SMALLHOLDERS: HOW TO INVOLVE SMALL-SCALE FARMERS IN COMMERCIAL HORTICULTURE

A paper prepared for the 6th video seminar in the series
"High Value Agriculture in Southern and Eastern Africa"

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October 2010

PREAMBLE

The following paper is presented as an introduction to the sixth of the video seminars in the series "High Value Agriculture in Southern and Eastern Africa" organized by the World Bank, GlobalHort, the EU and ACP. Although the series title refers to high value agriculture, the focus is directed at the horticulture and specifically the fresh produce value chain. This paper reviews the issues around the integration of small-scale farmers into the chain of production, trade and consumption of fruit and vegetables that are commercialized and traded in their fresh, more-or-less entire state.

While cut flowers and foliage also fall within the scope of commercial horticulture and fresh produce, their trade within the region is minimal. In terms of international exports, cut flowers are important for some countries, particularly for Kenya and Ethiopia, and the value if not volume is comparable to the exports to Europe of fresh vegetables from the whole of Africa. Nevertheless, the sophistication of the supply chain to the European consumer limits the opportunity for the independent small-scale farmer[1].

The scope of the discussion excludes those products of horticulture that are dried such as the pulses which tend to be lower value staples though of great importance nutritionally.

We intend that this paper gives a structure to the issues around the integration of small-scale farmers onto the fresh produce value chain, whether they are real constraints or possible solutions, in order to facilitate discussion rather than to present a conclusive view.

1. INTRODUCTION

Small-scale farmers are the backbone of agricultural production in Africa. To put some numbers to this, from Nagayets (2005) and FAO data we can derive an estimate of the order of 36 million small-scale farmers in Africa with access to 2 hectares or less out of a total population approaching 1 billion. Spencer (2002) estimated that 90% of all agricultural production in Africa is derived from the output of small-scale farmers. The situation is probably not so different in 2010, and the small-scale farmers of Africa continue to represent a huge resource of labor and land.

The title of today's seminar "How to involve small-scale farmers in commercial horticulture" carries three embedded assumptions. Firstly, there is an implication that it is a desirable objective for small-scale farmers to be involved in commercial horticulture, that there are benefits and rewards available to the small-scale farmers from commercial horticulture. Secondly, the title suggests that commercial horticulture can benefit from small-scale suppliers, for why else would we want to involve them unless there are sound commercial reasons? Thirdly, we can infer the assumption that the participation of the smallholders calls for external support.

[1] At the turn of the twenty first century there were only two flower growers in Ethiopia. With an investment promotion and incentive policy from the Government of Ethiopia and support from the Dutch government there are now over 100 farms clustered around Addis Ababa comprising a mixture of foreign and local investment. Most of the farms grow roses in greenhouses but there is also some production of cuttings, carnations, lilies and summer flowers. One example of outgrowers is seen in the Dutch owned Sher Ethiopia who lease fully prepared plots (with greenhouses, irrigation, pack sheds, cold rooms etc), which allows investors to start immediately on a large scale.

If we are to look for answers to the question of how to integrate the small-scale farmers in the horticulture value chain then we need to understand why the small-scale farmers should be involved and why intervention might be needed to gain their participation.

1.1 How can commercial horticulture benefit the small-scale farmers?

Since small-scale farmers are among the poorest of the poor in Africa, any commercial activity that supplements, but does not interfere with, the subsistence agriculture and food security has a far greater impact on livelihoods than additional income in another, more prosperous, environment or sector. The direct revenue from commercial farming into small-scale farmers' households is a straightforward means of tackling poverty with all the onward implications for rural health and education.

But, there are further indirect benefits of stimulating commercial agriculture among small-scale farmers.

- ⇒ Income gained from commercial activity tends to be spent locally as the opportunities for spending in more remote markets are limited. This in turn boosts the rural non-farm economy as well as providing market opportunities for other farm products.
- ⇒ The introduction of commercial agricultural activity to small-scale farmers to take them beyond a subsistence existence comes with a labor requirement that is usually filled by the household. The labor supply to the local non-farm economy is thereby reduced and this should have a positive effect on rural wages.
- ⇒ A new market opportunity is introduced, bringing with it the benefit of a more diversified locally economy
- ⇒ A new technology, such as irrigation, may be introduced that can be applied to existing cropping
- ⇒ The consumption of fruit and vegetables adds important nutritional value to a diet based on staple grains by supplementing calories with mineral salts and vitamins, and possibly protein, essential for health. The adoption of commercial horticulture can bring nutritional value to the local diet,

While we can see then that involving small-scale farmers in commercial horticulture can be highly desirable for good development reasons, we need to ask whether it is feasible from a commercial point of view, and to establish whether small-scale farmers can compete in the fresh produce value chain. The answer here then can help us to define the role of government policy: is the role of the government to facilitate the entrance of small-scale farmers into commercial horticulture or to support the participation of small-scale farmers over the long term, or somewhere in between?

1.2 Can small-scale farmers compete in the fresh produce value chain?

As agriculture has come back in to focus over the last few years as a key sector for government and donor partner policy support for poverty alleviation (World Bank 2008), so the argument among observers in support of large versus small-scale farmers has become polarized. On the one hand, there are those who would argue that the World has changed and that agriculture must industrialize:

"*Using smallholder agriculture as a development policy is like promising an automobile to everyone in the world, but limiting construction to hand labor. Romanticists may prefer starvation, but the principles of industrialization and mass production for increasing productivity apply as equally to agriculture as they do to non-agricultural goods*." Blumenthal (2009)

While in the other camp are those who recognize that the many million small-scale farmers in Africa cannot compete in globalized market with free trade and no support.

However, between these two views is a practical realization that the situation is rather more complex (Wiggins et al 2010). In much of African agriculture there is often not a simple relationship between scale and efficiency: there may be no obvious economies of scale, and small-scale farmers may have distinct advantages over the larger organizations. In particular, where there is a high requirement for labor small-scale farmers may well be at an advantage. Household labor, managing small plots is

- ⇒ Self-supervising
- ⇒ Motivated
- ⇒ Flexible in seasonal working
- ⇒ Capable of high yields through intensive husbandry

Conversely, small-scale farmers are at a disadvantage compared to larger companies in

- ⇒ Procuring inputs, in terms of availability in remote settings and ability to negotiate volume discounts
- ⇒ Farm infrastructure
- ⇒ Obtaining credit, without collateral, and poorly capitalized, and export finance
- ⇒ Collecting and interpreting market information
- ⇒ Marketing and market linkages
- ⇒ Managing standards
- ⇒ Management: supply timing, post-harvest handling, logistics, reliability, performance

The critical point is that **the relative competitive strength of large versus small-scale farmers depends on the importance to the crop of labor versus inputs, and of the characteristics of the market, notably in terms of the concentration of buying**. So, there are crop/market combinations that suit the small-scale farmers and combinations that suit the larger enterprises. Levy and Poulton (2007) distil this into a matrix shown in Table 1 below.

Table 1 suggests that large-scale farming operations are likely to be more competitive in long distance horticultural exports, but the view is inconclusive for the competitiveness of small-investor farmers and the commercial smallholders who can however compete well in local and regional markets.

Note here that the relative inability of small-scale farmers to compete in the extra-African fresh produce markets is relatively recent and has been brought on by retail market and supply-chain developments in Europe: ten years ago the small-investor farmer was well able to compete.

According to Leavy and Poulton (2007) the small-scale farmers and the investor farmers can be competitive in the national and regional markets and this is indeed the experience in many parts of Africa. These markets offer substantial potential, as discussed by Tschirley (2010) in Video Conference No. 4 of the present series, and we particularly note the increasing needs of supply by the processing sector.

Table 1 Predicting competitiveness of farm types in different crops and markets (after Levy & Poulton 2007)

		Smallholder Farmers		Small Investor-Farmers	Large-scale Farming
		Non-commercial	Commercial		
Local, National and Regional Markets	Food Staples	Yes	Yes		Doubtful
	High Value Crops		Yes	Yes	Doubtful
Remote Export Markets	Low Value Export Commodities (cassava, soya, grain)				Doubtful
	Traditional Export Commodities		Coffee, cotton, cocoa, tea, groundnuts	Yes	Sugar, tea, tobacco
	Horticultural Products		Doubtful	Doubtful	Yes

We could divide the table further by horticultural crop and market type, for example fresh chillies into EU wholesale markets against fresh chillies to EU supermarkets, and demonstrate the point made above that the concentration of buying in the market also makes a difference.

The analysis here points us to four different areas in which to seek solutions to the question how to involve small-scale farmers in commercial horticulture:

1. **Markets**. In which markets can small-scale farmers best participate in commercial horticulture? Markets are dynamic, so might small-scale farmers become less competitive in some markets and more in others?

2. **Size**. Can the benefits of scale seen in some crop/market combinations be achieved by associating farmers into groups?

3. **Contractual arrangements**. Can we link farmers directly into the value chain?

4. **Government**. What is the role of government in supporting the integration of small-scale farmers into commercial horticulture?

Each of these areas will be examined in turn in this paper. We will also consider in Section 5 the potential for private sector support. We will conclude with some points for discussion.

2. EXPORT HORTICULTURE… OR…. LOCAL / REGIONAL TRADE?

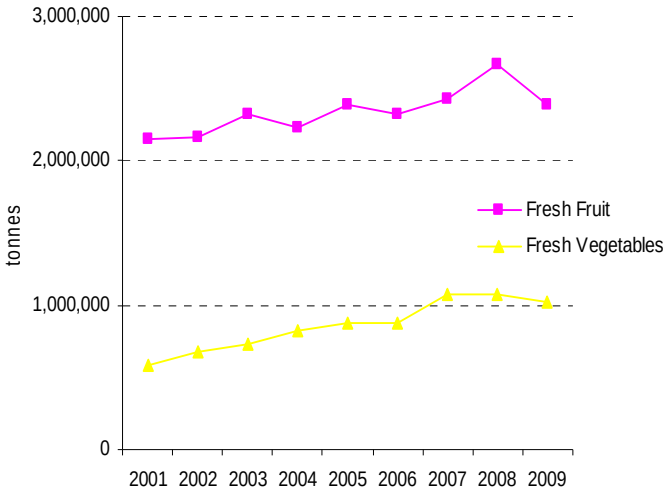
The video seminar facilitated by Tschirley (2010) earlier in this series discussed the opportunities for and constraints on the fresh produce trade of East and Southern Africa. As he describes, the literature on "horticulture" in Africa from 1990 up to a few years ago was largely dominated by the opportunities presented in the long-distance export markets, mostly in Europe but also in the Middle East and North America. It is only relatively recently that the scale of the opportunity for fresh produce in local and regional markets, and more importantly the rate of growth of the demand, has begun to be appreciated.

While the paper by Tschirley, therefore, focused on the opportunities and constraints in the local and regional markets, the long-distance export markets are however still active and represent an opportunity for African growers. Despite the many projects to integrate the small-scale farmers into the Europe-directed fresh produce chain that have failed to survive, small-scale farmers are today supplying a variety of produce into Europe.

Here we will compare the opportunities between long-distance export markets and the local/regional demand. Since local markets and regional trade in fresh produce are closely integrated we make no distinction between the opportunities within a country and that available in the neighbours.

2.1 Export Horticulture

The principal market for African fresh produce is the European Union. Figure 1 shows the growth in European imports of fresh fruit and vegetables from Africa since 2001.



Only a few products dominate the imports: among the fruits, trade in citrus, bananas, pineapples and grapes far outweighs the other products while in the vegetables the trade is concentrated in the legumes, tomatoes and potatoes. Among these leaders there are some that integrate small-scale farmers into the chain, such as peas and beans in the legume trade, through contracting to larger farmers in Kenya.

Figure 1 Imports of fresh fruit and vegetables to Europe from Africa (Data: COMEXT)

Further down the scale, with much lower quantities there are other products, such as the Asian vegetables and chillies as well as yams, that involve many small-scale farmers trading more-or-less independently. It is important to note that even though the quantity and tonnage of product imported into the Europe from such farming enterprises might be small compared with the total market opportunity, these exports are important to the farmers and the workforce that are growing the crop and exporting the product.

Recent reviews by the author of the opportunities for tropical fruit and vegetables in other distant markets such as the Maghreb, the Middle East and Eastern Mediterranean and South East Europe suggest that the opportunities here are still quite small and heavily influenced by the large fruit

trading companies looking for alternative markets for their surplus. Meanwhile the North American market remains quite distant and more easily accessed by South American produce while being secluded by phytosanitary regulations.

The European market for imported fresh produce is large, varied, segmented and offers significant opportunities to those who can supply. African growers, depending on their location, have comparative advantages (of water, climate, logistics) that give access to those opportunities, but the changes in the structure of European retailing over the last 25 years has squeezed out the independent small-scale farmers from the value chain. We find now that buying is now so concentrated in the major multiple retailers, the supermarkets, that only the larger well-resourced farmers can compete.

Those small-scale farmers who are in the market tend to be supplying either through existing larger farming operations or into the lower-value commodity markets that trade through the European wholesale markets. For example, the chilli sales from the larger growers in Kenya achieve substantially higher prices in the UK by selling into the supermarkets, while the small-scale farmers of Ghana sell low value bulk-packed chillies into the wholesale and ethnic market. Similarly we see, a major expansion in consumption of sweet potatoes in Europe, largely driven by supermarket sales, particularly in the UK, and although this is a common crop in West Africa, the European imports derive from the large growers in the USA and Israel. Tuber crops are doing well from West Africa, but it is the yam trade, to the low priced ethnic market that is expanding.

Supermarkets dominate the retail landscape across Europe even in the south where the development has lagged behind the northern European markets. In consequence, the fresh produce opportunities in Europe beyond the concentrated buying of the supermarkets are limited. There will always be a trade outside of the multiples, but it must be recognised that it is at the least not growing and always threatened by the surplus products from the supermarket supply chain.

Where once there was a multiplicity of buyers in the European markets, small-scale farmers in Africa could supply into a value chain that passed through the wholesale markets. Over the last 30 years that model has changed dramatically. The supply to the supermarkets is now handled by a relatively small number of category managers who look for a range of criteria such as reliability, collaboration, standards, traceability, as well as price among others that require levels of management skill, logistic capability and financial vigour which are not suited to the independent small-scale farmer or indeed the trader who can consolidate a load and send it to Europe.

But a new model has emerged, principally in Kenya, where the number of farmers dropped as the industry concentrated into fewer, larger players but they in turn now are increasingly engaging small scale–farmers to supplement their production for the agronomic advantages noted above in the introduction here. We will discuss this contract farming in Section 4.

African small-scale farmers generally now participate in the fresh produce value chain that leads to the European consumer in one of two ways:

- ⇒ As contracted suppliers to larger farms or export enterprises able to access the full spectrum of EU retailing
- ⇒ As independent farming operations supplying a product, perhaps consolidated by local traders, into Europe that is positioned in the market simply on the basis of low price

2.2 Horticulture for Local and Regional Markets

Tschirley covered this aspect in the 4th video conference of this series. His key findings were:

⇒ Existing data on the local and regional trade in fresh produce are limited, but that the trade can be substantial in crops such as onions, cabbage, oranges and Irish potato, which are less perishable and transport fairly easily

⇒ Rapid urbanization and per capita income growth are driving a strong demand for marketed fresh produce in the region, with growth in demand for fruit outstripping that for vegetables

⇒ The regional system must be assessed in conjunction with local systems, since the two are so integrated

⇒ The local/regional system is much larger than the modern export system (to Europe and other long distance destinations) and will contribute far more to absolute growth in demand over the next 20 years

⇒ Farm level marketing is highly concentrated, with 3-5% of farmers in most countries providing at least 80% of the marketed surplus

⇒ Current supermarket shares of the fresh produce market are low and growing more slowly than once anticipated. Open air markets, kiosks and other informal outlets will dominate the local/regional system for many years

⇒ Wholesaling is the necessary focus of improvements in this system. Approaches to improvements must lodge hard infrastructural investments within substantially revised legislative, regulatory and attitudinal

2.3 Conclusions

⇒ The market for fresh produce represents a substantial opportunity for particular crops. It seems however that participation by independent small-scale farmers in Africa is limited to the lower priced commodity end of the market.

⇒ The small-scale farmers who are integrated into the European supermarket supply chains do so as contractors to larger farmers in their area.

⇒ The market opportunity to supply locally or regionally in Africa is far greater than the opportunity for long distance exports.

⇒ The supply of fresh produce into these markets is mostly made through traditional channels supplied by small and medium scale farmers and brokered through wholesale markets to a variety of small retailers. Tschirley identified two broad areas of opportunity for improvement in information flow and in hard infrastructure.

⇒ Supermarkets are not impacting on the fresh produce trade in Africa as significantly as had been predicted despite the rapid urbanization of the population and the development of retailing in other grocery sectors.

As noted earlier, much of the support given to horticulture in Africa over recent years has been directed at exploiting the opportunities presented by the European market. The Kenyan example of

substantial earnings from supplying into Europe provided both a model and an incentive that was misleading without a full understanding of the issues. The success of the Kenyan horticultural exports was multi-faceted with many factors that were not replicated elsewhere. Some might be straightforward and obvious: the altitudinal range in Kenya allows the cultivation of temperate vegetables throughout the year, which cannot be successfully grown in the tropical climate of West Africa where the tropical vegetables can only be supplied to a comparatively minor demand. Other factors, such as the human capital in the form of management expertise, were less obvious, and it seems, often overlooked.

Many of the factors that seemed to constrain small-scale farmers from participating in the market appeared to be a consequence of scale. One way forward that has been often tried, and indeed still is promoted, was the development of producer organizations that might, by the aggregate actions of their members, act as if a larger scale producer.

3. PRODUCER ORGANIZATIONS

Producer organization come in a variety of forms from farmer co-operatives to trade associations to farmer owned trading companies. They are formed often with the promotion of an NGO or development project for a variety of purposes. An NGO for example that is tasked to deliver farmer training Is better able to manage the trainings over a large number of small-scale farmers by forming farmer groups that can be co-ordinated into field schools. But groups also form without the input of NGOs: ZEGA[2] for example grew out of an alliance of farmer/exporters.

As regards developing fresh produce exports we have seen that there are a number of problems of scale. The small-scale farmers are less well able to compete than the larger farmers. In particular, they are at a disadvantage in, for example:

- ⇒ Finance – it is difficult for a small-scale farmer to get and manage finance even where there are rural credit facilities available
- ⇒ Inputs – inputs such as agricultural chemicals may not be available in the area because of insufficient aggregated demand which the producer organization should be able to supply. Equally, the volume discounts are not available to the individual small-scale farmer
- ⇒ Market strength – the small-scale farmer is unlikely to have any influence in the market not only because of size but also because there are likely to be intermediaries
- ⇒ Similarly the indirect marketing reduces the flow of market information back to the farmer
- ⇒ Indirect marketing is likely to incur higher transaction costs
- ⇒ And finally, the individual farmer has no political voice.

Although the logic of organizing producers is sound, the practice is less successful. They may or may not form voluntarily and some cultures seem pre-disposed to this form of collaboration while others are not, just as the French farmers more willingly form co-operatives while the English do not. It does however usually take some incentive to cause them to form. Producer organizations do not

[2] Zambia Export Growers' Association

arise spontaneously. If that incentive is external, perhaps driven by an NGO, then there is a risk that without sustained support the organization will fail.

The formation of small-scale farmers groups is not a goal in itself. The cohesion of a group depends on sufficient, recurring motivation to maintain that group. Ideally, the rewards of aggregation need to be commercial, but that does not guarantee success.

Studying the producer marketing organizations Berdegué (2001) and Berdegué et al (2005) found that in Chile and Central America the great majority of these organizations fail. They noted that it was relatively easy to form organizations and even for them to facilitate initial access to supermarkets. But the problem lay in finding the right combination of managerial expertise, physical investment and organisational approaches to stay in the market and survive.

A similar example can be found in Ghana where the farmer-owned company FARMAPINE, had initial success and quite quickly became the second largest exporter of pineapples. It was however a short-lived glory and within another four years the organisation was declared bankrupt. While the obvious explanation might have been a massive change in pineapple demand in Europe, in fact the issues within the management, with a bloated, over-staffed administration, with an inability to manage finances properly, together caused the downfall of the heavily subsidized organization.

The FARMAPINE example demonstrates the two main defects that are usually inherent in producer organizations:

⇒ An inability to innovate, in this case in response to changing European demand

⇒ The deficient calibre of management

We can see then that the inability of small-scale farmers to integrate into the external fresh produce value chain is not simply a question of size. It is undoubtedly more dependent on the availability of management and human capital, who among their skill set have an ability to innovate, that leads to success in export horticulture. Larger scale farms are able to succeed in export horticulture because they can manage not simply the husbandry, but also the post-harvest, the finance, the logistics and the marketing.

Within the local /regional value chain the problem is not so different. Without sound management a marketing organization or producer group is doomed to failure. The management needs to be able to maintain the cohesion of the group and demonstrate the benefit of membership. It is unusual to find that capability among farmers, and hired management is expensive. Across Africa, there are producer associations that persist through continued and expensive external support.

4. CONTRACT FARMING

Where experience seems to show that the reality of producer organizations often does not achieve the expectations of the theoretical model, then what other options are there for overcoming the scale problems faced by small-scale farmers?

One alternative solution lies in establishing a contractual relationship. The logic behind contract farming is that the buyer can guarantee the supply of raw material where price, quantity, delivery time and quality are all established in advance. The farmer should benefit at a minimum from the assured market and but may also have access to inputs, technical support, post-harvest

infrastructure. Both parties also benefit because contract farming gives the opportunity for transaction/market costs to be taken out of the chain as well as providing a conduit for information flow.

4.1 Practice

Contract farming operations can have a number of advantages:

- ⇒ The shorter supply chain should reduce transaction costs. For a processor this can be critical but the benefit can also be passed to the farmer in terms of higher farm-gate prices
- ⇒ The assurance of a fixed price allows the farmer to decide on the use of chemical inputs
- ⇒ A reliable supply of product is critical for forward contracts for long-distance exports or to processors to manage factories efficiently;
- ⇒ Production credit, perhaps as inputs, can be provided
- ⇒ Extension services and technical advice can be provided
- ⇒ New crops and varieties can be introduced with a guaranteed market
- ⇒ For the long distance exports the market requirements for traceability, and due diligence are satisfied
- ⇒ Where population pressure on the land is high the larger farm can expand its area under control without the difficulties of securing tenure of increasing the numbers of landless in the population
- ⇒ A contracted supply reduces the risk in a start-up of a new factory or processing line

We see now Kenyan flower and vegetable growers extending their range of operations by engaging small-scale farmers to supplement the production, for example Frigoken, or in Madagascar the fresh vegetable exporter and processor Lecofruit manage the production of a large number (10,000) of small suppliers. A survey by Minten et al (2009) found that the contracting of farmers in Madagascar improved technology adoption, led to better resource management and showed a spill-over into the productivity of rice. As a group, the contracted farmers had higher welfare, more income stability and shorter lean periods than those not in the contract scheme.

Another example is seen in China where Miyata et al (2008) showed that contract farmers earn significantly more than independent farmers and that the manner in which contracting contributes varies: in apples for example the contracting led to higher yields (presumably due to technical assistance) while the green onion growers received better prices (presumably from better quality).

But the number of successful outgrower contract operations in Africa is relatively small. See Kirsten and Sartorius (2002) for a review of the literature on the history of contract farming in Africa. There are clear theoretical advantages to contract farming, yet the schemes too often fail in practice. Why do they fail?

4.2 Failure

Causes of failure include:

⇒ **Contract abuse**. Side-selling is a common reason that longer term arrangements break-down. The offer of a higher price from alternative buyers is a strong incentive to break a contract. The issue of side-selling is most easily avoided in crops or regions with only one buyer. Such 'monopsony' is found for example in the sugar and tobacco industries but not seen in the fresh produce sector where a number of buyers usually operate. But the other side of contract abuse is the non-payment, delayed payment or even reduced payment of the delinquent contractor (Kirsten and Sartorius 2002)

⇒ **Cost of managing the scheme exceeds the benefits**. This is particularly true of scattered holdings of small players where the infrastructure is inadequate and transaction costs spiral upwards. There are also situations where the integration of the outgrowers into the nucleus farms own infrastructure is difficult. A banana farm for example, that uses overhead trackways to move bananas from field to packhouse without bruising is unable to benefit from small scale farmer s supplementing supplies from distant locations.

⇒ **Lack of motivation in the participants**. Both sides must achieve an adequate reward and any intermediaries, agents or staff must be fully engaged in the outcome of the scheme.

4.3 Conditions[3]

Contract farming can work. What then are the conditions necessary for success?

⇒ **Farmer selection is critical**. Clearly, the farm must enjoy appropriate climate and soil, but it must also be of an economic scale: the buyer, for example may need volume for processing or may need traceability of few suppliers, or may simply need to minimize transport costs. Further, the relationship with the farmers is critical since the pact will succeed or fail on trust. Bellamare (2010) also points out that the in a study of a single contractor, the processor Lecofruit in Madagascar, the impact of agricultural extension service was more effective for growers who had completed fewer years of education.

⇒ **The production of the commercial crop must not interfere with issues of food security**, which might be avoided by, for example, intercropping a staple with a commercial crop or by bringing further land into production or producing crops out of the food crop season

⇒ **Clustering the farms will minimize the management costs** and also encourage information and technology exchange within the cluster

⇒ **Farmer groups provide a forum** for an exchange of information and opinion that in turn help to cement the relationship

⇒ **The costs of establishing and managing the contractual arrangement must be fully recovered** by the reduced production or transaction costs

⇒ **The contract must be respected**, and there must be an adequate capability for dispute resolution

⇒ **All parties to the contract must be adequately rewarded**, which in turn demands a level of transparency

⇒ **Both parties must be committed to a continual improvement** and farmer training is key. This in turn requires a motivated team working for the contractor

[3] See also Dorward et al (1998)

4.4 Conclusions

We conclude from the extent of these conditions for success that **an informal approach to contract farming is unlikely to remain viable** over the longer term. An outgrower scheme demands a significant investment in time, training, management and possibly credit from the buyer's side to make it work. This then presumes **a motivated, technically competent, well capitalised business in place** in order to provide the small-scale farmer with a linkage to the market.

Even so, side-selling can wreck the scheme as indeed can default by the buyer.

The solution to contract abuse lies in the development of a relational contract between an established business and a select group of small-scale farmers that is not focussed on a single exchange but on a continued co-dependence over time.

The maintenance of a relational contract does not depend on the legal system or the law courts ability to enforce a contractual agreement, but relies on the willingness and capability of the two sides to find equitable solutions and to move forward. This means that both sides need to have a continued interest in the success of the joint venture. It is in that respect the beginning of a true value chain where each link is not only dependent on the performance of the link on either side but also recognizes the dependence.

It is not surprising then that contract farming so often fails. The maintenance of the contract requires a level of understanding between the intermediary and the small-scale farmer that is unusual in a commercial setting where short-term profit is too often the driver. For contract farming to succeed a level of trust needs to be built that goes beyond the simple price agreement. Where there is a dependence on subsidies from Government or donor partner the relationship is unlikely to succeed.

Finally, it is also apparent that **contract farming favours the medium to larger-scale farmers**. This is not only a question of reducing transaction costs, but for the intermediary (the nucleus farm, exporter or processor) it is easier to achieve a consistency of quality and supply and to develop a close relational agreement. There is then a risk that the small-scale farmers originally targeted for integration are in the end excluded by the scheme intended to support their participation. While producer organizations have been suggested as a mean of avoiding this, the experience of the long-term sustainability of such groups is, as we have seen above, poor. Perhaps the activity of the intermediary buyer might improve the cohesion of the organisation, but the reality is that the grouping adds other problems to the relationship removing the individual trust that is needed to secure the relationship.

5. POTENTIAL FOR CONTRIBUTION FROM THE PRIVATE SECTOR

The private sector players in the horticulture value chain all have an interest in the continued success and growth of the industry. To this end, there are strong reasons to establish national collaborative support structures in order to promote the industry, tackle constraints, develop national standards and possibly brands, influence the enabling environment defined by government policy, provide market intelligence and news and so on. We see examples in the trade associations in East Africa such as the Fresh Produce Exporters' association of Kenya (FPEAK), Tanzania Horticultural Association (TAHA), Zambia Export Growers' Association (ZEGA), and Ethiopia Horticulture Producer- Exporters' Association (EHPEA).

There are many potential roles for a trade association and the scope will depend to an extent on the interests of the members. Table 2 lists the potential roles.

Table 2 Potential roles of a horticultural trade association

1. Industry Strategy	• Definition • Implementation • Revision
2. Co-ordination	• Allows sector (fruit/vegetable/flowers) identities to be maintained, while co-ordinating activities • Co-ordinates donor partner support to the sector • Manage funding to the sector • Provide a unified sector response to issues of the day • Provide networking and linkage opportunities
3. Technical	• Innovation in production and processing • Manage/ co-ordinate research • Knowledge management • Technology transfer for production and processing
4. Economic	• Investment Promotion o specialised support to the GIPC o outreach • Market development o Market intelligence – not only external but also domestic and regional, fresh and processed o Industry promotion o Quality/safety o Standards o Reputation
5. Social	• National development issues • Regional issues • Nutritional issues • Labour issues
6. Environmental	• Pesticides • Water extraction • Water pollution • Carbon footprints / air-freight • Biodiversity
7. Legal	• Linkage to international organisations – eg WTO, EC o Trade barriers • Contract farming • Mediation service for land, contract farming, trade disputes
8. Political	• Advocacy/lobby • Linking public and private • Business enabling environment

While the organizations may initially be established by larger grower/exporters they are increasingly including support to small-scale farmers in their strategy and planning. The support can take a number of forms:

⇒ **Training** for example in Good Agricultural Practices and standards compliance. ZEGA itself invested in a small training farm that could also be run as a commercial unit, while the EHPEA established a diversification programme to increase the incomes of vegetable producers, particularly smallholders and outgrowers.

⇒ **Advocacy** is important to the small-scale farmers who individually have no political voice. The private sector needs to lead government policy. See Section 6

⇒ **Linkage** the associations should be able to provide opportunities for networking and developing links within the value chain, vertically and horizontally, domestically and on the export market, as well as working in partnership with donors and NGOs. Individually these might be difficult to achieve for the small-scale grower.

⇒ **Market intelligence** the small-scale grower has no capacity to research either the background market knowledge or the current up-to-date market information that a trade association can potentially compile.

As a trade organization the funding for these types of activities can be sought from donor partners such as USAID and the EC and the practical activities can draw on the support of member companies.

6. THE ROLE OF GOVERNMENT POLICY

In the introduction to this paper, we argued that the development of commercial horticulture was desirable as a straightforward means of tackling rural poverty with onward implications for rural health, welfare and education. It is clear then that government policy should value the contribution that commercial horticulture can make to a poverty alleviation strategy while also recognizing the wider economic benefit of employment, a diversified economic base and possibly also export earnings.

A commercial horticulture sector needs government policies that provide an environment in which the sector can thrive. It does not need direct intervention from the government in its activities; rather government should recognize the need for a vigorous private sector as the engine of commercial growth.

We see five areas in which government policy can provide an active support to commercial horticulture.

Infrastructure – firstly a usable transport infrastructure is critical to the success of any commercial horticulture. Not only do poor roads increase the transaction costs (time, delays, and wear and tear on the trucks) but the produce is highly perishable and often easily damaged on poor roads. Further, if the transport costs of evacuating produce are so will be the import costs of bringing food stuffs into the locality. This increases the farmer dependence on their subsistence crops and reduces the time available to grow income-generating crops.

Secondly, improvements to the infrastructure of water, health services and education all lend support to developments of the rural economy.

Investment – Government must recognize the importance of investment both from local/domestic sources and also foreign investors. It is the larger farms that will drive the sector forward that will provide employment that will generate the critical mass to attract buyers and transporters. If contract farming is the best option for integrating small farmers into the horticulture value chain then it is self-evident that there must be an intermediary of sufficient scale to manage the outgrowers.

In particular it is important to recognize the potential contribution from foreign investors who bring in not just funds but also technical know how as well as management expertise and very likely market linkages too. Their contribution to a fledgling horticulture sector can be enormous, and the investment should be encouraged. Note also here that the scale of horticultural investments is of a different order to the massive land acquisitions that are attracting so much adverse comments now.

Support to investors might include:

- ⇒ A simplified investment code
- ⇒ Support to land acquisition: the identification of available land, the titling of the property, and the acquisition by lease can all take unduly long and will discourage investors.
- ⇒ Appropriate fiscal incentives: tax incentives are not always useful when broadly applied through holidays for investors, but tax breaks to support specific activities can have a more precise effect.
- ⇒ Support to inward investors, a one-stop-shop for information , guides and official paperwork

Institutional – institutional innovations are the hardest aspects of directing government policy. For the business community it is important to reduce the bureaucratic overhead (Customs, VAT, licensing costs etc) that adds to the cost of doing business. We have seen how important the regional trade has become and government needs to provide support not only with the infrastructure but also by easing border procedures.

Innovation – a key component of competitiveness is the ability to innovate. Without an innovative capacity any industry will fall behind its competitors. Innovation can be encouraged in a number of ways:

- ⇒ A matching grant scheme in Zambia helps companies by sharing the cost of new developments
- ⇒ Innovative companies might be given tax relief on their research and development spending
- ⇒ The government might bring in specific technical assistance where there are particular problems.
- ⇒ The capacity to innovate needs to be supported by an active agricultural research programme delivering through a widespread extension service.

Human capital - Where we have discussed the development of commercial horticulture in African countries we find that an important constraint is often the quality of the workforce. Depending on the country, the shortfall is seen at all levels. The training of unskilled labour puts a major cost onto the development of a new project. The shortage of supervisors and middle-managers can be critical to the survival of the larger companies but it is rare to find graduates willing to consider a career in horticulture. Training schemes to encourage the development of middle-management would no doubt also generate new farmers from those wanting to try on their own. And finally senior management: export horticulture in particular demands a suite of managerial strengths that are not readily available and foreign investment is most important to bring in this capability.

7. DISCUSSION

1. The reasons why we should seek opportunities to involve small-scale farmers in commercial agriculture were covered in 1.1 of this paper. The potential benefit lies not simply with improving the prosperity of individual agriculturalists but in the positive impact on rural income as a whole

2. Whether or not commercial horticulture is an appropriate and feasible sector for small-scale farmers is not so clear. Commercial horticulture is one of the few opportunities for rural income, but the participation of small-scale farmers in the value chain has been difficult.

3. Certainly there are commercial opportunities to be exploited. As we have seen much of the focus of agricultural development assistance over the past 15 years has been aimed at the long distance exports, but more recently local and regional markets have been shown to be of greater promise and potentially more accessible.

4. Markets and their demands have changed: in Europe the change has been radical and the multiple retailers, with their concentrated procurement through a select list of category managers, are now dominant throughout the grocery sector. In Africa, supermarkets, urbanization and the formal catering sector are gaining ground in many countries. While this change is impacting on the grocery sector, it seems that fresh produce marketing in Africa is less susceptible to change and the traditional channels of wholesale markets and open-air retailers and kiosks still handle most of the product.

5. The opportunities for small-scale farmers to supply independently into Europe, either through market growth or supplier substitution, have shrivelled or are now quite restricted. This is only partly a question of standards blocking the way since market penetration through the category managers, who have requirements of continuity of supply, performance and reliability, is beyond the reach of most small-scale farmers.

6. Accessing the European market is not a question of learning the technology and finding scale perhaps through consolidation. The demands are far more sophisticated. As such the model of outgrowers supplying to a nucleus farm or a managing exporter has some attractions. But the reality is that these schemes are exceptionally difficult to run. The best examples are seen with the most sophisticated grower exporters in Africa, for example in Kenya. Other schemes survive by virtue of heavy subsidies and political will.

7. Accessing the local and regional markets is simpler, but still fraught with difficulties of transaction costs (in view of the state of the infrastructure), market risk (gluts in supply are hard to manage), and counter-party risk (default and non payment) on top of the production risks (weather, disease). As such it is doubtful whether again the smallest of the small-scale farmers should participate. Contract farming may provide the solution but the burden of supporting the contracting farmers with credit, inputs and technical advice is increasingly onerous with smaller farms.

8. With contract growing it seems that larger famers are favoured and that the majority of small-scale farmers are unlikely to have access.

9. A shift in thinking is perhaps needed now. **Firstly**, rather than looking for income generating projects for the population of small-scale farmers perhaps we should **look at the market opportunity, and ask how to exploit it given the rural resources** available. We perhaps then need to accept that the very smallest farmers – the bottom quartile who are virtually landless and have access to less than 0.1ha per head (Hazell et al 2010) - are not at present in a position to participate commercially in a value chain as self–employed growers. Their needs are far more immediate and these are issues of development, of food security and poverty alleviation, rather than commerce, but the improvement of rural income, not individual incomes but the overall income in the locality, should impact on their livelihoods. As discussed in the introduction here, successful commercial horticulture can have a significant non-farm impact in the local economy. The activities of projects and schemes and government interventions that seek to include the very smallest-scale farmers are costly and constraining the very schemes that can bring prosperity to a region. We shy away from supporting a few farmers in favour of distributing the trainings or mentoring or credit among all. This spreads the intervention too thinly and provides inappropriate support to many.

10. **Secondly, the importance of investment has been under-valued**. Small-scale farmers are in no position, either in terms of capability or in terms of resources, to drive the sector forward. At best we might expect an incremental growth pattern as productivity goes up, areas extend and markets grow. The step-wise growth, which is so urgently needed, requires investment. Investment too is a precondition of any outgrower scheme, whether based around a processing factory or a nucleus farm. Without the factory and without the large-scale farm there can be no outgrower scheme. Foreign direct investment (FDI) is important here not only for the import of capital but also for the technical know-how and above all for the management. Commercial horticulture requires a level of management expertise that is not seen elsewhere in agriculture: the post-harvest handling and marketing of perishable produce is a race against time, with no room for compromise in quality or cost. It is unfortunate that FDI in African agriculture has had so much criticism recently and it is important to redress the balance, bring in the foreign investment or encourage the local investment and involve the rural population.

11. **Thirdly, the human capital must be developed**. We cannot rely on imported expertise and it is critical that the abilities of the local population are developed at all levels. Intellectual capital, in terms of the ability to innovate, is entwined with this.

12. There are no quick solutions to the integration of small-scale farmers into commercial horticulture, but commercial horticulture can generate income for rural communities.

BIBLIOGRAPHY

Bellemare MF (2010) Agricultural extension and imperfect supervision in contract farming: evidence from Madagascar. Agricultural Economics DOI: 10.1111/j.1574-0862.2010.00462.x

Berdegué JA (2001) Co-operating to compete; peasant associative business firms in Chile. Doctoral Dissertation Wageningen.

Berdegué JA, BalsevichF, floresL, and Reardon T (2005) Central American supermarkets private standards of quality and safety in procurement of fresh fruit and vegetables Food policy 30(3) 254-269

Blumenthal GR (2009) Investors' perspectives on farmland. In: *Land Grab? The race for the World's farmland.* Eds Kugelman and LEvenstein Woodrow Wilson International Center for Scholars 55-68

Dorward A, Kydd J and Poulton C (1998) eds S*mallholder cash crop production under market liberalization.* CAB International, Wallingford

Hazell P, Poulton C, Wiggins S and Dorward A (2010) The Future of Small Farms: Trajectories and Policy Priorities. World Development 38(10): 1349-1361

Kirsten, J., Sartorius, K. (2002), Linking agribusiness and small-scale farmers in developing countries: is there a new role for contract farming? Development Southern Africa (19) 4: 503-529

Jayne, TS, Mather D and Mghenyi E (2001) Principal challenges confronting smallholder agriculture in sub-Saharan Africa. World Development 38 (10) 1384-1396

Leavy, J. and Poulton C. (2007) *Agricultural Commercialisations – A Level Playing Field for Smallholders?* Future Agricultures Briefing www.future-agricultures.org

Minten B, Randrianarison L and Swinnen JFM (2009) Global Retail chains and poor farmers: Evidence from Madagascar. World Development 37(11) 1728-1741

Miyata S, Minot N and Hu (2009) Impact of contract farming on Income: linking small farmers, packers, and supermarkets in China. World Developments 37(11) 1781-17901

Nagayets, O (2005) Small Farms: current status and key trends. In: *The future of small farms: proceedings of a research workshop,* Wye, UK June 26-29 IFPRI www.ifpri.org/publication/future-small-farms

Neven D, Odera MM, Reardon T and Wang H (2009) Kenyan Supermarkets, Emerging middle-class horticultural farmers, and employment impacts on the rural poor. World Development 37 (11) 1802-1811

Reardon T, Barrett CB, Berdegué JA and Swinnen JFM (2009) Agrifood industry transformation and small farmers in developing countries. World Development 37 (11): 1717-1727

Spencer, D. (2002) The future of agriculture in sub-Saharan Africa and South Asia; whither the small farm? In: *Sustainable Food Security for All by 2020*. Proceedings of an International Conference, Sept 4-6 2001 Bonn Germany. IFPRI

Tschirley D. (2010) Opportunities and constraints to increased fresh produce trade in Eastern and Southern Africa. Paper prepared for 4th video conference under AAACP-funded series of highvalue agriculture seminars

Wiggins S, Kirsten J and Llambi L (2010) The future of Small Farms. World Development 38 (10) 1341-1348