



Out-grower System through contract farming

Zambia

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August 2006

Report nr: 2007- 04

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Preface

A prominent positive result of commercialisation in small-scale agriculture is the engagement of agro-industrial firms as partners in production and marketing. Out-grower systems have been in existence for many years as a means of organizing the commercial production of both large-scale and small-scale farmers. The interest in out-grower systems continues to expand, particularly in countries that previously followed a central planning policy and in those countries that have liberalized marketing through the closing down of marketing boards. Small-scale farmers have become vulnerable to ‘middlemen’ who have replaced marketing boards and who over time could manipulate market access, if left unregulated.

The purpose of this document is to provide advice: first to the management of companies using existing out-grower systems on how to improve their operations; second to companies that are considering starting such ventures on the preconditions and management actions necessary for success; and, last but not least, to government officials seeking to promote new out-grower system operations or monitor existing operations. The document describes in detail the general *modus operandi* of out-grower system. It emphasizes that sustainable out-grower system arrangements are only possible when the various parties feel committed to a long-term partnership.

1 Introduction

In an era of market liberalization, globalisation and expanding agribusiness, there is a danger that small-scale farmers face difficulties in participating in the market economy. In Zambia such farmers could become marginalized as large scale farming becomes increasingly necessary for a profitable operation. As a consequence there will be a continuation of the drift of populations to urban areas.

Attempts by government and developmental agencies to arrest this drift through the stimulation of out-grower system production, emphasized more on the awareness and introduction than on the actual management and operation of out-grower systems. Background information on the existing developmental and production hiccups for the rural farmers is often overlooked. This includes information on the availability of reliable and cost-efficient inputs such as extension advice, mechanization services, seeds and credit, and guaranteed and profitable markets. Well-organized out-grower systems do take such hiccups into consideration and could offer an opportunity for smaller producers to farm in a commercial manner. Similarly, it also provides a reliable source of supply to the investors, from the perspective of both quantity and quality.

1.1 Out-grower system and contract farming: Definitions

Out-grower systems are schemes that provide production and marketing services to farmers on their own land. For Glover and Kusterer (1990), these generally connote a government scheme with a parastatal enterprise, purchasing crops from farmers, either on its own or as a joint venture with a private firm. Glover and Kusterer (1990) also use the term contract farming to refer to the same arrangement in the private sector, where farmer and firm engage in a forward agreement of production and marketing. Partnership between farmers and agro-industrial firms in Zambia started in the late 60s and early 70s when the government established the Lint Company of Zambia (LINTCO) and encouraged farmers to grow cotton in an out-growers scheme. With the phasing out of a central planning economy and the liberalized marketing through the closing down of marketing boards, private firms have become more involved in the out-growing using contract farming.

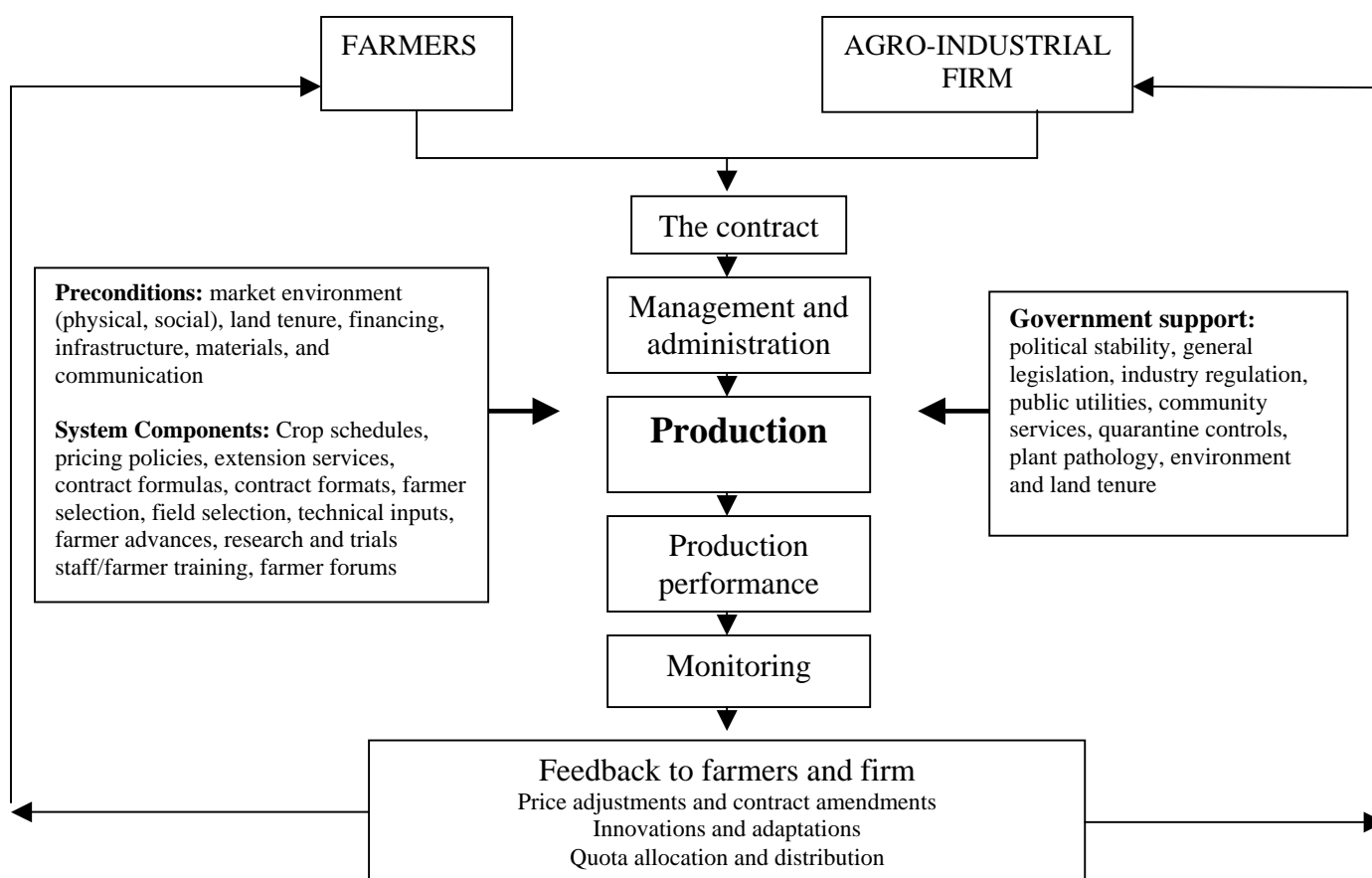
Contract farming refers to a system whereby a central processing and exporting unit purchases the harvests of individual farmers, and the terms of the purchase are arranged through contracts. It's a range of initiatives taken by private and public firms to secure access to smallholder produce. The terms of the contract vary and usually specify how much produce the contractor will buy and at what price. The contractor often provides credit inputs and technical advice. Contracting is a way of allocating the risks between producer and contractor; the farmer takes the risk of production and the contractor the risk of marketing. The basis of such arrangement is the commitment of the farmer to provide a specific commodity in quantities and at quality standards as determined by the purchaser and the commitment of the company to support the farmer's production and to purchase the commodity. The intensity of the contractual arrangements varies according to the depth and complexity of the provisions in each of following three areas:

- **Market provision:** The grower and buyer agree on terms and conditions for the future sale and purchase of the crop or livestock;
- **Resource provision:** In conjunction with the marketing arrangements the buyer agrees to supply selected inputs, including on occasions land preparation and technical advice;
- **Management specifications:** The grower agrees to follow recommended production methods, inputs regimes, and cultivation and harvesting specifications.

Out-grower systems should be seen as a partnership between an agro-industrial firm and farmers. To be successful it requires a long-term commitment from both parties. Exploitative arrangements by a company are likely to have only a limited duration and can jeopardize agribusiness investments. Similarly, farmers need to consider that honouring contractual arrangements is likely to be to their long-term benefit. It must be stressed that the decision to use the out-grower system modality must be commercial. Out-grower systems that are primarily motivated by political and social concerns rather than economic and technical realities will inevitably fail.

Figure 1 shows diagrammatically a hypothetical contract/out-grower farming system framework. It sets out those aspects that must be considered when planning and implementing a venture.

Figure 1: An out-grower system framework



In this document the term out-grower system is a broad farmer and agro-industrial firm partnership, which also has a component of contract farming. The variable definitions used in the reference literature make it difficult to establish a rigid categorisation of these terms. Therefore the two terms will be used interchangeably.

These aspects are discussed in detail in the next chapters.

2 Advantages and problems

Out-grower systems have significant benefits for both farmers and agro-industrial firms (investors). However, it can also cause certain problems. This section of the document looks at both advantages and problems from the perspective of the farmers and of the agro-industrial firm.

2.1 Farmers

The advantages for farmers include:

- Markets are known and more or less secured.
- The agro-industrial firm usually provides inputs and production services, often on credit.
- Out-grower system often introduces new technology and also enables farmers to learn new skills.
- Farmers' price risk is often reduced as many contracts specify prices in advance. (pre-planting price)
- Out-grower system opens new markets, which would otherwise be unavailable to small-scale farmers.
- A central buying place close to the out-growers.
- Donors use out-growers as a tool for targeting vulnerable groups of farmers.

The problems faced by farmers include:

- Particularly when growing new crops, farmers face the risk of both market failure and production problems.
- Agro-industrial firms may be unreliable or exploit a monopoly position.
- The staff of an agro-industrial firm may be corrupt, particularly in the allocation of quotas.
- Farmers may become indebted because of production problems and excessive advances.
- Out-growers may be made dependent on the agro-industrial firm, after which exploitation can occur.
- If production of the same crop is on the estate as well, first preference will be given to the estate production, resulting in later buying, transportation.

2.2 Agro-industrial firm

The advantages include:

- Out-grower system with small-scale farmers is more politically accepted than, for example, production on estates.
- Working with small-scale farmers overcomes land constraints.
- Purchase is more reliable and sustainable compared to an open-market purchase and the company faces less risk by not being responsible for production.
- A strong business relation can be build up through the earlier mentioned services.

- More consistent quality can be obtained compared to purchases made on the open market.
- Significant quantities can be purchased.

The problems faced by agro-industrial firm include:

- Contracted farmers may face land constraints due to lack of security tenure, thus jeopardizing sustainable long-term operations. This is especially a problem when organic production and certification is involved.
- Social and cultural constraints may affect farmers' ability to produce to managers' specifications, e.g. in some communities it is not accepted to use pig manure on the fields.
- Adequate research, staffing finance and management skills are required. Poor management and lack of consultation with farmers may lead to farmer discontent and results in a long and expensive learning process for the firm.
- Farmers may sell outside the contract (extra-contractual marketing) there by reducing processing factory input.
- Farmers may divert inputs supplied on credit to other purposes, thereby reducing yields.
- Poor recovery rates and problems with defaulters.
- Entrepreneur needs more well motivated field staff to attend to the out-growers.

A well-managed out-grower system through contract farming is an effective way to coordinate and promote production and marketing in agriculture. Nevertheless, it is an agreement between unequal parties: companies, government bodies or individual entrepreneurs on the one hand and economically weaker farmers on the other. It is, however an approach that can contribute to both increased income for farmers and higher profitability for agro-industrial firms. When efficiently organized and managed, out-grower system through contract farming reduces risk and uncertainty for both parties as compared to buying and selling crops on the open market. Critics of out-grower system tend to emphasize the inequality of the relationship and the stronger position of agro-industrial firms with respect to that of growers. Out-grower system is viewed as essentially benefiting firms by enabling them to obtain cheap labour and to transfer risks to growers. However, this view contrasts with the increasing attention that out-grower system is receiving in Zambia, as evidence indicates that it represents a way of reducing uncertainty for both parties. Furthermore, it will inevitably prove difficult to maintain a relationship where benefits are unfairly distributed between firms and growers.

The advantages, disadvantages and problems arising from out-grower system will vary according to the physical, social and market environments. More specifically, the distribution of risks will depend on such factors as the nature of the markets for both the raw material and the processed product, the availability of alternative earning opportunities for farmers, and the extent to which relevant technical information is provided to the contracted farmers. These are likely to change over time, as will the distribution of risks.

3 Preconditions for out-grower system establishment

No out-grower system should be initiated unless some basic preconditions are met. The primary precondition for any investment in an out-grower system is that it must be likely to be profitable. Having identified a potentially profitable market, the agro-industrial firm can move on to assess whether out-growers in a particular location can profitably supply that market. This involves an assessment of the social and physical environment of the proposed contract area as well as the potential support likely to be provided by the government.

3.1 A profitable market

The firm must:

- Have identified a market for the production.
- Be sure that such a market can be supplied profitably on a long-term basis.

And the farmer must:

- Find potential returns more attractive than returns from alternative activities/enterprises and must find the level of risk acceptable.
- Have potential returns demonstrated on the basis of realistic yield estimates.

3.2 The physical and social environments

The success of any agricultural investment requires that two multidimensional preconditions be met:

- The general suitability of the topography, location of the out-growers, climate, soil fertility and water availability.
- The suitability of the physical environment for the specific plant genotype for which there is a market demand.

The extent to which all these factors interact determines production yields, quality and profitability.

Many rural communities are wary of modern agribusiness and strongly influenced by traditional practices. There are often great disparities in cultural attitudes towards work. Before beginning such a venture, firms need to develop an understanding of the cultural attitudes of whom they are working with.

Factors that fall under physical and social environments are:

- The physical environment must be suitable in general, and in particular for the product to be produced.
- Sufficient utilities and communications must be available, this includes feeder roads and for agro-processing water and electricity.
- Land availability and tenure – contracted farmers require unrestricted access to the land they farm.
- Input availability – sources of inputs need to be assured.

- Social considerations – cultural attitudes and practices should not conflict with farmers’ obligations under the contract, and firms must develop a full understanding of local practices.

3.3 Government support

The government has to play an important role if contract farming is to be successful. The government role is to establish a legal framework that captures the conditions for the legal agreement in the out-grower system. A relevant legal framework and an efficient legal system are preconditions. Out-grower systems depend on either legal or informal agreements between the contracting parties. An informal agreement is not a reliable out-grower system and should not be encouraged. In this system nobody has any rights; there is no formal agreement on paper hence making it difficult for the parties to count on each other. The legal agreements, in turn, have to be backed up by appropriate laws and an efficient legal system. Governments need to be aware of the implications of all laws and policy decisions on agribusiness development and how those policies influence out-grower system. It is however unfortunate that many governments, including Zambia, do not have this legal framework to back up the legal system of the out-growers. Experience has learned that the establishment of such policies and legal frameworks by the government is usually done after noticing the ill and unfair management of out-grower system.

While it may not be considered a precondition it is desirable that the government plays an arbitration or dispute resolution role.

Two roles of the government and their local agencies are identified:

The enabling and regulatory role

- Suitable laws of contract and other laws are required as well as an efficient legal system.
- Government needs to be aware of the possible unintended consequences of regulations and should avoid the tendency to over-regulate.
- Government should provide services such as research and extension.

The development role

- Government can take steps to bring together agribusiness and farmers. The government needs to develop the infrastructure within the out-grower area. This includes the structuring of good roads for easy transactions of both the producers and the agro-industrial firm.

4 Types of Out-Grower systems

Multinational corporations, smaller private companies, parastatals, individual entrepreneurs and farmer cooperatives can all act as agro-industrial firms and financial investors for out-grower system activities. In nearly all cases, the agro-industrial firms are responsible for management of the venture.

Out-grower systems through contract farming can be structured in a variety of ways depending on the crop, the objectives, and resources of the firm and the experience of the farmers. Contracting out production is a commercial decision to facilitate an adequate supply within a designated period and at an economic price. Any production can theoretically be contracted out using any of the models; however, certain products favour specific approaches. For example the informal model is usually linked with short-term crops such as vegetables. A table summary on the characteristics of the different models used in out-grower systems has been provided in this chapter to illustrate this relationship.

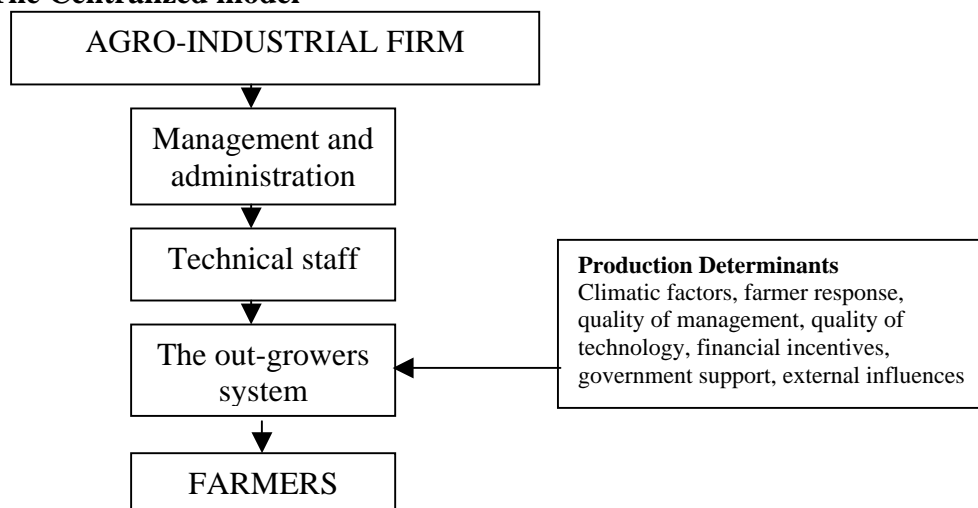
Broadly speaking, out-grower system arrangements fall into one of the five models:

- The centralized model
- The nucleus estate model
- The multipartite model
- The informal model
- The intermediary model

Decisions by agro-industrial firms on the type of model to follow should be made on the basis of market demand, production and processing requirements and the economic and social viability of plantation versus smallholder production. However, it is not always possible for a farmer to choose a kind of model for a specific crop. Instead, a farmer can avoid getting involved in an out-grower system model that does not involve formal arrangements. Such considerations when deciding which model to get involved in reduces risks both on the part of the agro-industrial firm and the farmer.

4.1 The centralized model

This is a vertically coordinated model where the agro-industrial firm purchases the crop from farmers and processes or packages and markets the product. The agro-industrial firm takes care of the organization structure in a centralized model; it provides management, administration and technical support. These efforts are invested into the scheme, plan, development, mission and task of the whole out-grower system. Below is the structure of a centralized model.

Figure 2: **The Centralized model**

Farmer quotas are normally distributed at the beginning of each growing season and the quality is tightly controlled. The centralized scheme is generally associated with vegetables, tobacco, cotton and sugar. Under this model the level of involvement by the firm in the production can vary from a minimum where only the correct type of seed is provided, to the opposite extreme where the company provides land preparation, irrigation system, seedlings, agrochemicals (in organics it could be manure or compost) and even harvesting services. The extent of the involvement of the firm in production is rarely fixed and depends on many different factors e.g. its financial circumstances.

4.2 The nucleus estate model

This model is a variation on the centralized model. In the nucleus estate model the plant owner has an estate plantation, which is usually close to the processing plant. The estate is often fairly large in order to provide some guarantee of input for the plant, but it can be relatively small, primarily serving as a trial and demonstration farm. A common approach is that the firm starts with a pilot estate and then, after a trial period, introduces the technology and management techniques of a particular crop to interested farmers. Out-growers are usually included to enlarge the production potential of the processing plant of the estate. This involves a dependency on both sides, for the nucleus estate and the out-growers. Nucleus estates have often been used in connection with resettlement or transmigration scheme.

Farmers in the surrounding area of the estate produce crops on their own land and/or on the estate land (which has not been utilized for some time) and sell their crops to the estate for further processing. Farmers may encounter the problem that the processing of the produce of the estate has priority and that they have to wait. This often decreases the quality of the product from the farmers. Beneficial aspects for farmers are that the estate is providing inputs, training, transport and social and medical benefits.

4.3 The multipartite model

The multipartite model usually involves statutory bodies and private companies jointly participating with farmers. Multipartite out-grower system may have separate

organisations responsible for credit provision, production, management, processing and marketing. In some cases farmers are expected to belong to associations or cooperatives and the public institutions become involved as providers of credit and extension. However, the extension service provided by the public is usually not very effective and this results in lack of management skills on the part of the farmer associations and cooperatives. What contribute to the ineffectiveness of the extension system are the different messages that the producers may receive from the different actors involved. A company that receives the product may demand certain specifications, which may be different from what the public extension system provides. Unless these functions are well coordinated, the system fails.

4.4 The informal model

This model applies to individual entrepreneurs or small companies who 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 a minimum amount of processing. Material inputs are often restricted to the provision of seeds and basic fertilizers (for organics, this could be drums for manure teas and manure), with technical advice limited to grading and quality control matters. In the northern provinces of Thailand farmers grow chrysanthemums and fresh vegetables for the Chiang Mai and Bangkok markets, under verbal agreements with individual developers. No technical inputs are provided but in most cases the developers advance credit for seed, fertilizer and plastic sheeting. All agronomic advice to farmers is given by government agencies that also organize training courses for the growers.¹

4.5 The intermediary model

Throughout Southeast Asia the formal subcontracting of crops to intermediaries is a common practice. In Thailand for example, large food processing companies and fresh vegetable entrepreneurs purchase crops from 'collectors' or from farmer committees, who have their own informal arrangements with farmers. In Indonesia, this practice is widespread and is termed *plasma*.

The use of intermediaries must always be approached with caution because of the danger of sponsors losing control over production and over prices paid to farmers by middlemen. In addition, the technical policies and management of inputs of sponsors can become diluted and production data distorted. Subcontracting disconnects the direct link between the sponsor and farmer. This can result in lower income for the farmer, poorer quality standards, side selling and irregular production

¹ FAO bulletin145, C. Eaton, A.W. Shepherd

5 Contracts and their specifications

Agreements, in the form of a written contract or verbal understanding, usually cover the responsibilities and obligations of each party, the manner in which the agreement can be enforced and the remedies to be taken if the contract breaks. In most cases, agreements are made between the firm and the farmer. The farmers can be in cooperatives, associations or just individual farmers. In the case of arrangements through intermediaries, the firm contracts directly with the intermediaries who make their own arrangements with farmers. Four aspects need to be considered when drafting contracts:

- The legal framework: the formal law of contract in the country, as well as the manner in which that law is used and applied in common practice.
- The formula: the clarification of the managerial responsibilities, the pricing structures and the set of technical specifications that directly regulate production.
- The format: the manner in which the contract is presented.
- The specifications: the details of the implementations of the contract.

5.1 The legal framework

- The contract should comply with the minimum legal requirements and if the legal framework is not available, at least the contract must address issues that will avoid exploitation of the actors involved.
- Local practice must be taken into account.
- Arrangements for arbitration must be addressed.

5.2 The formula

It can be based on:

- **Market specification**, where only quality standards are specified and input provision is often minimal.
- **Resource specifications**, where details of production, product e.g. varieties are specified. Input provision is often limited and income guarantees are minimal.
- **Management and income specifications**, which are the most intensive and may involve predetermined pricing structures, farm input advances, technical support and managerial control.
- **Land ownership and land tenure specifications**, which are a variation of the management and income model with additional clauses relating to land tenure. This formula is usually used when the contractor leases land to the farmers.

5.3 The format

- Formal agreements are legally endorsed contracts, with detailed obligations for each party.

- Simple registrations are the most common format, which the contractor and farmer sign to indicate understanding of the terms of agreement.
- Informal models frequently use an informal format.

5.4 The specifications

These may include;

- The duration of the contract.
- The quality standards required by the buyer.
- The farmer's production quota.
- The cultivation practices required by the contractor.
- The arrangements for delivery/buying of the crop.
- Transparency on price calculation system; prices fixed at the beginning of each season, flexible prices based on world or local market prices, spot-market prices, consignment prices (when payment to the farmer is not known until the raw or processed product has been sold) or split pricing (the farmer receives an agreed base price together with a final price when the contractor has sold the product).
- Procedures for paying farmers and reclaiming credit advances.
- Arrangements covering insurance.

6 Managing out-grower systems

Poor management can cause potentially promising out-grower system ventures to fail. This section outlines the steps that managers must take in order to coordinate production activities and the delivery of products by farmers to the processing and/or marketing facilities. Stress is placed on the need to carry out all activities in a transparent and participatory manner so that the farmers fully understand their obligations and those of management. For this to be achieved, the maintenance of the harmonious relations between management and out-growers is essential.

6.1 Coordinating production

A number of specific organisation and administration activities have to be carried out before production commences. The key issues that managers must address in advance are:

- Identification of areas that are suitable for production and provide easy access for transport and other support.
- Selection of farmers. Criteria will vary according to the crop and intensity of the contractual relationship.
- Formation of groups of farmers. This involves the establishment of a field organisational structure, which should be able to help in the provision of extension advice, delivery of inputs, training, buying, and crop collection.
- Arrangements for the ordering and supply of inputs, and provision of farmer credit.
- Arrangements for purchasing the product in accordance with the contract, in particular to ensure that farmers can verify weights and qualities.

6.2 Managing the agronomy

It is important that managers not only form competent field extension teams, but also plan effective production schedules. During the production season, supervision by extension services of all cultivation activities is essential, particularly to be sure that certain recommended practices are compatible with the farmer's ability to implement them. Significant factors in any venture's performance include:

- Field extension services. Staff must be fully familiar with the product and system of production involved and, preferably, have local knowledge.
- Transfer of technology. Field staff must be able to adopt technologies to the farmers' situation and must be aware of the problems expected in technology adaptation by the out-growers.
- The use of cropping schedules to ensure the correct timing and sequencing of all contractual activities.
- Training of extension staff and farmers, and research into varieties and cultivation/production practices. Organic agriculture requires a lot of research and observations and this has to be in place.

6.3 Management relations

The development and maintenance of a positive relationship between management and farmers is crucial for the stability of any venture. The management relations can be maintained and strengthened by paying attention to;

- Out-grower management forums, which link management and out-growers or their representatives to interact and negotiate and can avoid many of the problems caused by lack of communication.
- Male-female relationship, which can be adversely affected by out-grower system through payments to men for work largely carried out by women or through conflict between contract requirements and women's priorities with regard to subsistence farming.
- Participation in community affairs, which helps to create a positive atmosphere of partnership. This can include participation in social events and/or provision by the firm of small-scale infrastructure, health facilities etc. However, farming communities should not become dependant on such contributions.

The following lessons were noted by operational level company managers:

- Strong field staff giving sound technical advice is crucial.
- Good administration saves money.
- Intercropping with legumes in first two years gives growers income in early stages and improves soil fertility.
- Consolidate rather than spread too thinly across areas – transport costs and other costs are prohibitive if volumes per area are too low.
- Strong relationships with growers are vital – especially when money for weeding ceases, when firebreaks must be maintained and trees should not be felled.
- Transparency is essential – e.g. allocation systems must be explained in terms of world supply, all concerned must understand reasons for cutbacks.
- Management needs change over time – in the early years it is focused on extension, later on managing product supply e.g. quota systems, contractors' availability and pricing.
- Reputation rather than heavy marketing spreads the word

(Source: James Mayers and Sonja Vermeulen, 2002)

7 Monitoring performance

Regular attention needs to be given to all activities of out-grower system ventures in order to take full account of changes. Some anomalies that are found may require amendments to the contract, technological modifications or the reorganisation of field extension services. This section highlights the need for monitoring and suggests methods for management to ensure that the objectives of the contract are achieved.

7.1 Monitoring quality and yields

- Deterioration of quality can have far-reaching consequences for any venture while quantity shortfalls can reduce processing efficiency and jeopardize markets.
- Quality control should be carried out before, during and immediately after harvest and at buying.
- Formal monitoring of the crop at all stages may lead to identification of factors that could cause poor production.
- Remedial measures may have to be implemented prior to harvest if the farmer fails to carry out recommended practices.
- Sale by contracted farmers of extra-contractual production from other farmers must be avoided (not allowed in organic farming).
- Techniques for estimating yields are visual observations and statistical analysis. Estimates can then be used to prepare calculated yield indicators in order to identify products infiltrated from outside. A farmer list presented by the Internal Control System in organic farming should be able to provide such data.
- Production matrixes represent a way of identifying the key components of production and post harvest performance.

7.2 Monitoring human resource

- The human resources need to be monitored.
- Extension should be evaluated through visits to farmers' fields at least twice a year, so that management can see at first hand the extension workers relationship with farmers and his or her knowledge of the crop.
- Extension staff will need to carry out routine visits to all farms, the frequency being determined by the nature of the crop.
- All field activities, with dates, should be documented. Farmers should also be encouraged to keep records.
- Building up a strong relation with the out-growers reduces risks.

In short effective monitoring systems involve a holistic approach, especially when the out-grower system is in its initial stage of establishment. This is particularly important with organic agriculture production.

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Annex I Summary on the characteristics of the out-grower models

	Centralized model	Nucleus estate model	Multipartite model	Informal model	Intermediary model
Land owned by	Farmer	Farmer / Estate	Farmer	Farmer	Farmer
Product specific	Vegetables, tobacco, cotton, sugar i.e. high value crops	Tea, coffee, herbs, sugar, palm oil, bananas, etc.	Not specific	Short-term crops such as vegetables	Not specific
Farmer quotas	Yes	Yes	Yes	Yes	Yes
Only delivering to one company	Yes	Yes	No	No	No
Free market	No	No	No	No	No
Secured market	Yes	Yes	Yes	Not very	No
Contract	Yes	Yes	Yes	Verbal basis	Yes
Inputs from company	Yes	Yes	Usually	Yes	Sometimes
Social benefits	Sometimes	Yes	Sometimes	Sometimes	No
Extension services	Yes	Yes	Not very effective	Limited	No
Intermediate organisation	No	No	Cooperatives / Associations	Sometimes	Yes
Initiative of agri-business to produce crop	No	Yes	No	No	No
			State development agencies State marketing authorities		
Agri-business	Private corporate sector State development agencies	State development agencies Private/Public plantations Private corporate sector	Private corporate sector Landowners Farmer cooperatives	Entrepreneurs Small companies Farmer cooperatives	Private cooperate sector State development agencies