately US$ 5,566,000. An indicative budget is presented in Table 4.

Table 4: Indicative Budget for Commercialization Investment Strategy

Item	Budget Amount
1. Commercial Agricultural Network	$ 250,000
2. Commercial Agricultural Alliance/ Commercial Agricultural Fund	$ 3,100,000
3. Agricultural Market Information System	$ 250,000
4. Support to BDS Facilitators and Providers	$ 650,000
5. Institutional Capacity Building	$ 500,000
6. Credit Guarantee Fund	$ 310,000
Contingency (10 percent of Total Costs)	$ 506,000
Total Cost	$ 5,566,000

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ANNEX 1 TERMS OF REFERENCE

I. Background

The World Bank has been supporting the government of Mozambique in developing a strategy to promote horticultural exports. A Horticulture Sector Development Study has been carried out in 2005 with a special emphasis on the potential of the Maputo and Beira corridors[6]. This initial diagnosis focused on identifying the markets and products where the Mozambique has true comparative advantage. The study has also highlighted some of the constraints to reaching full potential – and also identified areas where further work and analysis is required before the national strategy can be developed. This study and further discussions with government and industry stakeholders has recommended that some additional research be carried out to better assess the potential of the local and regional markets for Mozambican producers, particularly for citrus, bananas, mangoes and a range of vegetables.

One of the potential crops that is being developed as an export crop is paprika. One company attempted to establish it as an outgrower crop for small-farmers in Nampula Province, but this was not successful[7]. More recently 2 companies have been established in Manica Province to promote the crop. These companies are concentrating their efforts on the larger commercial farmers. This has the advantage of building-up the critical mass, which is important to get the industry established. However, in the long-term, it may have a much greater rural impact as a small-farmer/outgrower crop. It is therefore proposed that an investigation be made of "outgrower best practices" in neighbouring African countries and to make recommendations to improve the supply of crops such as paprika.

Neighbouring countries such as Zambia have developed paprika as an outgrower crop for 10 to 15 years and therefore have considerable experience of developing best practices[8]. Also, the cotton companies have been particularly innovative in the dealings with outgrowers. The main problem that these cotton companies had to overcome was very low repayment of loans made in kind for inputs – the farmers were tempted to sell their output to other companies rather than repay debt. Therefore after a number of years of heavy losses, the biggest cotton producing company in Zambia, Lonrho[9] developed a new system for input distribution. To reduce costs and give a higher price to growers, it disbanded its extension system and appointed "local distributors" who will perform some of the functions of the extension

[6] Mozambique Horticulture Sector Study prepared for the ESSD, World Bank by Grahame Dixie, Bodil Bjerg and Andrew Sergeant (Ramboll/Accord), August 2005.

[7] It is reported that the problem was due to the late delivery of finance

[8] It is interesting to note that Zambia, being a land-locked country, is at a freight cost comparative disadvantage compared with Mozambique.

[9] At the time, it was called Lonrho but it has since been taken over by Dunavant.

workers[10], i.e. these agents became responsible for distribution of inputs on credit and the collection of cotton. Initially each agent looked after between 35 and 50 ha and is paid on the basis of loan recovery[11] and a commission for each kg of cotton produced by their group. The removal of extension from the package offered to smallholders reduced Lonrho's overhead considerably and most of the savings were be passed on the farmer in terms of higher prices – which resulted in 25 to 35 percent higher farm-gate prices. Loan recovery increased from around 65 percent to over 95 percent. It is therefore important to review the best practices associated with outgrower production of paprika and similar crops in countries that have been successful.

It is therefore proposed to a consultant to review best outgrower practices in Zambia and either Zimbabwe or Malawi, analyse existing contract farming experiences in Mozambique and make recommendations to how the findings can be adapted to the development of horticulture outgrower schemes in Mozambique.

II. Objectives

The objectives of this assignment are:

- To carry out a comprehensive review of the outgrower production systems in Zambia and another African country – concentrating on paprika, but also taking cognisance of the schemes and institutional arrangements made for other crops such as cotton.
- To make appropriate recommendations to improve the systems of outgrower production for horticultural export crops such as paprika, but also taking cognizance of how the recommendations could be adapted to other similar crops
- To provide recommendations as to how development finance can best be applied to support companies in establishing outgrower networks in their early years, i.e. when management and support levels need to be high but output is at its lowest.
- To design two pilot projects in line with the World Bank's "Learning and Innovation Loan" program. These pilots would be implemented in the Manica province and in southern Mozambique.

III. Detailed scope of work

The consultant will report to, and be directed by GPSCA and the Horticulture Task Force (HTF). The proposed research will use and build on, as much as possible, on already existing data and information, particularly the Study on Contract Farming and Supply Chain Financing in Mozambique by the World Bank (Report No. 33406, July 2005) and the Synthesis Study on Options for Smallholder Commercialization in Zambia, Agro-business Development A/S, August 2005.

The tasks will include the following:

[10] These local distributors will have previously either been emergent farmers supplying Lonrho for at least 2 years and with a 100 percent loan repayment record or ex- Lonrho employees. They must be able to give at least four cattle as collateral – or some other goods to an equivalent value.

[11] In the first year of operation (the 1999/2000 season), if the agent achieved a credit recovery rate higher than Lonrho normally attained (i.e. about 65 percent), they were given a bonus.

- Collect and review existing studies and information on the local and regional markets.
- Interview the main companies involved with outgrower production of paprika and cotton in Zambia and another country to be agreed between the consultant and GPSCA to evaluate their key success factors.
- Read relevant reports about best practice for outgrower production, e.g. World Bank's study on contracts and supply chains, its proposed rural development strategy and other work carried out by NRI and TechnoServe.
- Interview the main paprika and cotton companies operating in Zambia and discuss the results of the Zambian survey.
- Hold discussions with relevant projects and financial institutions as to the support mechanisms applied, their success and otherwise.
- Develop a manual of best practices that could be adapted and improved for paprika and other horticultural crops grown by outgrowers in Mozambique[12].
- Make any other recommendations to improve outgrower systems,
- Design two pilot projects in line with the World Bank's "Learning and Innovation Loan" program (LIL). These pilots are to be implemented in the Manica province and in southern Mozambique.

IV. Implementation

The assignment will be entrusted to a consulting firm with considerable experience of promoting, designing, managing and/or evaluating outgrower production in Southern Africa. The consultant's team leader should have:

- At least 10 years proven operational experience in international agribusiness, rural development and agro-industry, and
- A degree in marketing, economics or agriculture.

It is estimated that the assignment will be completed within 6 weeks, i.e. 4 weeks in-country and a further two weeks for analysing the data and writing the report.

GPSCA and the HTF will make available all existing documents and information on the research topics.

V. Output and timetable

After completing his research work and field visits, the consultant is expected to submit the following outputs:

- A detailed draft report including findings and recommendations: 90 days after contract signature
- Presentation to be made shortly after to the World Bank and GSPCA/HTF
- A full final report: 30 days after presentation and taking into account comments made by both the HTF and the World Bank

[12] It is not the intention to develop recommendations for cotton – they are interviewed to help understand the issues and problems associated with outgrower systems.

ANNEX 2 ITINERARY AND PEOPLE CONTACTED

Date	Time	Institution/*Activity*	Key Informant	Designation	Contact Details
Tuesday 07/03/06		*Travel to Mozambique*	*Departure Lusaka 14.30 hrs; Arrival Maputo 19.25 hrs*		
Wednesday 08/03/06	08.00-13.00	*Background reading*			
	14.00-16.30	**1. Office for the Promotion of Commercial Agriculture (GPSCA)**	Jorge Tinga	Economist	+ 258 21 307957 + 258 82 3253570 jorge.tinga@gpsca.gov.mz
			Rogerio P. Ossemane	Economist	+ 258 21 307957 + 258 82 3253570 rogerio.ossemane@gpscaina.gov.mz
			Juliana Rwelamira	Practice Area Manager (Agribusiness & Rural Developement) ECI Africa	+ 27 11 6021217 + 27 82 6597272 juliana.rwelamira@eciafrica.com
Thursday 09/03/06	08.00-13.00	*Report writing*	*Abbreviations, Table of Contents, Background, Scope of Study, Acknowledgements, Itinerary*		
	14.00-15.00	**2. Citrinos de Umbeluzi (CITRUM)**	Paulo Guilheme Negrao	Financial Administrator	+ 258 1 775002 + 258 82 3175550 adm@citrum.co.zm
	15.00-16.30	*Interview notes*	*Interview notes meetings 1 and 2*		
	17.00-19.00	*Planning meeting GPSCA*	*Jorge Tinga, Rogerio Ossemane, Rudy van Gent: appointments with key informants to be made; mission planning*		
Friday 10/03/06	08.00-09.30	**3. TechnoServe**	Juma H. Juma	Timber Adviser	+ 258 1 419923 + 258 82 459749 jumatns@yahoo.com
	09.45-10.30	*Interview notes*	*Interview notes meeting 3*		
	11.00-12.00	**4. USAID**	Andrew Levin	Agriculture Development Officer	+ 258 21 352054 + 258 82 3161770 alevin@usaid.gov

	12.15-12.45	*Interview notes*	*Interview notes meeting 4*		
Friday 10/03/06 (continued)	14.00-14.45	**5. Ministry of Industry and Trade**	Frans van de Ven	Chief Technical Adviser FAO Marketing Management Assistance Project	+ 258 1 494527/498796 + 258 82 3222080 vandeven@tvcabo.co.mz
	16.30-18.00	**6. Fion de Vletter**	Fion de Vletter	Independent Consultant – Microfinance	+ 258 21 450308 fion@tvcabo.co.mz
Saturday 11/03/06	06.30-08.15	*Travel* *Non-working day*	*Departure Maputo 06.30 hrs; Arrival Chimoio 08.15 hrs.*		
Sunday 12/03/06	11.00-14.00 16.00-19.00 22.00-23.00	*Interview notes and updates*	*Outgrower questionnaire; Company questionnaire; Interview notes meetings 5 and 6; References; Update itinerary*		
Monday 13/03/06	08.30-10.00	**7. TechnoServe**	Jose Helder Soares	Horticulture Adviser	+ 258 21 326171/3 + 258 82 4193310 jhsoares@tvcabo.co.mz
	11.30-12.15	**8. ACDI-VOCA**	Thomas Robert Gardiner	Beira Corridor Manager	+ 258 251 23993 + 258 82 5558010 acdivocamoz@teledata.mz
	12.30-13.30	**9. ADIPSA**	Henrique J.F. Bettencourt	ADIPSA Representative Manica	+ 258 82 5099040 hbettencourt@adipsamanica.org hbettencourt@teledata.mz
	14.45-16.00	**10. GAPI**	Francisco Lino Junior	Branch Manager	+258 251 22722 +258 82 5098370 lino.junior@gapi.co.mz gapi.chimoio@teledata.mz
	21.00-22.15	*Interview notes*	*Interview notes meeting 7*		
Tuesday 14/03/06	10.00-12.00	**11. Potato Producers Association of Manica (CABAM)**	Joao Bettencourt		+ 258 82 5012670 abettencourt@teledata.mz

	12.15-13.30	**12. Provincial Directorate of Manica (DPM)**	Joaquim S.R.O. Langa	Provincial Director	+ 258 251 22191 + 258 82 3189840 Jlanga@chimoio.mocambique.net joaquim.langa@excite.com
Tuesday 14/03/06 (continued)	13.45-15.00	**13. RDI Limitada (Research, Development, Implementation)**	Monty Hunter	Managing Director	+ 258 82 5095480 rdi.monty@gmail.com
		Optima Industrial Lda.	Pine Pienaar		+ 258 251 23447 + 258 82 314 9230 pine@teledata.mz
	15.15-16.15	**14. Agency for Economic Development in Manica (ADEM)**	Manuel Queiroz dos Santos Junior	Executive Director	+ 258 251 22414 + 258 82 5841160 msjqueiroz@hotmail.com adem.chimoio@teledata.mz
			Antonio Zaqueu	Head Technical Department	+ 258 251 22414 + 258 82 5986140 aczaquey@yahoo.com adem.chimoio@teledata.mz
	18.15-19.30	**15. Provincial Directorate of Manica (DPM)**	Ana Armando Chapo	Head Rural Extension Department	+ 258 82 8675400 anaachapo3@yahoo.com
Wednesday 15/03/06	08.30-10.30	**16. Pimentas de Mozambique**	Piet Nel	Managing Director	+ 258 82 5099060 pimenta@teledata.mz
	13.45-15.15	**17. Associacao Herois Mozambicanos**	Ofelio F. Chuva	Coordinator ACDI-VOCA Business Dev. Centre	+ 258 82 2514330 ofchuva@yahoo.com
			Alberto Zeca	Association Chairman	
	15.30-19.00	*Interview notes*	*Interview notes meetings 8, 9 and 10*		
Thursday 16/03/06	09.00-15.00	**18. ADAMA**	*Field visit to litchi producing areas near Manica town (semi-commercial farmers)*		
	15.30-18.00	*General meeting*	*Meeting with a group of mostly ex-Zimbabwe commercial farmers*		
	19.00-22.00	*Interview notes*	*Interview notes meetings 11, 12 and 13; Up-date itinerary*		

Friday 17/03/06	08.00-10.30	*Interview notes*	*Interview notes meetings 14 and 15*		
	11.45-13.00	**19. Vanduzi**	Chris Servontein	Chief Executive Officer	+258 251 22754 +258 82 3003001 chris@vanduzi.com
			Anthonie du Toit	Production Manager	
Friday 17/03/06 (continued)	14.30-18.00	*Interview notes*	*Interview notes meetings 16, 17, 18 and 19*		
	20.00-22.00	*Updates*	*Update list of references; Update itinerary*		
Saturday 18/03/06		*Non-working day; Travel to Joburg*	*Departure Chimoio 07.30 hrs; Arrival Maputo 11.00 hrs; Departure Maputo 16.30 hrs; Arrival Johannesburg 17.30 hrs*		
Sunday 19/03/06		*Non-working day; Travel to Lusaka*	*Departure Johannesburg 10.30 hrs; Arrival Lusaka 12.10 hrs*		
Monday 20/03/06	08.00-12.00	*Administrative issues*	*Contract ECI Africa; Invoice Mozambique*		
	13.00-17.30 & 19.00-20.00	**20. Tombwe Processing Ltd.**	*Review interview notes 2005*		
		21. Continental Ginnery Ltd.	*Review interview notes 2005*		
		22. Biopest	*Review interview notes 2005*		
		23. Enviro Oil & Colorants Ltd.	*Review interview notes 2005*		
Tuesday 21/03/06	08.00-12.00	*Literature search*	*Internet*		
	13.00-18.00	*Literature search*	*Internet*		
Wednesday 22/03/06	09.00-12.00	**24. Dunavant Cotton**	Patrick Nyumbu	Dunavant Projects Manager	+ 260 97 822506 nyumbupat@yahoo.com
		25. Lusaka Agricultural Marketing Company	Patrick Nyumbu	Managing Director	+ 260 97 822506 nyumbupat@yahoo.com
	13.00-16.00	**26. Cheetah Zambia Ltd.**	Mark Terken	Managing Director	+ 260 97 771188 mark@cheetah.co.zm

	19.00-22.00	*Interview notes*	*Interview notes meetings 24 and 25*		
Thursday 23/03/06	09.00-10.00	**27. Central Growers Association**	Robinson Manese	Chairman	+ 260 97 805112
			Perrywick Mungabo	Extension Officer	+ 260 97 780758
	11.00-13.00	*Interview notes*	*Interview notes meeting 27; Update itinerary*		
Friday 24/03/06	09.00-13.00	*Review literature*			
	14.00-18.00				
Saturday 25/03/06		*Non-working day*			
Sunday 26/03/06		*Non-working day*			
Monday 27/03/06		*Non-working day; Travel to Lilongwe*	*Departure Lusaka 13.00 hrs; Arrival Lilongwe 18.15 hrs*		
Tuesday 28/03/06	08.30-11.30	**28. Cheetah Malawi Ltd.**	Sander Donker	Managing Director	+ 265 1 761073 + 265 9 822250 sanderdonker@cheetah.malawi.net
	12.00-13.00	**29. Demera Paprika Association (Kabudula area)**	S. Mkwanila	Farmer (and Treasurer)	
	13.00-14.00	**30. Cheetah Malawi Ltd.**	McDonald Makala	Cheetah Extension Officer	+ 265 9 263262
	15.00-17.00	**31. Chiluzi Paprika Association (Dedza area)**	McDonald Makala	Cheetah Extension Officer	+ 265 9 263262
			Laban A. Chafulatira	Cheetah Field Assistant	+ 265 9 455798
			13 Farmers		
	19.00-23.00	*Interview notes*	*Interview notes meetings 27and 28*		
Wednesday 29/03/06	07.00-18.00	*Field Trip*	*Tete Province, Mozambique*		
	10.00-12.00	**32. Cheetah Mozambique Ltd.**	Mikael Dupuis	Manager	+ 258 82 5155950 cheetahmoz@mw.celtelplus.com
		33. Sunsmile Mozambique Ltd.	Goswin Arendsen de Wolff	Director	+ 258 82 5092520 sunsmile@teledata.mz

	14.00-15.00	**34. Mozambique Leaf Tobacco Ltd.**	David Raul Taipa Magish	Assistant Area Manager – Angonia	+ 258 82 4809840 fly@portugalmail.pt
Thursday 30/03/06	08.30-13.00	*Interview notes*	*Interview notes meetings 29, 30, 31, 32 and 33*		
	14.30-15.30	**35. Farmers Union of Malawi**	Benito Eliasi	Executive Director	+ 265 8 392928 beliasi@farmersunion.mw
	16.00-17.00		Mellissa Field	Institutional Capacity Building Officer	+ 265 1 776167 mfield@farmersunion.mw
	19.00-21.00	*Interview notes*	*Interview notes meeting 34 and 35*		
Friday 31/03/06	08.00-08.30	**36. Ministry of Finance - NAO Support Unit**	Peter K. Simbani	Deputy Director – Head NAO Support Unit	+ 265 1 774 061 + 265 8 339860 naosupport@globemw.net
	08.45-10.15	**37. Ministry of Agriculture and Irrigation**	McDonald H.L. Sande	Deputy Director – Horticulture	+ 265 1 789547 + 265 8 894085 crop-dept@malawi.gov.mw
	10.30-11.30	**38. Tobacco Association of Malawi (TAMA)**	Christopher L. Beya	Deputy Executive Secretary	+ 265 1 773099/276 + 265 9 932534 chris_beya@tamalawi.com
	13.15-14.00	**39. Ministry of Agriculture and Irrigation**	Harris H.S. Chanza	Deputy Director – Department of Agricultural Investment Programs	+ 265 (0) 1 774993 + 265 (0) 9 284043
	15.00-17.00	*Interview notes*	*Interview notes meeting 35*		
Saturday 01/04/06	09.00-10.45	*Interview notes*	*Interview notes meetings 36 and 37*		
	11.00-12.30	**Cheetah Malawi Ltd. – Follow-up meeting**	Sander Donker	Managing Director	+ 265 1 761073 + 265 9 822250 sanderdonker@cheetah.malawi.net
	14.00-17.00	*Interview notes*	*Interview notes meetings 38 and 39*		
Sunday 02/04/06		*Non-working day; Travel to Lusaka*	***Departure Lilongwe 07.00 hrs; Arrival Lusaka 10.00 hrs***		

Monday 03/04/06 to Friday 07/04/06		***Report writing***			
Saturday 08/04/06		***Non-working day***			
Sunday 09/04/06		***Non-working day***			
Monday 10/04/06 to Thursday 13/04/06		***Report writing***			
Friday 14/04/06 to Monday 17/04/06		*Non-working days (Easter)*			
Tuesday 18/04/06		*Non-working day; Travel to Maputo*	*Departure Lusaka 08.00 hrs; arrival Maputo 16.00 hrs*		
Wednesday 19/04/06	09.00-10.30	**CITRUM – Follow-up meeting**	Paulo Guilherme Negrao	Financial Administrator	+ 258 1 775002 + 258 82 3175550 adm@citrum.co.zm
	10.45-13.45	*Report writing*			
	14.00-14.45	**40. Libombos Macadamia Ltd**	Antonio Gomes	Director	+ 258 82 3230190 sapel@tropical-web.com
	15.00-18.00	*Report writing*			
Thursday 20/04/06	07.00-13.30	*Preparation of presentation*			
	14.00-16.00	*Presentation*			
	19.00-22.00	*Report writing*			
Friday 21/04/06	08.00-13.00	*Report writing*			
	14.00-19.00	*Report writing*			

Saturday 22/04/06		*Non-working day; Travel to Lusaka*	*Departure Maputo 07.00 hrs; Arrival Lusaka 14.00 hrs*		
Sunday 23/04/06		*Non-working day*			
Monday 24/04/06	14.00-18.00 19.00-01.00	*Report writing*	*Corrections to draft report, Sections 1-5*		
Tuesday 25/04/06	08.00-13.00 13.30-17.00 18.30-23.00	*Report writing*	*Final sections*		

ANNEX 3 OUTGROWER QUESTIONNAIRE

This is not a straight questionnaire. It was to act as guideline questions and areas of interest to add direction to informal interviews; extra information was to be acquired wherever possible during visits and conversations.

A: General Information

1. Location
2. Name of outgrower scheme:
3. Name of company/organisation linked to
4. Distance from scheme to processor
5. Main Crop

B: Group information

6. Name of farmer group/association/intermediary organisation:
7. Name of interviewee
8. Position/role of interviewee
9. Land tenure of member farmers
10. Type of organisation: farmer association/cooperative/trust/other/-------
11. Formally registered: Yes/No
12. Date formed
13. Reason for formation
14. Management formation
15. Number of farmers represented
16. Farm size, number of farmers per farm size ha 0-1, 1-5,5-10, 10-50, 50+
17. Area covered by members - ha
18. Membership process
19. Fee structure
20. Description of network:
21. Services provided
    a. Input sales
    b. Input delivery
    c. Training
    d. Credit provision
    e. Credit recovery
    f. Transport
    g. Logistics
    h. Other
22. Other farming activities/crops of members
23. Food crops
    a. Area allocated
    b. Support provided
    c. Labour provided percent
24. Cash crops
    a. Area allocated
    b. Support provided
    c. Labour provided percent
25. Intermediary – type of intermediary org, terms, understanding, length of support

C: Marketing/supply arrangement

26. Contractual arrangement - Formal / informal
27. If informal – do farmers require/want formal contract
28. Written/verbal
29. Designed by whom
30. Option to negotiate – choose terms
31. Structure of contract:
32. Price setting
    a. Pre-set – by whom
    b. Fluctuating
    c. Retrospective payment
    d. Market related - Quality related
33. Independent quality control
34. Delivery terms
    a. Delivery distances accepted
    b. Fixed quotas
    c. Specified times
    d. Lifespan of harvested crop
35. Transport
    a. Who transports
    b. Who pays
    c. Price formulation/negotiation
36. Control of delivery/weighing/administration
    a. Location of weighing service
    b. Mechanized weighing process
    c. External control
37. Payment terms
    a. Method of payment
    b. When
    c. Payment made to individual farmers directly or through association/intermediary
38. Quality
    a. Grades
    b. Methods of assessment
    c. Verification
39. Incentives
    a. Field operations
    b. Production volume
    c. Production quality
    d. Timely delivery
40. Enforcement
    a. How are terms of contract enforced by both parties
    b. Has it happened that one party has failed its terms
41. Length of contract: seasonal, annual on-going
42. Arbitration
43. Contracted with whom:
    a. Association
    b. Intermediary
    c. Individual farmer
    d. Other

44. Contract to company/ intermediary
45. Inspection /monitoring terms
46. Traceability – from farmer/field etc
47. Other services incorporated into contract

D: Input provision

48. Who provides inputs? Company/Association/ intermediary / supplier/other
49. What inputs are provided: seeds / fertilizer / herbicides / pesticides/ application equipment – timing/amount
50. Who are inputs provided to?
51. Delivery of inputs?
    a. Payment for delivery? Who pays
52. Price negotiation for inputs, with whom?- discount, compared to street prices
53. Payment terms
54. Method of recovery
55. If direct input provision is not available, are inputs applied?
56. How are they procured?
57. Is credit available
    a. Who is the loan provider
    b. Terms of loan – length/interest rates/fees/installments
    c. Do credit agents want to see formal supply contracts – as collateral?
    d.

E: Extension

58. Extension services received – YES / NO
59. Extension services provided by whom
60. Visits per season by extension official
61. Training received – formal – classroom / in field
62. Cost of service
63. Level of extension – crop specific?
64. Quality of extension
65. Experience/professionalism of extension provider –
66. Field inspections
67. Monitoring of extension services
68. Monitoring of farmer activities / results

F: Market

69. Alternative markets for crop
70. Advantages/disadvantages of alternative markets
71. Which marketing channels

G: Logistics

72. Post harvest storage facilities
73. On farm processing activities
74. Bulking points
75. Input from company for construction/assistance?

H: Finance

76. Cost of production – breakdown of service costs, labour costs, input costs etc
    a. Variable costs

b. Fixed costs
c. Levies/fees/taxes
d. Breakeven point – yield/quality

77. Investment costs – how much - input from company?
    a. Length of time to recover investment

I: External support

78. Is there any current or historical Donor/Government/NGO assistance or interventions?
79. In what format / terms?
80. Other social support from external parties?

J: Information flow / communication

81. How often do the farmers/associations meet with the company?
82. Do the farmers/associations inform the company of important issues?
83. Can the farmers/association easily contact the company/request meetings?
84. Are the farmers/associations kept informed about issues from company?

K: Development & constraints

85. Progression/development of farmers through land acquisition/development?
86. Opportunity for development, company expansion – are they being encouraged to develop?
87. Risks to crops/arrangement
88. Constraints to development

ANNEX 4 COMPANY QUESTIONNAIRE

1. Overview of the company
    a. Background
    b. Aims and goals
    c. Stakeholders
    d. Potential future developments/opportunities
2. Overview of the industry; worldwide and domestic
    a. Future developments/opportunities
    b. Future threats
3. Reasons/motivations for using outgrowers
4. Description of current Outgrower Model
    a. Outgrower network/Choice of participants
    b. Origin of model
    c. Successes/constraints of model
    d. Opportunities for expansion
5. Cost of running the outgrower model, e.g.
    a. Extension services
    b. Input provision
    c. Quality control
6. Production cost analysis of:
    a. Smallholder crop production
    b. Commercial farm crop production
    c. Company estate crop production
7. Cost of crop procurement analysis of:
    a. Smallholder crop production
    b. Commercial farm crop production
    c. Company estate crop production
8. Benefits of procuring from:
    a. Smallholder crop production
    b. Commercial farm crop production
    c. Company estate crop production
9. Constraints of procuring from:
    a. Smallholder crop production
    b. Commercial farm crop production
    c. Company estate crop production
10. What value adding facilities or potential activities do you operate in country?
11. What Government policies affect your development and/or the further development of outgrower schemes?
12. Recommendations for interventions to support expansion of Outgrower scheme.

ANNEX 5 COMMENTS TO THE DRAFT REPORT AND CONSULTANT'S RESPONSES

Minor corrections have been incorporated directly into the text of the report, the remaining comments are dealt with separately in the following section.

3.1.1 Cotton
The average area cultivated by smallholder cotton producers is below 1 ha, and they receive, on average, no more than US$ 10.00/producer as input credit for cotton.

What land size is cost effective?

This is an entirely different question, which can not be answered within the scope of the current study.

3.1.3 Regulatory System for Cotton and Tobacco

Monopsonies, if not properly managed and enforced, permit firms to capture rents easier. Whereas companies can operate with lower risks and no explicit competition within their concessions, they do not seem to pass the benefits of their favorable market position to smallholder farmers.

What can be done about this?

Better monitoring by the government.

3.2.4 Paprika – Pimentas de Mozambique, Chimoio, Manica Province
Most commercial paprika production is done by ex-Zimbabwean farmers.

What is the status of Zimbabwean farmers given the Technoserve and World Bank reports? What is being done to improve the status of agriculture in the area?

Having met with a gathering of ex-Zimbabwean farmers it transpired that many are facing difficulties in continuing their operations for a variety of reasons, including low international prices for their produce, but also the regulatory environment. Little or nothing appears to be done to assist the farmers.

3.4.4 ADIPSA
Compania Agricola de Chimoio (CAC) – Birds Eye Chillies
CAC was assisted by ADIPSA with salaries for one manager and one supervisor, as well as transport. The outgrower scheme involved only 20 farmers, of which only a few managed to produce any BEC because of lack of irrigation. Also, the seed provided to the farmers was of poor quality, with many off-types. Commitment by the company was low. Support to CAC has been stopped.

It should have been realised right from the start that the project was not viable if they were growing without irrigation and that the inputs that were being supplied were of poor quality. Actions like these from the companies make the farmers lose hope in contract farming as usually there is no compensation on the opportunity forgone.

There is always a need to have a close look at the track record of companies that are being considered for support.

3.5 Constraints to the Development of Outgrower Schemes

- The smallholder sector attracts much attention from the many NGOs, at the expense of the emerging group of semi-commercial Mozambican entrepreneurs, who could create a better continuum. Larger companies have access to international financing or to the commercial financial sector (the latter with limitations), but there is nothing in place for the semi-commercial entrepreneurs;

Contract farming should have a mix of farmers, that is, commercial, semi-commercial and small scale farmers. The idea is that there should be more small scale farmers based on poverty reduction. The ideal situation is where the majority of the small scale farmers graduate into semi-commercial farmers and the semi-commercial into commercial farmers. The commercial and semi-commercial farmers serve as more stable investment for the contracting companies and also as examples to the small scale farmers that the crop being grown can improve their livelihoods.

This observation confirms that the focus of support should not necessarily be on smallholder farmers only.

4.1.3.4 Input provision (service models), costs and payment modalities

Table 1 Cheetah Zambia Ltd. cost of production and margins for 1 ha paprika

Can companies involved in contract farming in Mozambique provide such a similar financial analysis of their activities?

This would indeed be very useful.

4.1.4.5 Extension services and costs

Cheetah Zambia employs its own extension staff, as was customary for other companies in Zambia, despite the high costs involved. Cheetah Zambia employs 7 extension officers, with support of 5 local Field Assistants in the more important production areas. Government extension officers are viewed as ineffective and not having the specialized knowledge needed to provide support to the farmers in paprika production.

This is also a problem in Mozambique (especially for horticultural crops), what is being done about this?

That this is a problem in Mozambique also is mentioned in the report. Nothing or very little is done about it. In the recommendations it is suggested to address this issue.

4.1.4.7 Purchase prices and payment modalities

Cheetah Zambia determines the equivalent local currency prices at the beginning of the marketing season. Because of the possible detrimental impact of government interventions, notably significant re-valuations of the local currency against the dollar shortly before the start of the marketing season, the company has been prompted to wait as long as possible with announcing the farm-gate prices, to not unexpectedly be facing much higher equivalent US$ prices.

Is this a problem in Mozambique? If yes how is it being solved?

This particular problem has not been mentioned by any of the companies in Mozambique. However, in general terms, the need for macro-economic stability has been emphasized.

4.3.2.7 Purchase prices and payment modalities

At the previous exchange rate of US$ 1 = ZKW 4,800 production cost was equivalent to US$ 1,000/ha, leaving a net profit of approximately US$ 587/ha. However, at the current exchange rate of US$ 1 = ZKW 3,200 the production cost is equivalent to US$ 1,500/ha, leaving virtually no profit.

What is the best way to deal with negative exchange rate fluctuations?

There should not be negative exchange rate fluctuations of a magnitude as indicated here. It is the responsibility of the government to provide macro-economic stability.

5.1.1 Viability of Smallholder Outgrowers

Efforts by Cheetah to make inputs for the new season available at the time when farmers are selling their paprika crop, and encourage farmers to use some of the proceeds from the sales for securing the inputs (in particular seed and chemicals) for the following season, have met with limited but increasing success.

Has this been tried in Mozambique and if so what has been the success of this method of input supply?

As indicated, the approach is met with increasing success in Zambia. Cheetah Malawi has recently also introduced a system of vouchers for seed and chemical inputs for the new season on a trial basis. The value of the input vouchers is deducted from the payments for the paprika crop. This has been well received by many farmers. Cheetah Mozambique is intending to introduce this approach also. There are no known examples of other companies taking similar approaches. In the end it is the choice of the farmers whether they wish to secure their inputs for the following season in this manner, or receive payment in full.

Probably the biggest challenge facing any outgrower promoter (not only for paprika, but also for other crops such as cotton, vegetables, tobacco) is a change in attitude among the smallholder farming community (as well as the donor community!) to view farming as a business activity, and not as a philanthropic activity, which is perpetuating a culture of dependency on hand-outs and a poor probability of sustainability in the future.

What is being done to educate farmers for them to reduce defaulting and to reduce their dependency syndrome and to make them operate as business minded people?

Unfortunately many governments, donors and NGOs do very little to change this. This is an issue that is being emphasized over and again throughout the report.

5.1.3 Constraints to Production Volumes

Smallholder paprika production is limited in volume, while yields of individual farmers are well below potential. Smallholder paprika production is largely rain fed which carries an

inherent risk that production is suffering from unfavorable or adverse weather conditions, as shown in recent years.

Given that 'unfavorable or adverse weather conditions' are now occasional there is need for a joint effort (PPPs) to set up irrigation schemes which can ameliorate the farmer problems in drought periods.

Irrigation facilities could indeed ameliorate some of the problems, but may not be feasible everywhere. There is never a single, simple solution.

5.2.1 Viability of Smallholder Outgrowers

At farm level, increased yields and returns on investment is the only way that smallholder farmers are going to achieve long term stability and profitability. The current cotton yield produced by smallholder farmers in Zambia of around 500 kg/ha will not cover the increasing costs of inputs and reduction in prices, rendering many smallholder operations unprofitable.

As part of farmer education there is need to show them that the quality as well as quantity of their produce has a direct relationship with the profitability of their enterprises and the long term sustainability of contract farming.

This is very true, and as indicated in the report there is an important role to play here for NGO type of organizations.

5.2.2 Crop Quality Constraints

The quality of the seed cotton delivered to the ginneries depends mainly on careful harvesting to ensure the reduction of excess moisture, trash and other contaminants which are difficult to remove during the ginning process and may damage the spinning quality of the fibre. The cotton produced in Zambia is all hand-picked, which increases the quality of the cotton and is proven to be the most efficient method of harvest.

More needs to be done in terms of improving the quality of inputs, production and post-harvest handling techniques.

Yes indeed.

5.2.4 Viability of Extension and Marketing Arrangements

The controlling element by the companies in the cotton industry is proving to be viable in the present environment, and the financial burden on the companies to pre-finance the inputs, although heavy, is crucial to the sustainability of their industry in the current climate. The lack of commercial capacity and informality of the grower groups constrains their ability to procure inputs independently. Increased self-sufficiency of smallholder farmers may however not necessarily be in the direct interest of the companies as it would remove their claim on the cotton produced, and thus their ability to plan their business and negotiate forward contracts.

What is the implication of this for Mozambican farmers and companies involved in contract farming?

The issue here is that the problems of side-selling and defaulting on contracts need to be addressed. This requires education of farmers, but may also include developing mechanisms

to reduce side-buying. Without side-buying there is no side-selling. Side-buying is done by much fewer individuals, and addressing the issue if side-buying, thus reducing the opportunities for side-selling, may be much easier.

5.3 Export Vegetables

The export vegetable sector works with a limited number of farmers who are not necessarily representative for the smallholder farming sector. Most of the export vegetable farmers are individuals retired early from government service or the private sector, and much better educated than the average smallholder farmer. Not surprisingly, the majority of farmers interviewed showed to be much more business minded, are capable of planning of activities and budgeting for the crop requirements, and have a clear sense of their obligations under contractual agreements with other parties.

Not necessarily the case in Mozambique. There is still a lot that needs to be done for the farmers to be more business minded in their approach to their business approach. There is also need to incorporate agriculture in the schools from the lower levels given its importance in the economy of the country.

Indeed, more needs to be done to educate farmers in seeing farming as a business activity. This is an issue that is being emphasized in various parts of the report.