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A smallholder farmer stands next to his EurepGAP compliant chemical store. The farmer made a net annual income of £417 from export vegetables, the chemical store costs £48 to construct, one of many expenses faced by farmers seeking to comply with EU private standards (Photo ndrew Graffham).

All other pictures by Andrew Graffham and Esther Karehu, Natural Resources Institute, United Kingdom.

Contents

Glossary

ACP	African, Caribbean, and Pacific less developed countries that were included in the Lomé Convention and now the Cotonou Agreement
APS	Assured Produce Scheme (United Kingdom)
AWB	Airway Bill
BRC	British Retail Consortium
CB	Certifying Body
CFU	Colony Forming Unit
COLEACP	Interprofessional association of exporters, importers and other stakeholders of Europe - ACP horticultural trade
CPP	Crop Protection Product (pesticide)
DFID	UK Department for International Development
EU	European Union
EurepGAP	European retailers protocol for Good Agricultural Practice
HACCP	Hazard Analysis Critical Control Point (system)
HDC	Horticultural Development Centre (now KHDP)
IIED	International Institute for Environment and Development
IPM	Integrated Pest Management
ISO	International Standards Organisation
KHDP	Kenyan Horticultural Development Project (formerly HDC)
MRL	Maximum Residue Limit
NGO	Non Governmental Organisation
NRI	Natural Resources Institute (United Kingdom)
PPE	Personal Protective Equipment
PHI	Pre-Harvest Interval
PIP	Pesticide Initiative Programme of COLEACP (EU funded programme)
PMO	Primary Marketing Organisation
QMS	Quality Management System
SHG	Self Help Group
SPS	Sanitary and Phytosanitary (human and plant health)
SSG	Small-Scale grower
TNC	Tesco Nature's Choice
USAID	United States Agency for International Development
VMO	Vegetable Marketing Organisation
WHO	World Health Organisation
WTO	World Trade Organisation

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Summary

This report aims to improve the understanding of the viability of small-scale growers (SSG) in export horticulture chains that include EurepGAP compliance criteria. To this end a methodology has been devised and piloted in Zambia employing a survey tool based around understanding the costs and benefits of EurepGAP compliance. For this work a survey of the outline costs and benefits of producing export crops in Kenya was undertaken with the aim to help answer this C/B question, indicate trends and illustrate incentives for SSG farmers to continue being part of EurepGAP.

The survey tool collected a range of data and qualitative information to enable analysis of these data to ascertain the incentives involved with export horticulture. Interviews were conducted with company personnel and farmers involved in EurepGAP compliant SSG schemes. The data obtained gives a good perspective on the costs of compliance from the point of view of farmers and exporters, and qualitative information on the benefits of compliance and challenges faced by the various stakeholders. The figures for donor inputs only include those known to the exporting companies, and would in reality be much higher as the exporters do not have figures for international consultant costs and costs of running donor projects in the country.

This report is based on data collected from a survey of 11 out of 18 of the major exporters in Kenya, covering the four largest companies that control 80% of produce exports to the EU, three medium-scale companies and four of the smaller export companies. In addition the survey team made visits to the one section of the Mwea Irrigation Scheme in the Karii Region to interview farmers from seven Self Help Groups (SHG) regarding their experience of export horticulture, export companies and implementation of private standards such as EurepGAP. This final exercise was useful as it illustrated that farmers dropped by one exporter may join other groups with a new exporter and thus continue to export produce to EurepGAP compliant markets.

Section 1 – Impact of EurepGAP on Kenyan SSG

Prior to 2003, the majority of the export companies relied on casual purchases of vegetables from large numbers of small-scale growers via a system of brokers. Only limited records were kept and thus it is impossible to determine accurately how many smallholders were involved in supplying exports to the EU at this time.

Following the introduction of EurepGAP 2.1 in September 2003, the exporters were forced to try and certify growers. At this time 9,342 smallholders with 45,000 dependents (family and waged labour) were involved.

As of mid 2006, 60% of these smallholders have been dropped by the export company they were linked with in 2005 or withdrawn from EurepGAP compliance schemes as a direct result of non-compliance with EurepGAP. While there are many components to failure, the primary reason for failure is financial rather than technical ability to meet the standard. Farmers are credit constrained and have to invest in relatively complex systems. Feedback from company management teams indicates further reduction in smallholder involvement planned for 2007. Modifications to EurepGAP discussed in Prague in September 2006 may create an increased

cost burden. Based on this information it seems likely that by November 2007, a further reduction in smallholder involvement will have occurred.

The figure of 60% should not be taken to mean total exclusion from market participation at this stage. All of these growers remain in farming selling to local markets and many continue to sell to exporters selling to less stringent markets. A small number have been absorbed into groups managed by other export companies and are still trying to achieve EurepGAP compliance. A more detailed investigation of this area would be most useful.

From these companies, 1,978 smallholders have been supported by exporters and donors to get EurepGAP certification. 1,187 of these have been certified and the rest of the 3,937 (40% of original number) are in the process of preparing for certification.

15% of the 1,187 certified farmers have since dropped out of EU markets, as it was not cost effective for the exporter and farmers to meet ongoing costs for standards compliance.

Farmers who had attained EurepGAP certification were clearly reaping benefits from the adoption of good agricultural practice, record keeping and improved hygiene. Yields were generally higher and input costs reduced as the growing process was better managed. Many farmers said that they were using EurepGAP records to understand their financial viability and run their farms more commercially. Proper handling of pesticides and improved food safety and hygiene had health benefits on farm, and in addition most farmers said that they had transferred hygiene messages to the homestead with obvious positive implications for family health.

Establishment of EurepGAP for 1,978 smallholders cost at least £2,339,740, which was £1,183 per grower in simplistic terms. On average, farmers paid 36% (£844,230), exporters paid 44% (£1,031,800) and donors paid 20% (£463,710) of this cost. The farmers' contribution works out at £427 per grower, but actual contributions ranged between schemes from £9 to £636 per grower for smallholder (0.1-1.0ha) groups and £3,823 for ten larger farms (~10ha) certified individually under option 1 of EurepGAP.

Maintenance of EurepGAP for 1,978 smallholders cost at least £1,502,560, which was £760 per grower in simplistic terms. Farmers paid 14% (£205,310) and exporters paid 86% (£1,297,250) of this cost. The farmers contribution works out at £104 per grower, but actual contributions ranged between schemes from £1.10 to £175 per grower for smallholder (0.1-1.0ha) groups and £1,183 for ten larger farms (~10ha) certified individually under option 1 of EurepGAP.

Analysis of smallholder incomes from export sales suggest net incomes ranging from £98 to £1,250 per annum, with most making £200 per annum. Variations occur according to geographical location, agronomic features, varieties grown, land areas and level of technical support provided by the export company. Standards compliance is not possible without external support and can only be maintained with significant financial inputs from export companies. It was difficult to determine where farmers sourced working capital for standards compliance although all farmers complained of investing most or all of their individual or group savings in EurepGAP. Four companies offered credit support for standards activities recovering loans via produce sales and two companies operated a cost sharing scheme for farm and centralised infrastructure with the company contributing between 20% and 50% of initial investment costs.

Donor support has been a significant factor in encouraging attempts to comply with EurepGAP. For individual schemes, donor support for establishment costs ranged from 0 to 100%; most donors were only funding training, laboratory analyses and certification costs with no support for smallholders' farm site or centralised infrastructure. The exception to this was USAID, which made contributions of 25-50% of initial investment cost for selected farm site and centralised facilities.

There is concern (expressed by exporters and farmers) that donor inputs are not coordinated, do not seek involvement of the stakeholders, do not provide direct support to individual farmers (this is not entirely correct in practice as some donors have given support for farm site infrastructure and collective facilities) and take no account of the long term viability of smallholder schemes.

Certification of individual farms under option 1 of EurepGAP is obviously not viable for small-scale growers as establishment costs £8,628 per grower and £5,666 per annum to maintain (with exporter and donor support the actual cost burden per farmer was £3,823 for establishment and £1,183 per annum for maintenance).

Ten of the eleven companies were using variations on EurepGAP option 2. Only two of these offered a complete and balanced system when assessed as individual grower certification. With the leading company, option 2 cost £1,819 per grower to establish and £1,319 per annum to maintain. With company and donor support the actual cost burden per grower was £636 for establishment and £175 per annum to maintain. Option 2 in its current form offered an 80% cost saving over option 1 for establishment and 77% cost saving for annual maintenance of compliance as compared to each grower certifying individually under option 1 of EurepGAP. However, even with these savings smallholders and smaller export companies were struggling with the costs of compliance and one of the large companies has taken the decision to drop remaining smallholders as costs for standards compliance are not justified when compared with income from produce sales.

One company is trying out a novel approach for certifying groups of farmers under option 1 of EurepGAP. This is verging on a violation of the general regulations of the standard but can be justified on the basis of a broad interpretation of definitions provided under the current version of the general regulations (feedback from Prague 2006 indicates that a new definition of what constitutes a farm, farmer and farmer group could legitimise this approach if approved by the standard owners). The cost per farmer for establishment was £577, with annual maintenance of standards compliance costing £140 per grower. Thus group certification under option 1 would offer a saving of 93% on establishment costs and 98% on annual maintenance costs when compared to certification of individual farms under option 1. When compared to conventional certification of the farmer group under option 2 the saving is 65% overall with a 90% saving on EurepGAP registration fees. This appears to be a very encouraging development but the scheme in Kenya exhibited serious flaws in the level of management and control on the ground and was going against the trend for greater control expressed by retailers at the EurepGAP meeting in Prague in September 2006. It remains to be seen if retailers are willing to accept this scheme in its present form. Should this happen it would be logical for all existing option 2 schemes to switch to option 1 for groups so as to benefit from the very considerable cost savings and much simpler management system.

Overall, the Kenyan data revealed that farmers were almost universally positive about the benefits of EurepGAP compliance, and the high number of successful certifications demonstrated that small-scale growers have the technical ability to meet the requirements of the standard. However, virtually every farmer interviewed complained of the very high costs of standards compliance, and the majority felt that these costs were not balanced by an increase in price for compliant produce.

Sustainable EurepGAP compliance by small-scale growers was found to be related to the level of commitment and resources made by the export company. Only two of the schemes examined were running efficiently in terms of evidence of full compliance in the field and repeated annual re-certifications. These two were operated by the largest exporters in Kenya. The exporter for one of these schemes evidently had the resources but was expressing doubts about continuing with small-scale growers for business reasons. The other appeared happy to pay for 86% of the maintenance costs of a large and very well managed EurepGAP compliant SSG scheme. Farmers within this scheme made comments about the costs of EurepGAP but did not see these costs as a big issue and were highly positive about growing EurepGAP compliant produce. This was due to the fact that the farmers were unaware of the real costs of standards compliance as most costs were met by the exporter.

Smaller export companies were in a very different position. Most had relied heavily on donor support amounting to 40-100% of establishment costs as compared to 15-28% for the large companies. Smaller export companies were more likely to operate a more streamlined system with more of the costs of compliance pushed onto the farmer. Some of these companies were frank in saying that they cannot see how the system can be maintained once donor support is withdrawn. Interviews with farmers associated with these schemes showed how such farmers are more aware of the very high costs of compliance than those supplying large companies and cannot see how a compliant system can be maintained without a dramatic increase in income. All of the failed and failing schemes are associated with the smaller companies who lack the necessary resources to operate an efficient and sustainable EurepGAP compliant scheme.

Section 2 – Key findings and recommendations

The following is a summary of the key findings and recommendations deriving from the analysis of the Kenyan data.

The export horticulture business is complex. Production, trade and supply chains are not homogenous and hence one solution or basket of solutions will not fit all. Proportions of SSG produce exported vary by product and season as exporters manage their portfolio of farms. Export of non-EurepGAP horticultural produce to European wholesale markets, South African retail and Middle East entrepots is expanding. Outside the export market there is a functioning alternative non-export horticulture market available to exporters and farmers. Payments are lower, but both agents make use of this system. The clever middleman buys product from SSG just before the exporter wants it.

This complexity is seen in the EurepGAP certification system. As expected, the number of farms associated with an exporter is a good indicator of the average initial cost per farm of establishing the EurepGAP system - there are significant economies of scale. Yet, the average cost to the farmer shows a strong opposite trend – the more farmers, the higher absolute investment by individual farmers. A range of possible explanations includes

safety/security in numbers for the farmers and the confidence that all parties feel in working with larger exporters.

Complementary products: all export crops are either complementary or competitive products in the portfolio of the exporter and farmer. The dynamics of how this "works" in practice and over time as other factors evolve is unclear.

Impacts of standards on the rural economy

There are some positive impacts of standards**.** By expanding the potential market opportunities for Kenyan produce, standards have increased the demand for export horticulture and continued to inject cash from exports into rural areas. Exporters have more flexibility to buy from or sell to whomever they want. Increased flexibility would also pertain to farmers in the case of farmer-owned primary marketing organisations (PMO). However, in the case of exporter-owned PMO's flexibility rests with the exporter as the farmer is dependent on the exporter for market access. Productivity (yield per hectare) has increased, and input costs have been reduced through more prudent pesticide and fertiliser application and the ties with export horticulture have increased the quality of the seeds (yield, germination rate, etc). Standards provide incentives to upgrade, specialise and high-grade – and as such provide positive incentives for farmers to improve their practices and exporters to find and secure produce from these farmers.

The absolute number of SSG involved in export horticulture is falling – yet the absolute volume of produce from non-large scale growers has not fallen commensurately. This indicates a change in composition of production in Kenya. The absolute number of people involved with export horticulture (and the number of dependents) might not have fallen. There is evidence from earlier studies that farmers "dropped" from export horticulture supply chains do not give up farming – they switch to other markets. In Kenya, there are a number of other markets. For instance, produce might be sold to brokers and into the UK wholesale market or for pickling and sea transport to the EU market or for road/sea transport to Durban for the food service market. It is certain that the potential value in these markets will be lower, but there will be some immediate advantages to the farmer – lower initial and recurrent costs through no EurepGAP compliance, cash in hand, etc. SSG are reported in McCullough (1999) to find work as labourers on larger farms. The dependents associated with one labouring job and one SSG involved with export horticulture are similar (NRI, 2006). Larger farms can be less labour intensive but also less productive.

The number of skilled agricultural technicians has risen. This means that best practice is more widely disseminated and productivity and efficiency throughout the agricultural sector (i.e. on non-EurepGAP crops) in Kenya has increased.

The value of skilled labour has risen. Our survey provided evidence that trained and competent agricultural technicians were highly sought after and there was considerable 'poaching' among exporters. While this is positive for those technicians and provides excellent incentives for new entrants into this field, for all exporters this presents an ongoing headache. Not only to pay to train someone but also to pay them well to ensure loyalty. This means that exporters will need a threshold of small-scale growers to make this investment viable. For smaller companies, this investment appears to hit hardest, and for those new entrants keen to enter and thrive in the industry, this is an added barrier to entry.

Rural employment stability can be increased through standards. Non-family farm employment (permanent and casual) accounts for over half of the production costs for green beans in Kenya. The abundance of cheap unskilled rural labour helps give SSGs an advantage in comparison to an exporter either growing beans on their own farm or sourcing from a larger farm. Spillovers into the rural economy help to build a more stable system, as skills are upgraded at farm and service-provider level, and higher incomes reduce liquidity constraints. Yet, these advantages are eroded when barriers to entry exclude these SSG.

There is a range of factors for SSG or exporters to terminate the production or buying relationship for export horticulture. These include:

EurepGAP

- High costs of compliance at farmer level, increasing costs of compliance can squeeze exporter margins and make continued investment in SSG unattractive
- Low confidence by exporter that farmers will repay trade credit investments for EurepGAP

Donors

- Donor subsidies for initial costs can give farmers and exporters a skewed view of the reality of producing EurepGAP-certified export crops. Hence, farmers who in reality are not going to be able to conform to EurepGAP in the long-term might have been swept along (with neighbours or fellow cooperative members) in the initial stages, yet dropped out when the financial and organisational reality started to bite

Exporters

- Exporters perceive better option to source supply from other larger producers
- SSG are not performing to the standards the exporter requires, and/or may be side selling or not repaying loans
- Exporter loses market share or becomes de-linked with a particular market in Europe.
- Exporter goes bankrupt thus severing the SSGs' link to the export market

SSG

- Farmer group production and marketing arrangements fail to work
- Specialisation of some SSG in favoured export crops “crowds out” neighbours
- The SSG or cooperative terminates its relationship with an exporter
- Some farmers sell into other markets or liquidise their crops by side-selling to brokers
- Unwillingness to re-invest profits from EurepGAP compliance. A key change in farm-based financial planning is prompted by EurepGAP compliance – that a proportion of the rents must be reinvested in the subsequent year’s run-on costs and in paying off initial costs. The latter significantly differs from usual financial practice on SSG in Kenya
- Poor information: information on what is expected of farmers appears to be available and well disseminated. However, it is complicated and, depending on the sequencing and focus of donor funds, trade credit, loans from exporters, etc – farmers may be convinced at a number of junctures during the compliance process to drop out or for exporters to cut their losses
- Standards are inflexible and can constrain the innovation of farmers and other supply chain participants in ways that mean a long-term involvement in EurepGAP is not possible

- Recurring costs are higher than margins making continued investments in EurepGAP unviable

Reducing recurrent costs is the key to sustaining SSG engagement

In rural areas, opportunities to move into other cash markets are often available and household or family necessity may offer strong incentive to side-sell or otherwise jeopardise a supplier relationship (and hence jeopardise access to future EurepGAP opportunities). Currently, farmers pay 14% of estimated total recurrent costs for EurepGAP compliance, with exporters paying the rest. Our calculations indicate that when the average farmer is asked to contribute more than 25%, his margin slips to zero and he ceases to be a part of EurepGAP value chains, seeking other markets instead. This begs a key question that is crucial for donors and analysts to consider: what growth in costs in the green bean supply chain can be sustained by SSG? A number of market interactions could change the cost profile for SSG including: (i) EurepGAP v.3 is expected to increase the compliance costs for producers including SSG; (ii) Lower demand for sub-Saharan African export crops owing to competition from producers in South-east Asia; and (iii)"food miles" arguments gaining traction among UK consumers.

SSG access to infrastructure makes a significant difference to margins

The research here shows that initial costs are a *barrier to entry* but also a launch pad to sustainable enterprises. For instance, access to electric irrigation increases production costs by 20%. There is a divergence in the incentives for the private sector to invest in SSG as suppliers. The research here shows that the private sector is quick to invest its own resources in a system that already exists and is functioning – here contributing around 86% of recurring costs. However, the initial costs of certification are a substantial barrier to entry for exporters and hence farmers. Donors considering investing in securing long-term access to export horticulture markets for SSG must first consider investing in infrastructure, since the private sector appears reluctant. While better information would no doubt be welcomed, it is difficult to see how in Kenya or in other countries, these high initial costs can be surmounted other than through donor intervention. Options exist to ensure that these investments are not wasted – such as bonds, repayment schedules from imports, etc. Also, initial costs are a *barrier to expansion* for those firms already sourcing EurepGAP-certified product from SSG in Kenya. In theory, these firms would be the most likely to expand the numbers of SSG involved in export horticulture, and their reluctance compounds the analysis of the apparent insurmountable costs.

1 Introduction

Production and processing of fresh produce for export to the European Union (EU) is an attractive market opportunity that is currently exploited by 25 nations in sub-Saharan Africa (see table 1 below). Ten of these countries (shown in bold-italics in table 1) export significant volumes of fresh fruits and vegetables to the EU, and in countries such as Kenya export horticulture has become the fastest growing sector of the economy. According to the EU-COLEACP Pesticide Initiative Programme (PIP) exports from these countries involve over 3.5 million people directly in production and another 7 million in supporting services. Small-scale growers (SSG) play a significant part in this process; in Kenya 46,000 tonnes were exported in 2002 and approximately 50% of this came from SSG.

Table 1.1 Sub-Saharan African countries involved in fresh produce exports to the EU (largest exporters in bold)

Burkina Faso	***Ghana***	***Mali***	Nigeria	Tanzania
Cameroon	Guinea	Mauritania	***Senegal***	Togo
Djibouti	***Ivory Coast***	Mauritius	***South Africa***	***Uganda***
Ethiopia	***Kenya***	Mozambique	Sudan	***Zambia***
Gambia	***Madagascar***	***Namibia***	***Swaziland***	***Zimbabwe***

Source: Anonymous, 2003

In many of these countries small-scale growers make a major contribution to export production and derive significant levels of income in return. In Zambia, where rural household incomes are often less than £100 per annum, small-scale growers made net incomes of between £1,000 and £7,500 from vegetable exports (2003-2004 figures from Graffham *et al* 2004).

Consumer pressure, protection of brand image, stricter food regulation in the EU during the 1990s and the need for access to a due diligence defence drove retailers to develop strict commercial standards culminating in the introduction of EurepGAP (European retailers' protocol for Good Agricultural Practice). Since its inception, EurepGAP has been the main driver for change in producer and exporter practices. Currently, thirty of the retailer members of Euro-Retailer Produce Working Group (EUREP) control 85% of fresh produce sales in the EU and their standards go much further than the legal minimum specified under EU regulations for food of non-animal origin. Large-scale commercial growers have found it relatively easy to comply with EurepGAP as they already have access to the necessary financial, infrastructural and human capacity. In contrast small-scale growers find EurepGAP a major challenge as they lack the necessary infrastructure and trained personnel and do not have the finances to support adoption and maintenance of EurepGAP without external help (Graffham *et al*. 2006).

In September 2006, there were 41,121 EurepGAP certified suppliers (Option 1 - individual certification, and Option 2 - group certification) of fruits and vegetables in 78 countries around the world. EurepGAP management predicted that this figure would reach 50,000 by the end of 2006. The EurepGAP family of standards covers fruits and vegetables, combinable crops, flowers and ornamentals, livestock, aquaculture, livestock feed, green coffee and tea. The number of certified (options 1 & 2) suppliers of fruits and vegetables globally and in sub-Saharan Africa is summarised in tables 1.2 and 1.3 respectively.

Table 1.2 Number of EurepGAP certified (options 1 & 2) suppliers[1] of fresh fruits and vegetables globally as of September 2006

Country	No. of certified suppliers
Europe	33,130
Latin America	2,979
Asia	2,369
Africa (including North Africa)	2,354
North America	289
Total	**41,121**

Source: Moeller (2006)

Table 1.3 Number of EurepGAP certified (options 1 & 2) suppliers[1] of fresh fruits and vegetables in sub-Saharan Africa as of September 2006

Country	No. of certified suppliers
Cote d' Ivoire	19
Ghana	85
Kenya	386
Senegal	3
South Africa	1,448
Tanzania	20
Uganda	1
Zambia	4
Zimbabwe	14
Total	**1,980**

[1] *– This does not represent the number of growers as schemes can represent anything from 10-2,000 or more individual growers per scheme.*

Source: Moeller (2006)

1.1 EurepGAP

In order to tell a coherent story of the impact of EurepGAP on small-scale growers it is necessary first to have an understanding of the current version (version 2.1-January 2004) of the EurepGAP protocol for fresh fruits and vegetables.

The European Retailers Protocol for Good Agricultural Practice (EurepGAP) code for production of fresh fruits and vegetables was started in 1996 by a group of eleven British and Dutch retailers, with the objective of creating a single private sector standard for ensuring food safety and quality of fruits and vegetables from seed through to the farm gate. From the retailers perspective getting suppliers to prove compliance with EurepGAP would provide all parties with a due diligence defence under EU food safety regulations. Major growers in Europe were also interested in EurepGAP as it offered a way of reducing the number of private sector standards in the market place and thus reducing problems with incompatibility of standards when trying to supply several retailers with the same product.

The EurepGAP standard has evolved with time and by September 2006, the number of retailer members had increased to 31 from eleven countries (including one Japanese retailer). In its first decade, EurepGAP has developed into a global standard with over 40,000 certificates in 85 countries around the world. National standards (Kenya-GAP, Chile-GAP, Mexico-GAP,

China-GAP) have been developed modelled on the original EurepGAP protocol and benchmarked against the EurepGAP standard to ensure system equivalence (N.B. benchmarking is still in process for some of the national GAPs mentioned above).

At the time of writing EurepGAP is being re-designed with the intention of launching version 3 in March 2007. The new version is intended to create a single standard for a wide range of food commodities rather than the current scenario of several different mutually incompatible EurepGAP protocols to cover different products. The layout of the new integrated farm standard is shown in figure 1.1. Under the new system a fruit or vegetable grower will need to comply with the all farms base module, the crops base module and the fruits and vegetables protocol. The new standard will offer many advantages for EurepGAP compliant farms practising mixed agriculture with for example, dairy, pigs, barley and a horticultural crop on one farm. For most of the growers overseas and all of the small-scale operations the layout of the new standard is unlikely to have any real impact as they only produce fruits or vegetables for export to EurepGAP compliant markets in the EU.

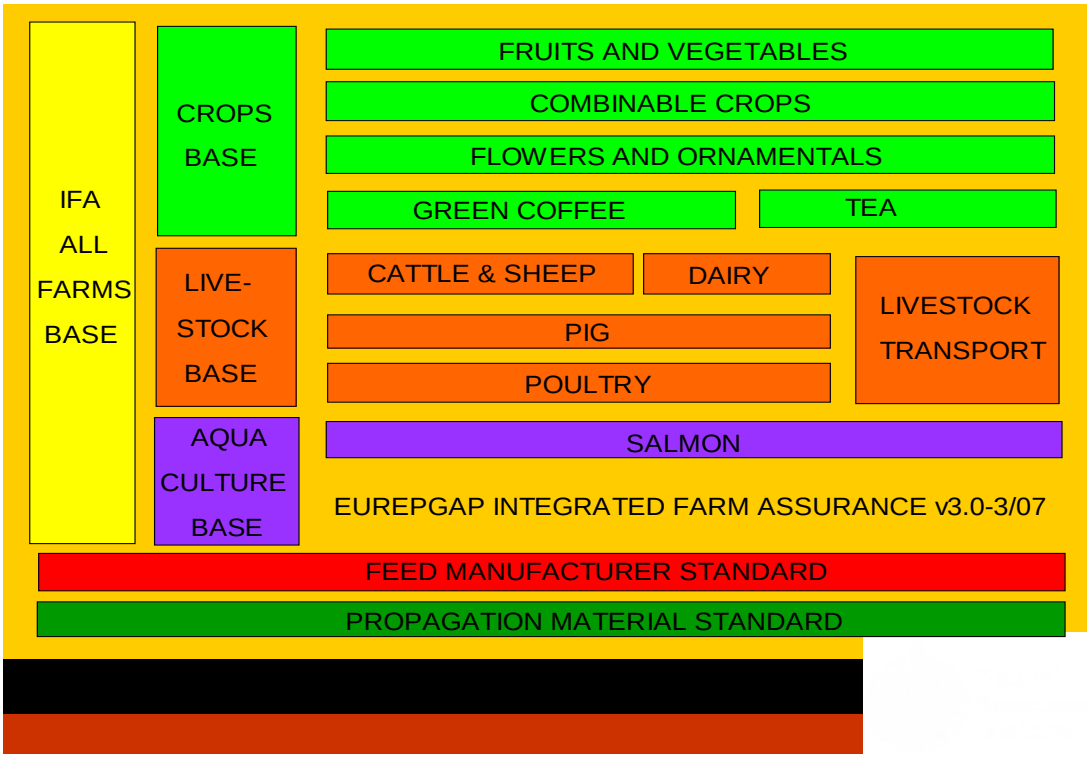

Figure 1.1 Layout of the EurepGAP integrated farm assurance standard v3.0-3/07

At the EurepGAP meeting in Prague in September 2006 many changes to the content of the standard were discussed. However, it remains to be seen what the final content of the new standard will be.

1.2 EurepGAP for small-scale growers (SSGs)

In order to understand why the smaller farms face such a challenge in meeting the requirements of EurepGAP, it is essential to understand the workings of the EurepGAP standard. In this report

EurepGAP is taken to mean the fresh fruits and vegetables protocol 2.1-Jan 2004, which was introduced in September 2003 and became mandatory from January 2004. This version of EurepGAP is divided into fourteen chapters with sub-divisions into a large number of control points that cover all aspects of agricultural production from seed through to delivery of the produce at the farm gate. Each control point has specific criteria for measuring compliance, and the system for measurement is via independent audits of the application of EurepGAP on the farm. To make the verification process easy the most important control points are highlighted in red and known as "major musts". For a farm to pass the certification audit there must be 100% compliance on major musts. The second category of control points are highlighted in yellow and known as "minor musts", the farm must demonstrate compliance with 95% of these control points at the time of the audit and 100% within one month of completion of the audit. The final category of control points are highlighted in green and known as "recommended controls". Failure to comply with the recommended points cannot be used as grounds for withholding a certificate, but a few of the recommended points are linked to minor and major musts. EurepGAP offers four optional routes for achieving certification but only two of these are applicable to most developing country suppliers. The key features of these are as follows:

Option 1: Individual grower certification

- Individual grower demonstrates compliance with protocol
- Grower accepts management responsibility for compliance
- Apply to EurepGAP approved certifying body (CB)
- Initial audit by CB
- Internal audit – minimum one per annum
- External audit – minimum one per annum

Option 2: Primary marketing organisation (PMO) / grower certification

- PMO = group with legal structure, 100% control
- PMO has ultimate management responsibility for compliance
- PMO central procedures, all farm sites under central system
- All farms initial internal inspection, CB for PMO
- Internal audit one per annum all sites
- PMO annual system check by CB
- CB audit square root of farm sites e.g. 100 farms, audit 10 per annum

Most large-scale commercial growers go for option 1 of EurepGAP, but most small-scale growers are unable to meet the requirements for certification under option 1 due to an inability to demonstrate compliance with all of the control points specified, resulting from inadequate technical and financial resources. The favoured option for SSGs is option 2 whereby groups of small-scale growers are certified as operating under a common management system.

Option 2 uses the same set of control points as option 1 but farmers must be grouped under a primary marketing organisation (PMO). The PMO takes legal responsibility for overall management of the scheme and compliance with EurepGAP, and each individual grower must sign a legally binding contract agreeing to comply with all of the requirements specified under the EurepGAP protocol. Annual audits are made of the PMO system and a number of randomly selected farm sites chosen by the auditor. For audits of schemes involving large numbers of growers the number of farm sites chosen for audit is often the square root of the total number of sites (the auditor may choose to evaluate more or less sites). If the chosen sites pass then the whole scheme is deemed to have passed. If one or more sites fail the whole scheme may be deemed to have failed depending on the seriousness of the non-compliance. If the auditor is

satisfied that the scheme is compliant but one grower has failed on audit, that grower will be suspended from the EurepGAP scheme until the time of the next audit.

In September 2005, EurepGAP introduced a new feature for option 2 of the protocol in the form of a quality management system (QMS) checklist (Annex II of EurepGAP) and checklist of requirements for internal farmer group inspectors. To pass the certification audit the farmer group must demonstrate 100% compliance with 85 control points in the QMS checklist and 9 control points pertaining to the farm inspector. The QMS covers issues such as legality of the farmer group and contractual documentation, and introduces the concept of an ISO compatible document control system and specifies the need for a Quality Manual, HACCP manual and Quality Management System manual. Development of these manuals and provision of suitably qualified farm inspectors is a major challenge for smallholder groups lacking access to external support from a large exporter or local service provider with experience in this area. Auditing of the QMS involves the management of the PMO being able to understand and explain the interrelationships between a large number of documents.

Independent commentators have suggested that many of the smallest farmers have been excluded from EU retail markets due to high compliance costs and insufficient capacity for standards compliance. In this study we sought to investigate the reality behind smallholder involvement with EurepGAP.

1.3 Objectives and approach for the current study

Much of the evidence for market exclusion problems with EurepGAP is anecdotal. For this reason the decision was made to conduct a detailed cost-benefit analysis of EurepGAP implementation by small-scale growers in Kenya, Tanzania, Uganda and Zambia. In Kenya the fieldwork was conducted by NRI and IIED working in collaboration with a consultant (Ms Esther Karehu) commissioned by the Business Services Market Development Project (BSMDP), which is funded by DFID-Kenya. The overall objective of the work is to identify, quantify and assess the range of costs and benefits associated with compliance with the EurepGAP standard in order to design policies for donors and standards-setters that are pro-poor and sustainable. The research questions were:

- What is the differential impact on differently resourced producers of standards imposed on supply chains for export horticulture in Africa?
- What changes in industry incentives occur from rising standards?
- What productive impact results from rising standards at farm level?
- What are the keys to inclusion for small-scale producers in the light of rising standards?
- How can donors intervene to increase opportunities for poverty reduction in the long-term?
- Are farmers impelled to invest or is it their choice?
- What are the terms of the investments at farm level by exporters and donors – are these loans repayable in full or on easy credit terms or is there insufficient transparency in the system to decide?
- Are there differences in the terms of engagement with the EurepGAP system for those SSG who are the initial SSG for an exporter or for those SSG that form part of system expansion by an exporter?

The approach taken was:

- Using concept of standards compliance as a continuum with each country studied being at a different level of market "maturity", in ascending order: Uganda, Tanzania, Zambia and Kenya;
- Research team: Joint techno-economic team of an economist working with a standards compliance expert, relying on face-to-face semi-structured interviews.

Between May and October 2006, researchers conducted field visits in Kenya, data was collected from a survey of 11 out of 18 of the major exporters in Kenya, covering the four largest companies that control 80% of produce exports to the EU, three medium-scale companies and four of the smaller export companies. The companies visited were:

- Homegrown Kenya
- East African Growers
- Indu Farms
- Sunripe
- Veg-Pro
- AAA Growers
- Kenyan Horticultural Exporters (KHE)
- Wamu
- Woni
- Myner Exporters
- Vert-Fresh Limited

In connection with procurement for Sunripe and AAA growers, discussions were held with Freshlink, an independent vegetable marketing organisation (VMO).

In addition the survey team made visits to one section of the Mwea Irrigation Scheme in the Karii Region to interview farmers from seven Self Help Groups (SHG) regarding their experience of export horticulture, export companies and implementation of private standards such as EurepGAP. This final exercise was useful as it illustrated that farmers dropped by one exporter may join other groups with a new exporter and thus continue to export produce to EurepGAP compliant markets.

No formal questionnaire was followed; rather a semi-structured interview process was used to elicit answers, views and reflections on:

- Financial costs and benefits
- Production changes
- Satisfaction with the compliance process
- Non-financial changes and benefits.

The survey tool collected a range of data and qualitative information to enable analysis of these data to ascertain the incentives involved with export horticulture. Interviews were conducted with company personnel and farmers involved in EurepGAP compliant SSG schemes. The data obtained gives a good perspective on the costs of compliance from the point of view of farmers and exporters, and qualitative information on the benefits of compliance and challenges faced by the various stakeholders. The figures for donor inputs only include those known to the exporting companies, and would in reality be much higher as

the exporters do not have figures for international consultant costs and costs of running donor projects in the country.

For this work a survey of the financial costs and benefits of producing export crops in Kenya was undertaken with the aim to help answer this C/B question, indicate trends and illustrate incentives for SSG farmers to continue being part of EurepGAP. From the analysis the viability of EurepGAP compliance for small-scale growers could be expressed as:

Viability of EurepGAP compliant crops to SSG farmer	=	Turnover from crop sales (Exportable quantity = Harvest minus discards; Price = actual price paid)	-	Initial costs of complying with EurepGAP Recurring costs of complying with EurepGAP Costs of production Credit deductions (for initial costs, recurring costs, or to fund inputs) Alternative crops net benefits (turnover minus costs) Increased own labour deductions

The following is a detailed report of findings derived from fieldwork conducted by NRI, IIED and the BSMDP consultant in Kenya between May and October 2006. This document is one of a series of reports; a country report for Zambia was released in September 2006 and a report for Uganda is due for release on 28th February 2007. A final report on the cost-benefit analysis work drawing together lessons from the individual countries will be released on 31st March 2007.

2 Costs and benefits associated with EurepGAP compliance

The following are general features of the system analysed in Kenya:

- SSGs grow a diverse range of crops for export – green beans, sugar snaps, green peas etc.
- SSGs are in different parts of the country and some will have certain advantages and disadvantages over others – hence different production costs.
- SSGs for most companies surveyed have approximately one acre of land and produce a maximum of two harvests. Usually farmers will subdivide this acre into four "lots" and plant 4kg of seed in each.
- As with many other analyses of production costs it has only been possible to capture some of the more obvious costs – such as labour and agricultural inputs – but this has been consistently done across SSG who supply exporters. The following have not been captured in a rigorous way – financial flows, credit, interest rates, foreign exchange rates, insurance, reciprocity, trends in production, alternative land uses, trends in on-farm land use, impacts on subsistence production. Where possible, assumptions have been made to develop these uncaptured but important factors, and these are stated in the text.

Methodology

This report is compiled from data collected during face-to-face interviews in Kenya from May to October 2006. Ten exporters were questioned about their costs and their perception of their SSG suppliers' costs from EurepGAP. The data from exporters are estimates from a mixture of their accounts and personal communication. Questions were asked up and down-stream to verify claims. One the whole, exporters and SSG surveyed gave responses and data that did not contradict one another.

2.1 Initial costs and benefits

This section will deal with the direct initial costs of implementing EurepGAP owing to the difficulty of measuring the direct benefits of compliance. There have been and are ongoing significant investments in the necessary infrastructure for EurepGAP compliance. In our survey, exporters who are responsible for over 50% of the export horticulture market in Kenya were surveyed. All of these exporters were sourcing some of their produce from SSGs in Kenya and figure 2.1 indicates the estimates of how the total initial costs were financed.

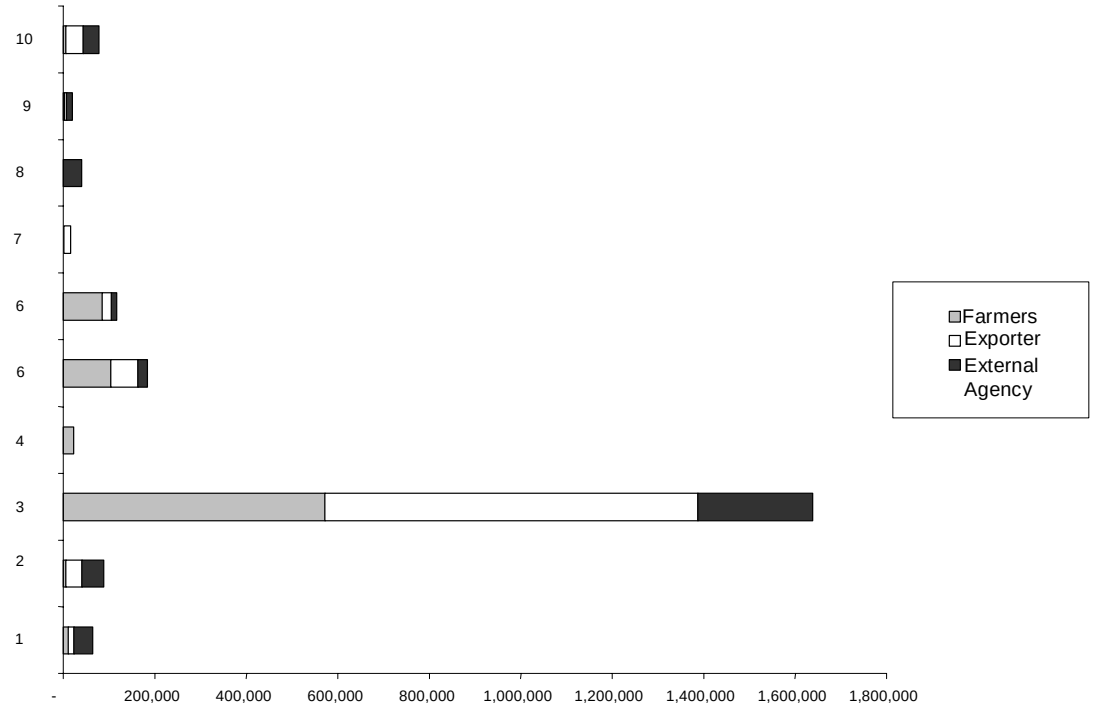

Figure 2.1 Total initial costs for SSG EurepGAP compliance systems, by ten different exporters, Kenya, UK£, 2006

A total of over £2.2 million has been invested in getting these 1,948 farms to a position where they can be audited for EurepGAP compliance, as follows:

	Total Initial cost	Proportion
SSG Farmers	805,999	36%
Exporter	996,517	44%
External Agency	450,943	20%
Total	2,253,459	

This is an initial investment of over £1,000 per SSG. The distribution of funding is better analysed on a per-farm basis, see figure 2.2.

At the farm level there is considerable variation in average per farm costs and in the distribution of funding, illustrating a range of models and approaches to EurepGAP compliance management. Also, there are sequencing issues – some of these firms are new entrants to export horticulture and others have been pioneers of EurepGAP compliance for SSGs – and market issues – with some firms accessing chiefly European supermarkets and others a diverse range of international, regional and local markets – all with a range of requirements.

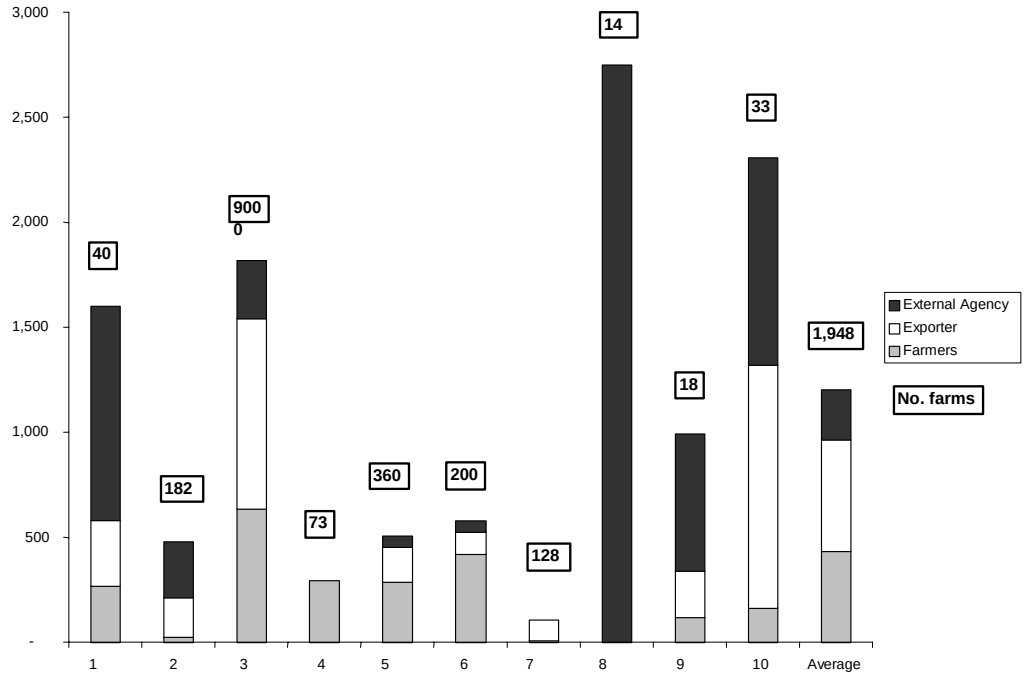

Figure 2.2 Average initial costs for SSG EurepGAP compliance, per SSG, associated with ten exporters, Kenya, 2006 (UK£):

SSG pay between £0 and £636 of initial investment cost in absolute terms and from 0-100% of the initial costs of EurepGAP compliance. On average, farmers pay 36% of initial costs. This apparently high financial burden is necessary before any produce has entered the relevant markets.

Exporter investment at an average of 44% of total initial costs, or £530, is encouraging since this indicates commitment from the private sector in EurepGAP compliance system. Yet it is likely that the relative financial commitment is highest for farmers.

External agencies have proved important in supporting this system and contribute an average of 20% to initial costs. It is notable that farms appear to either receive a lot of donor funding or very little. And for those with less donor funding, lower overall costs are noted. This could indicate a range of issues reacting to the levels or availability of donor funding. However, cost escalation when donors are present has been mentioned by a number of those surveyed. In addition, the costs of independent audit appear artificially high in Kenya – commensurate with the alternative cost of sending an international auditor to conduct the audit.

2.2 Recurring costs and benefits

It is sometimes believed that EurepGAP compliance is a one-off expense merely requiring an annual fee to remain certified. However, this is not the case and many recurring costs must be taken into account. The precise list of these costs varies according to the type of crop and system used, but the following list gives an idea of the most common items:

- Plot markers (replace every two years if wooden)
- Refill for first aid kits (annual)
- Handwash (replace every two years if using leaky tin)
- Personal protective clothing (many items require annual replacement)
- Annual maintenance for field shelters and field toilets (especially if thatch type)
- Annual maintenance for charcoal cooler if used
- Annual maintenance for knapsack sprayers
- Disinfectant, soap and chlorinating solution
- Salaries for record clerks
- Annual refresher training on GAP, food safety & hygiene and safe use of CPP
- Provision of technical advice
- Replacement of posters and extension materials (every two years)
- Record keeping forms (annual supply)
- Documentation (annual in most cases)
- Sampling and laboratory analyses (soil, water and MRL)
- Internal farm inspection (annual)
- Pre-audit (annual)
- External certification audit (annual)
- Updating of system to meet new requirements in line with upgraded standards
- Maintenance of the QMS (annual)

The analysis of recurring costs of EurepGAP compliance exhibits a very different profile to that for initial costs. Donor intervention disappears and exporters fund the majority of the system, with farmers also contributing. We do not have data on gross production margins (turnover [yield x price] minus production and variable costs) for SSG for all exporters, but as figure 2.3 demonstrates, for those that we have data on, these margins on average exceed both the EurepGAP-specific costs and production costs for which the SSG is responsible.

On average, farmers pay 14% of recurrent costs associated with EurepGAP and exporters pay the rest. It could be argued that this illustrates a “healthy and functioning” system with the two private sector investors sharing the costs and benefits. The distribution of recurrent costs appears more equitable than for initial costs – and future research would be prudent to focus on how the exporter “pays” for these investments – through price gouging up or down-stream, through efficiency savings, or in other ways.

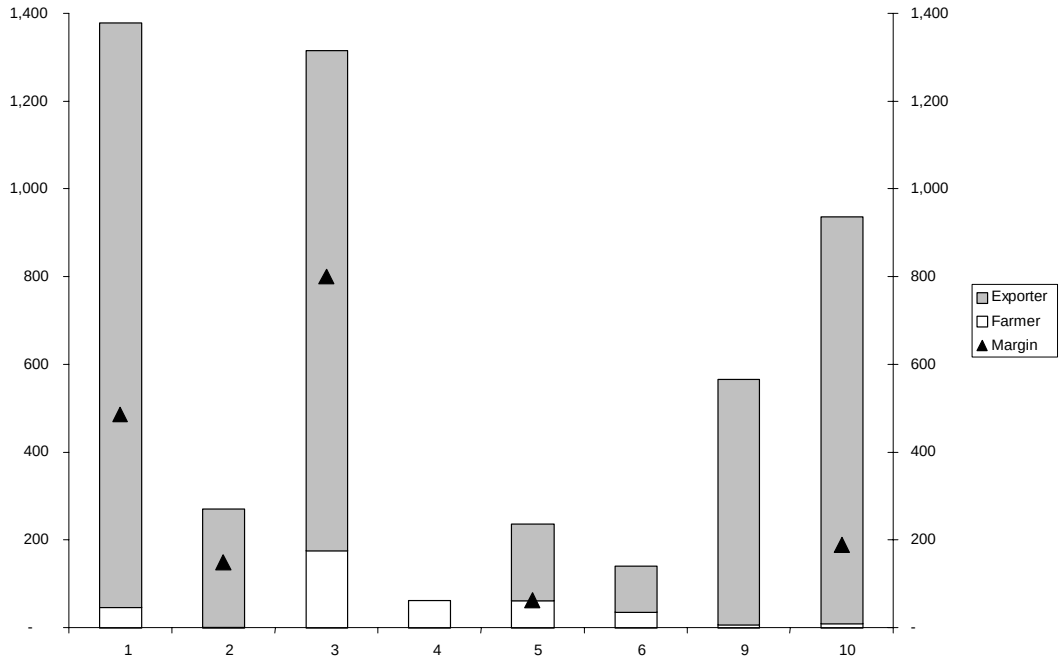

Figure 2.3 Recurrent costs and margins at a farm level for ensuring EurepGAP compliance, (UK£, 2006)

The absence of external agencies is a key finding. Regardless of the reason for this – stipulation by donor agency policy, a belief they are unnecessary or the wish to ensure that financial incentives are preserved – less external intervention means that the "true costs" of recurrent expenditure for EurepGAP certification are borne by local private sector. To this end, exporters and SSG would quickly withdraw if the current and future perceived costs (financial and non-financial) exceeded the perceived benefits – and the evidence in figure 2.3 leads us to conclude that there are net benefits. However, we have not considered initial investment and its financing. Yet, going forward, *it places the issue of recurrent costs of certification at the heart of the long-term viability of the compliance system in Kenya*. If costs rise above the threshold where farmers and/ or exporters perceive net benefits, then withdrawal from the system is likely. Section 4.1 details views and estimated numbers of SSG that have begun or tried to be EurepGAP compliant and are no longer so. It is crucial that donors appreciate this and plan/monitor the compliance system into the future. To this end, donors should be lobbying standards-setters to ensure that the impact of cost escalation through compliance criteria is factored into the debate.

Yet significantly, this 14% of total recurrent costs equates to 56% of average margin from production for SSG. In other words, farmers could not afford to contribute a great deal more to recurrent costs without earning less than zero. Out of the production margin (as we shall see in the subsequent section) farmers have to pay family labour costs – hence the margin is nearer to £80 per farm per annum. When the average farm is asked to contribute more than 25% (under current conditions), the margin slips to zero. This is particularly pertinent under circumstances of rising costs at the farm level. Indeed, it is possible that exporters have pushed costs down to farmer level "to the limit".

2.3 Production costs and benefits

Our survey indicates that the production of export horticulture by SSGs depends on the product. Although we collected considerable data, we cannot be precise on the levels of profit or rent earned by individual SSG. To this end we have imputed rent in table 2.1 as being household labour plus profit at half of turnover. This crude calculation follows both field observations and calculations. Observations of green beans in table 2.1 indicate an average of 19% "profit"/ rent for the farmer/ household per unit of exportable product. Although there is limited quantitative evidence for other crops, for peas and mange tout, this profit rises to over 50% of turnover at farm-gate. Table 2.1 indicates that among the different SSGs, there is a range of anticipated profit margins, from 3% to 51%, indicating that some farms are better than others at turning a profit with this particular crop. This might be due to environmental factors, but also due to better management and crucially the level of infrastructure existing on a farm.

Farm sizes tend to be around one acre and with two plantings. The margin for the farmer/household is indicated in UK£ in the final column. The average farm makes £189 on one acre of green beans with two harvests. It must be stressed this is not pure profit and includes unobserved payments to the farmer and household for labour, and recompenses for foregone production (alternative products that could have been grown on the land).

It is clear that one of the key additional costs of EurepGAP certification at the farm level is rural employment. As table 2.1 shows, an average of 51% of total costs for green beans is non-family employment. Given the high levels of rural unemployment and under-employment in Kenya, this is a positive spin-off. Relatively abundant and cheap employment on SSGs is one of their competitive advantages over larger farms. This can mean better attention to the crops – including better scouting and maintenance – which results in higher productivity as well as higher production margins for the farmer.

Table 2.1 Production benefit/cost profile for SSG involved with different exporters for green beans for export, 2006

	Costs			**Benefits**	
	Labour (% costs)	**Inputs (% costs)**	**Other**	**Est. rent per farm (UK£)**	**Est. rent (% turnover)**
Exporter 2	67%	33%	0%	149	16%
Exporter 7	30%	46%	24%	30	3%
Exporter 5	42%	33%	26%	63	7%
Exporter 1	62%	18%	20%	485	51%
Exporter 10	62%	32%	6%	188	20%
Average	51%	34%	15%	183	19%

There are a range of indirect costs and benefits from EurepGAP. A key factor is overcoming liquidity constraints – SSG require money for non-farm household costs and report experiencing a lack of funds to invest in the farm. Partial solutions include the provision of

trade credit for inputs for SSG supplying for export, but currently such credit extension is limited to wealthier farmers or those tied to exporters. Input costs for green beans in the above example are an average of £132 per acre per growing season and comprise one-third of all production costs. Without trade credit (and assuming that trade credit means zero rate of interest), SSG must turn to the informal credit sector, often the only readily available source of capital for rural farmers, at a rate of over 50% per annum (Andersson *et al*, 2007). Such rates reduce margins by over one-quarter for the farmer/household. EurepGAP compliance for farmers forms new economic alliances between SSG and exporters. Exporters commonly leverage input suppliers to extend trade credit on favourable terms to their SSG suppliers – which can both reduce overall costs and enhance productivity as SSG access high-germinating seeds and quality chemicals. These factors help increase margins for SSG and hence provide additional incentives for implementing EurepGAP.

We have insufficient information on the complementary or competitive nature of export horticulture crops at the farm production or exporter levels. These are probably complex and no one model can provide the answer. Yet, evidence is that green beans are becoming more commodified and hence losing their niche value among consumers and crucially supermarket buyers. To this end, the margin per acre for green beans serves as a good minimum margin for all export crops.

2.4 Incentives analysis

The data collected and displayed in the previous sections can in most instances have a range of explanations that can be recounted in either positive or negative ways for SSG or EurepGAP. This section analyses these data for correlations and trends.

What is the relationship between participation in EurepGAP compliance systems and incentives for key investors?

As expected, average total start-up costs fall for an exporter as numbers of SSG rise. By charting the figure (Figure 2.4, without one outlier), there is a clear expected (and highly significant [r^2=56%]) relationship between an increased number of farms and average total initial costs. This indicates why there are financial incentives for exporters to have "as many farmers as possible" when starting out in order to reduce or share the per farm costs. There might be donor-led or government-led indicators or "numbers" of smallholders that they wish to see; such non-financial imperatives (or otherwise business incentives) might help explain why the farmer fall-out figure for schemes is so high – unviable SSG are taken on to fill quotas.

Start-up costs for such a scheme have several key business aspects. Barriers to entry mean untapped rents. There is no room for "trial and error" or "start-small-then-grow"; costs of failure are high and growth or expansion remains costly. Some big costs are involved in each scheme, which are an incentive to getting large numbers of farmers involved. There is a "sweet spot" beyond which marginal costs of more suppliers falls – in this case, around 50 SSG.

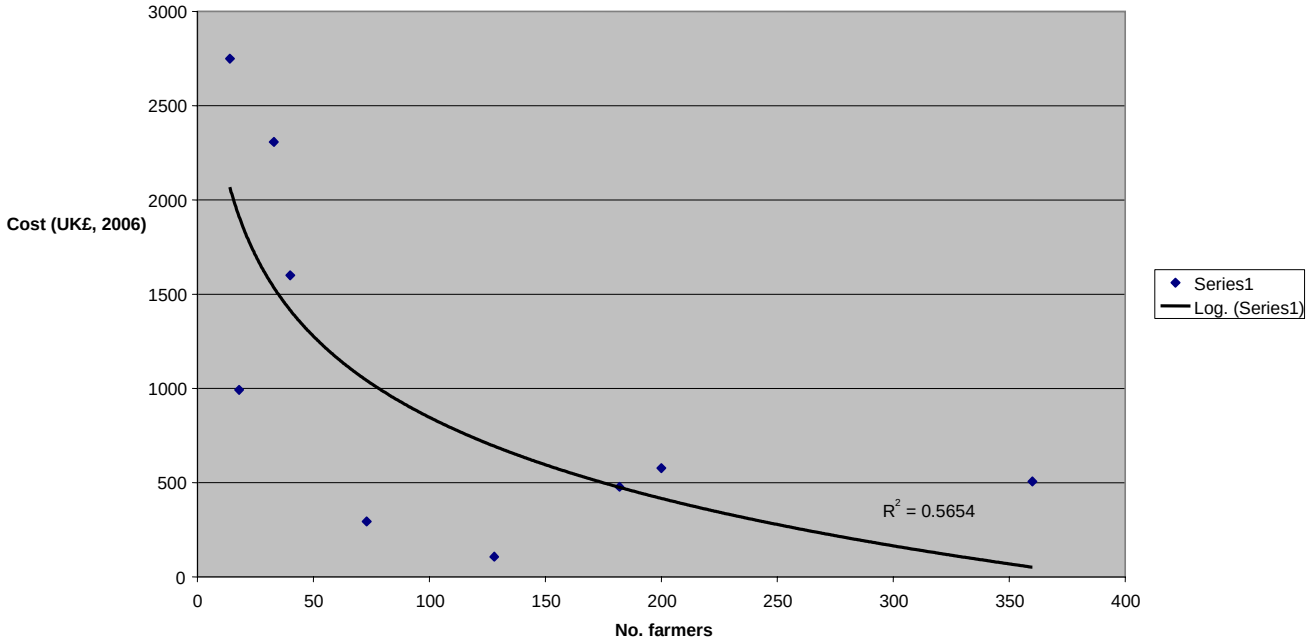

Figure 2.4. **Start-up costs actual per farmer, Kenya, 2006**

An important insight flowing from high per SSG initial costs is that where donor funding provides a subsidy to exporters to preferential souring from SSG, numbers of SSG suppliers might be inflated; the absolute number of SSG is not expected to increase when donor funding ceases – often in two to four years. We need to be clear that the actual rural/ non-large farmland under export horticulture has not fallen.

SSG farmers invest more when there are more farms. Figure 2.5 shows a strong linear relationship between the number of farms associated with an exporter and the amount each farm contributes to the initial costs (r^2=54%). The initial average cost to the SSG farmer supplying export horticulture is a factor of the total number of SSG associated at the outset with an exporter.

The incentives for a farmer to be involved in any scheme are only in part financial – other issues include perceived risk, social commitments and market opportunities. If we look at this as a SSG farmer with a purely financial hat on, one would be more inclined not to go with the largest exporter (if there is a choice). This raises questions: do farmers seek safety in numbers? Does more farmers mean more “power” for the farmer or the exporter in deciding who pays what? Are exporters finding ways of ‘cherry picking’ the best farmers?

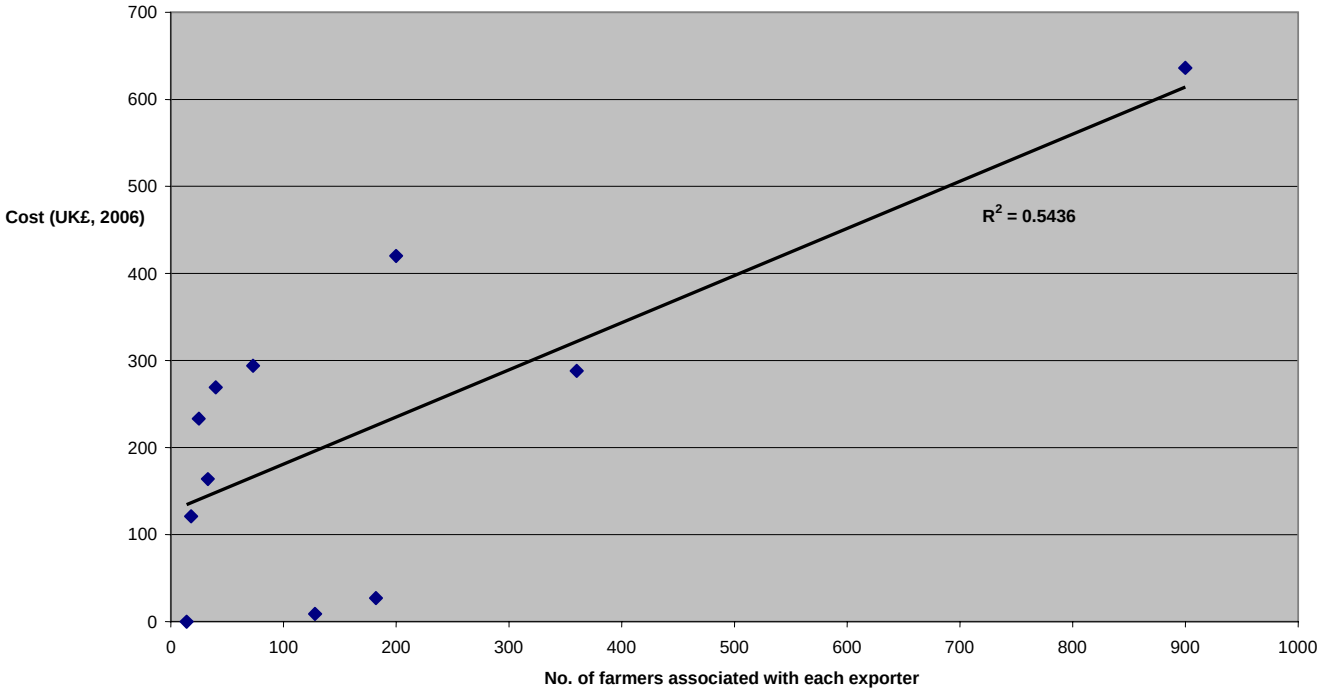

Figure 2.5 Correlation between per farmer annual investment in EurepGAP compliance and number of farmers in the scheme, Kenya, 2006

Why do the largest exporters have higher per farmer investment? Or more importantly, how or why do these firms "ensure" the farmers invest more? One reason is provided by the risk-averse exporters and informational asymmetries; if there are a lot of homogenous but unknown farmers in a particular area, an exporter will gain a better idea of who is keen, who has funds, who is the most professional, by 'pushing' the costs for initial investment onto these farmer suppliers.

Evidently there are mixed incentives to invest in schemes among key investors as illustrated through a quick analysis of the number of SSG associated with each exporter – with rising numbers, donors are less likely to invest and exporters and farmers are more likely to invest. Although the correlations are weak (r^2=4%–18%), there is a tendency for the key initiators, donors, to invest more heavily in smaller schemes. This of course might be owing to a range of factors: size of funds, risk, piloting, etc. It is difficult to see who is the actual driver of this. For instance, it could be that donors are stepping in to bridge a necessary gap where the exporter is unwilling to pay or the farmer unable. More research is necessary. Equally, it could be that exporters and farmers seek and are comfortable in investing when there is strength in SSG numbers, reducing the donor percentage. However, a critical finding is that exporters and farmers have incentives that are in the same direction – they are keen to invest more when there is greater involvement.

What changes are required for SSG to finance both initial costs (at current levels) and recurrent costs from production margins – i.e. without external agency support?

At the average farm level, without financial donor support the conundrum is how to finance £433 initial costs in year zero while covering recurrent costs of £104 with a production margin of £182. If we assume that half of the absolute margin is required to cover family labour and farmer labour costs, then a soft loan for the initial cost over 15 years would be possible. Farmers taking decisions over being in or out of EurepGAP compliant supply chains through the recurrent costs level might perceive this additional interest repayment (increasing perceived recurrent costs by around 50%) as too high and drop out. What loan arrangements would be needed – financial infrastructure etc – to make such a scheme a success? Loans such as this dampen flexibility for the SSG and might expose the farmer to greater pressure from down-stream in the supply chain – and price gouging at the farm gate.

Can donor agencies find other ways of ensuring that financing could be appropriate and equitable without direct subsidies? Approaches elsewhere have included:

- Providing annual soft loans to reduce the cost of working capital,
- Providing training on a range of business-related aspects to enhance skills and negotiating power;
- Funding cooperative structures at rural level;
- Expanding the market for export horticulture;
- Working with supply chain participants to channel rent to the farmer.

What is the outline economic viability of SSG production of green beans in Kenya for EurepGAP?

Using the data for the average farm, we analysed a few scenarios over several timeframes using internal rates of return for the farm to illustrate.

The data used are initial cost £433; recurrent cost £102; margin £182. It is unrealistic to consider all of the margin to be "available" for re-investment – hence we have assumed that 25% of this is appropriated by the farmer and family in recompense for their labour, leaving £137 available for re-investment. In reality this too might be unrealistic, but the illustration provides insights into the farm's viability.

What difference does the distribution of payment of the initial costs make to SSG viability?

Table 2.2 illustrates the internal rates of return for the SSG farm for two scenarios of farmer paying all and the donor funding all of the initial costs, using the data detailed above. As expected the rate of return when the farmer pays all is lower. It is surprising how much lower – with EurepGAP investment not appearing financially viable until the fifteenth year of operation. In contrast, when donors or other external agency pay, viability is possible from the third year.

Table 2.2 Internal rates of return under different initial payment scenarios

	Farmer pays	Donor pays
5 years	-24%	21%
7 years	-13%	28%
10 years	-4%	32%
15 years	2%	33%
20 years	5%	34%

This helps to illustrate that farmers cannot pay the full initial costs of EurepGAP compliance without donor help. Yet the terms of that help are important to investigate. It appears that a subsidy from the donor (as illustrated in table 2.2) ensures viability for the farm. Yet, donor intervention paying for initial costs is no guarantee to ensure sustainable enterprises.

Would soft loans to farmers for the initial costs be viable?

The liquidity constraints faced by SSG (which are forming a barrier to entry for SSG to engage in initial investments without donor assistance or are the reason for SSG dropping out of export horticulture) are potentially low enough to be covered through 'soft loans' that could provide solid financial incentives to farmers while not unduly handicapping their farms' economic viability. Table 2.3 provides the results of some scenario testing using the data above.

Table 2.3 Loan viability for SSG farmers to cover the initial costs of EurepGAP compliance

		If a donor loans farmers the initial costs over:				
		5years	**7 years**	**10 years**	**15 years**	**20 years**
Internal rate of return (IRR)	**5 years**				-1%	52%
	7 years				8%	57%
	10 years				14%	59%
	15 years	0%	1%	3%	18%	59%
	20 years	4%	5%	8%	22%	59%

The results in table 2.3 are not encouraging. For a farm to appear viable over the first five years, the initial cost would need to be made at a zero interest rate over fifteen years. Loans that are made over shorter periods mean farms only become viable after at least fifteen years – and then the rate of return is poor.

How sensitive is farm viability to escalations in recurrent costs?

There is evidence that the trend in horticulture is for costs to inflate while benefits reduce. If this is the case in Kenya for EurepGAP-compliant produce, then cost inflation could occur through higher compliance costs, more compliance points, more frequent testing, exporters pushing costs upstream, etc. Table 2.4 illustrates the results of a range of scenarios for increasing initial compliance investment costs over different payback terms.

Table 2.4a Scenarios for rates of return under different cost escalations for the average SSG in Kenya, 2006 – when the donor pays all the initial cost

	Base	1%	3%	5%
5 years	21%	18%	13%	6%
7 years	28%	25%	18%	8%
10 years	32%	29%	20%	-
15 years	33%	30%	19%	-
20 years	34%	30%	-	-

Table 2.4b Scenarios for rates of return under different cost escalations for the average SSG in Kenya, 2006 – when the farmer pays all the initial cost

	Base	1%	2%	3%
5 years	-24%			
7 years	-13%	-15%	-18%	-21%
10 years	-4%	-7%	-10%	-16%
15 years	2%	-1%	-7%	
20 years	5%	1%		

These results show that under both scenarios, relatively low levels of cost escalation, without compensating benefit escalation, quickly endanger the viability of investments by SSG farms in EurepGAP compliance. Even a relatively small increase in costs of 5% per annum when the donor pays for the initial cost, means that over ten years, SSG farm investment in EurepGAP compliance is only financially marginal – it would be better investing in savings banks or alternatives. Cost escalation when the farmer pays reduces viability to almost zero. This is a crucial insight when we are considering how to go forward with EurepGAP and SSGs in Kenya and elsewhere in Africa.

2.5 Auditing (costs, transparency, and monopolies)

A key strength of EurepGAP and other private standards is independent verification via an ISO-Guide 65/EN45,011 accredited auditing company employing auditors qualified to audit to the ISO 19,011 standard. In the case of EurepGAP, farmers can choose from a wide choice of auditing companies (called certifying bodies by EurepGAP) to conduct the annual certification audit and any pre-audits required by the farmer or exporter. Charges for the annual certification audit can be divided into set fees charged by the management of EurepGAP and fees for staff time, travel and subsistence and administration charged by the certifying body.

The fees charged by EurepGAP management are transparent and published on the EurepGAP website (www.eurep.org), and consist of 5€ per grower for registration, 20€ for the QMS audit (only applicable for option 2) and 20€ per grower visited during the audit. These fees are reasonable and with regard to small-scale growers will be reduced in 2007 to 3€ per grower for registration as EurepGAP is introducing a differential charging system that charges higher fees for registering large farms.

However, the main cost for EurepGAP certification is incurred through fees payable to the certifying body. Charges vary quite widely (and are not transparent in some cases) but typical staff fee rates for many certifying bodies are £550 to £650 per day plus direct costs. It might be imagined that using a local certifying body would reduce these costs as surely an African certifier will charge less than a European company. However this is not automatically the case and in fact one CB charges £600 per day for UK based auditors and £627 per day for South African based auditors. Although the best certifying bodies are highly professional, anecdotal evidence indicates increasing charges according to the perceived level of donor funding available.

In Kenya, GTZ and DFID have supported the development of a local certifying body known as Africert for EurepGAP and other standards. This company has established itself in the market by charging much lower fees than foreign certifiers, and during 2005 was successful in establishing a reputation in Kenya for providing a good service for EurepGAP audits. One Kenyan exporter produced figures for EurepGAP audits of approximately1,000 SSGs under option 2. Using a major international certifier the annual cost was £10,857, while when Africert were employed to do the same job the cost was £3,081, a saving of 72% and the exporter was happy with the standard of Africert's work.

However, a major international auditing company has developed a strategy for auditing multiple standards on the same day, which threatens the business of Africert and many other certifiers, as well as driving costs upwards by creating a monopoly. The multiple audit system works by offering to conduct both EurepGAP and Tesco Nature's Choice (TNC) on the same day using computer software whereby the auditor is able to automatically fill in two checklists at once. EurepGAP does not allow for monopolies among certifiers, but TNC auditing is contracted to one auditing company only. Hence if you want TNC you have to go to a single company and this company can now offer savings via the joint EurepGAP and TNC audit.

2.6 EurepGAP option 2 versus option 1 for small-scale growers: are double standards operating?

The EurepGAP protocol has several options available for certification. Option 1 is a single farm certification where the farmer takes responsibility for ensuring compliance, whereas option 2 allows for certification of groups of farms under one certificate on condition that the group can demonstrate a centralised management system operating via a primary marketing organisation with a EurepGAP compliant ISO type quality management system in place. Each grower must be registered under the PMO and have signed a legally binding contract to comply with all the control measures for EurepGAP specified by the PMO. Under option 2, the PMO takes full legal responsibility for EurepGAP compliance by all members of the group. Option 2 was designed for group certifications (especially among the large cooperative farms of Southern Europe that sometimes have ~2,000 farms sites in one cooperative) and offers advantages in terms of cost savings by allowing for external auditing of a small number (typically the square root of the total number of sites is audited by the certifying body) of farm sites rather than all sites.

In view of the low level of homogeneity between farm sites, group certifications must meet the strict requirements of the EurepGAP quality management system that only applies to option 2. Under option 2 each farm must pay a EurepGAP registration fee, a fee must be paid

for auditing the QMS system and a similar fee is payable for each farm site chosen for audit by the certifying body. The time taken for an option 2 certification varies according to the number of farm sites to be audited but typically requires 2-5 days to complete with obvious cost implications in terms of auditors fees. Another cost for option 2 certification is the need for several random MRL tests per year (costing £85-£150 per sample). Until recently option 2 had the advantage of only requiring a small number of tests to be made rather than doing a test for every site in the scheme thus making option 2 much cheaper than every farm having to go for option 1. However, in May 2006 (probably in response to concerns expressed by German retailers over pesticide residues) several Kenyan exporters reported being asked to plan for an MRL test for each farm site in order to maintain their EurepGAP certification. A major exporter with 300 SSGs said that this requirement if carried through would make procurement from the small-scale sector non-viable.

In contrast, single farm certification audits under option 1 of EurepGAP require between half and one day and have no QMS component, one registration and certification fee and one annual MRL test for the farm. Many have considered getting groups of SSGs certified under option 1 of EurepGAP as this would be much simpler and cheaper, but the general regulations of EurepGAP have always prohibited this for the very good reason that a large group of farm sites with individual owners cannot be considered as having the same level of homogeneity as a single farm with only one management team.

However, at the Paris meeting of EurepGAP in 2005 a Dutch government-funded project made a presentation unveiling plans to certify groups of small-scale growers in Kenya and Senegal under option1. As this presentation occurred within the official programme of the EurepGAP meeting, the concept of certifying SSGs groups must be assumed to be sanctioned by EurepGAP management even though it would appear to violate the general regulations of EurepGAP and undermine the quality of the standard by introducing an unacceptable level of risk by reducing the level of management and control within the system. The legality of the new version of option 1 was justified at the Paris meeting by a broad interpretation of points 2.40-2.42 and 2.50 of the general regulations of EurepGAP dealing with definition of such terms as farm, farmer and farmer group. The novel version of EurepGAP was not discussed directly at the meeting in Prague in September 2006, but during a presentation by the new certification bodies committee, a new definition of the term “farm” was presented that included a group of growers as constituting a farm. If this is accepted it opens the way to allowing for the new option 1 for groups.

During the fieldwork in Kenya, an exporter was identified who sources produce from 2,000 SSGs. These growers are organised into 24 groups who are being prepared for certification under option 1 in a series of phases. Phase 1 was completed in February 2006 with the successful certification of a group of 200 growers under a modified version of option 1 of EurepGAP. In this unusual version of option 1, the group of 200 farms has been classified as a single farm consisting of 200 plots, whereby the individual farms represent the plots and the farmers are considered as employees of the farm. The Chairman of the group is considered as the farm manager, and the export company is deemed to be the farm consultant.

For the group in question each farmer (“employee”) of the farm is responsible for crop scouting and spraying of crop protection products (pesticides). This situation greatly increases the risks of violation of pesticide requirements due to application of inappropriate chemicals, over-application or failure to maintain the correct pre-harvest interval. This risk is heightened by the fact that the group is growing snow-peas, sugar-snap and garden peas

which are all high risk crops requiring a high level of management of pesticide spraying programmes to avoid mistakes occurring.

The application of option 1 of EurepGAP to SSGs in Kenya appears unwise from a food safety perspective, even though it can be justified via a broad interpretation of the general regulations of the standard, and raises the concern of double standards operating within EurepGAP. It would also appear to be unfair as why should the majority of schemes go to the expense and difficulty of meeting the requirements of option 2 of EurepGAP when selected groups are being allowed to certify under option 1 and benefit from an easier route to compliance and overall cost saving of 65% when compared to option 2.

EurepGAP option 1 for groups makes certification much simpler as there is no QMS or need for a PMO organisation and greatly reduced costs for testing, infrastructure and also for auditing because the audit only lasts one day compared to four or five days for a comparable option 2 audit for 200 growers. As compared to option 2, the overall cost saving is 65% but the saving on EurepGAP registration fees is 90%. The option 1 for groups offers >90% savings on an individual certification under option 1 as this could be multiplied if several farms formerly certified individually under option 1 decided to demand certification as a group under option 1.

Given the trend towards greater levels of management and control that ran through the discussions at the EurepGAP meeting in Prague in September 2006, it seems unlikely that this option will be readily accepted by many of the retailers who own the EurepGAP standard. However, should this be the case it will spell the end of option 2 as surely all currently certified groups will demand certification under option 1 for groups.

3 Key informants' viewpoints (positive and negative) on EurepGAP

The following is a summary of some of the comments and viewpoints gathered during interviews with stakeholders in the field (full details are given in the individual cases studies in annex 1); many of these were common to many respondents. The general position from Kenya was as follows:

- All respondents stressed the importance of EurepGAP for food safety assurance, and farmers especially were highly positive about the advantages and benefits of EurepGAP compliance, but all believed that the costs of compliance were too high and unsustainable. Farmers believed that exporters should increase the produce price and pay premiums for compliance (only one company was operating a premium system for EurepGAP compliance at the time of the survey and the premium in itself was not sufficient to compensate for the increased costs associated with standards compliance). Exporters recognised that prices did not respond to certification and complained that the standard was too high relative to the level of risk associated with fresh produce in their opinion.

- Many Kenyan exporters have drastically reduced their involvement with the small-scale sector; 60% of small-scale growers had been dropped from EurepGAP compliance schemes by their exporters, but this figure should be treated with caution as all of these growers continue to farm - many are selling to non-EurepGAP compliant markets via other exporters and a few have managed to join new EurepGAP schemes and are having another go at compliance working with a different exporter. Having said this, the expected general trend in Kenya is still towards complete exclusion of small-scale growers from the high-value EurepGAP compliant markets, especially if compliance costs continue to rise.

3.1 Exporter and service providers' positive views

- Implementation of EurepGAP is good business practice as it offers a strong due diligence defence against EU regulatory requirements and retailer product specifications. Exporters with EurepGAP compliant suppliers believe the risk of being caught out on pesticide residues, microbial contamination or quality related issues is very low. In contrast, two of the biggest exporters in Kenya commented on the risks associated with the old system of spot buying from brokers and farmers where vertical and horizontal traceability is absent.

- All exporters interviewed had no issue with the current content of the EurepGAP protocol as they felt that good agricultural practice was important and delivered many benefits especially in terms of: good vertical and horizontal traceability, improved hygiene (sanitary and phytosanitary) and better levels of worker safety.

- EurepGAP certification raised the exporters' confidence in the suppliers' ability to meet the EU retailers' requirements but some had clearly defined limits to their reliance on EurepGAP certification as a guarantee of product safety (see negative views below).

- Most farmers are capable of putting in place the required level of farm infrastructure (field toilet, hand-wash, plot markers, field shelter and first aid kit). However, very small farms lacked the finances to put in place these structures and would never get a return on their investment, hence several of the exporters in Kenya had eliminated growers from their EurepGAP certified schemes with less than 0.5ha on this basis.

- Compliant record keeping (given a reasonable level of literacy and numeracy) is possible but it takes time to achieve farmer understanding and build up staffing capacity. One of the largest exporters in Kenya with the best organised EurepGAP compliant scheme reported that it took at least six months to bring a small-scale grower up to the required standard. Hence the importance of careful selection of suitable growers and retention of trained growers following completion of the compliance process.

3.2 Exporter and service providers' negative views

- One of the smaller exporters in Kenya reported that the costs of compliance with the EurepGAP standard were prohibitive for both the exporter and SSGs. This exporter was one of the first to get a group of SSGs certified for EurepGAP under option 2 in 2004, but maintenance costs for EurepGAP were too high and the exporter was forced to stop all involvement with the small-scale sector. Another small export company is continuing to work with small-scale growers but after two abortive attempts at EurepGAP compliance is focussing business on non-EurepGAP compliant markets.

- One of the largest exporters in Kenya complained of the high costs of annual audits for compliance. They felt that having completed five annual audits for EurepGAP successfully that a mechanism should be put in place to allow for a reduction in the frequency and depth of audits. Reducing audits to once every two to three years (the exporter asked for every five years but this seems unreasonable) dependent on continued good performance in audits and random chemical and microbial tests would certainly reduce the cost burden significantly. This issue was discussed at the EurepGAP meeting in Prague in September 2006, but the conclusion was that it would not be appropriate to reduce audit frequencies at this stage.

- Whilst accepting the vital importance of food safety assurance several of the Kenyan exporters commented adversely on what they considered to be the extra cost-burden in terms of facilities and personnel associated with non food safety related parts of the standards some of which were considered un-necessary or carried to too great a level of depth. These exporters were not overly concerned with the current version of EurepGAP in this respect but were very concerned by rumours that the next version of EurepGAP will contain significantly increased controls in the area of good social practice.

- The EurepGAP (ISO type) quality management system for option 2 of the protocol (Annex II introduced in September 2005) is seen as over-complex and demanding and a real challenge to implement for small-scale grower schemes. In Kenya, several companies posed the question as to whether it was all really necessary to ensure food

safety and good agricultural practice on the farm. The precise level of difficulty in meeting the requirements was related to the approach taken by the exporter and farmer groups and the level of resources available to the export company. In the more paternalistic systems (some of the largest exporters in Kenya operate this type of approach) the exporter functioned as the primary marketing organisation (PMO) and took full responsibility for implementation and operation of the QMS system. This is an interesting point in relation to the attempt to develop certification under option 1 for farmer groups, since option 1 does not have a QMS module and is therefore much simpler for the growers and exporter to operate. However, this begs the question as to why the QMS was developed in the first place, and the answer is simply that the standard owners felt the need for improved management and control systems to ensure the safety and quality of produce from small-scale grower schemes involving many individual growers.

3.3 Farmers' positive views

- The creation of centralised facilities by many of the schemes in Kenya was seen as beneficial by farmers as they saved money on inputs such as seed, fertilisers, chemicals and protective clothing via bulk purchasing agreements. Schemes with centralised spray teams recognised the savings made on infrastructure and materials for crop protection.

- In one of the schemes in Kenya, group organisation and improved management had been used to improve credibility for accessing credit for purchase of inputs.

- In Kenya one export grower scheme has used EurepGAP inspired group organisation to establish a group savings scheme to obtain credit and earn interest on the savings. Group savings are used for inputs and cash advances to pay for picking labour.

- Good agricultural practice has improved efficiency and profitability of farming operations as yields and product quality have increased and wastage of chemicals has been reduced due to following proper crop protocols.

- EurepGAP compliant record keeping has enabled farmers to evaluate the profitability of farming as a business and reduce theft of inputs by farm workers.

- Creation of traceable plots with coded markers linked to records has enabled many farmers to calculate the cost of production per plot and hence to obtain a further measure of profitability.

- Introduction of proper crop rotation has improved soil fertility and reduced the number of pests seen in the crop.

- Using proper harvest containers exclusively for produce has improved product quality and income levels because the percentage of rejects has fallen due to less damage in handling.

- Hygiene requirements and training have been transferred to households within the community and farmers believe personal hygiene has been improved.

- Correct storage of farm chemicals, handling of pesticide washings and disposal of empty chemical containers has reduced health risks through spillage and inappropriate use of empty containers (water carriers & children's toys). Some farmers believe that correct handling of pesticides is also good for the environment.

- Safe and effective use of pesticides has reduced the risk of contamination of the spray operator and some claim to have noticed health benefits from reduced exposure to pesticides.

- Improved understanding of pesticide selection, access to approved lists with application details, and training on crop scouting and correct techniques for application has eliminated the risk of crop loss due to inappropriate chemical selection and reduced wastage as pesticides are only sprayed following proper scouting and spraying is better targeted due to improved levels of competence of the spray operators.

3.4 Farmers' negative views

- The majority of farmers in Kenya complained that the cost of compliance was too high when compared to the level of return from fresh produce exports. If a premium was paid for compliance this problem would be overcome and many more farmers would be interested in resuming growing for EurepGAP compliant markets.

- Most Kenyan farmers felt that the level of return could not justify the investment made in infrastructure and record keeping. Two farm groups (of 35 and 40 farmers respectively) complained that they had exhausted all of the group's collective savings from produce sales which amounted to £8,000-£8,500 accumulated over three years prior to implementation of EurepGAP.

- There was a general concern amongst farmers in Kenya that EurepGAP certification could not be maintained once donor support was withdrawn as costs are higher than the returns and personal savings have been exhausted.

- Some certified Kenyan groups had withdrawn from the export market, as they were unable to afford the costs of the surveillance audit and routine tests for compliance with maximum residue limits of pesticides and microbial contaminants.

- Several farmer groups reported feeling demoralised and de-motivated, as prices remained the same even after certification; some reported that nearby groups were still exporting without trouble even though they had made no effort to attain EurepGAP certification. The worst affected of these certified groups have withdrawn from supplying EurepGAP compliant markets.

4 Conclusion

4.1 Is EurepGAP responsible for Kenyan farmers becoming excluded from retail markets or changing from one marketing channel to another?

It is not possible in most cases to give a definite statement of the total number of growers affected or excluded by EurepGAP as the numbers are difficult to track and the farmer groups excluded by one exporter have sometimes been picked up by a different exporter. In some cases members from a collapsed group manage to join a more successful group and retain access to EU retail markets.

In Kenya the majority of exporters reported relying on spot buying from farmers and brokers prior to 2003 when EurepGAP first became a major issue for the Kenyan fresh produce industry. Under the spot buying system, traceability and development of contractual relationships were not important so none of the exporters could provide figures for the number of growers involved at this time. However, with the coming of EurepGAP all of the companies interviewed were forced to stop spot buying and develop more permanent relationships with groups of small-scale growers. Most of these groups were already in place and were registered with the Kenyan government as Self Help Groups (SHG) but none of these groups possessed any of the systems or infrastructure required to attain EurepGAP at the start of the implementation process.

Table 4.1 Summary data on small-scale growers impacted upon by the implementation of EurepGAP, Kenya

Exporter	Number of SSGs involved at the introduction of EurepGAP	Number of SSGs involved in 2006	Number of EurepGAP certified SSGs	Number of SSGs dropped since EurepGAP introduction
1	750	750	750	0
2	1,180	300	40	880
3	400	14	0	386
4	360	360	0	0
5	107	33	33	74
6	605	237	126	368
7	500	170	18	400
8	4,000	2,000	200	2,000
9	1,200	73	0	1,127
10	240	0	20	240
TOTAL	**9,342**	**3,937**	**1,187**	**5,475**

Table 4.1 provides a summary of data from the companies and one VMO surveyed as part of this work. These companies belong to the top 18 companies in Kenya who control more than 50% of fresh produce exports from Kenya. Four of the companies surveyed controlled around 50% of fresh produce exports to the EU. A glance at the table shows that in 2003 when EurepGAP implementation started, the exporters sourced produce from 9,342 SSGs and this would have provided livelihood for ~70,000 dependent family members and employees.

By 2006, 60% of these growers had been dropped from the EurepGAP compliance schemes by their exporter due to problems with implementation of EurepGAP. Of the 40% of SSGs retaining access to EU retail markets, 31% had been certified for EurepGAP. 15% of the farms that have attained EurepGAP certification have since been dumped by their exporter, as the costs of maintaining certification were not matched by the level of income from produce obtained by these growers.

All of the farmers had to invest their own money towards attaining EurepGAP compliance and many complained that all of their personal and group savings (typically £8,000-£8,500 between 30-40 farmers which had taken five years to accumulate) had been exhausted in establishing EurepGAP compliant infrastructure. Export companies have also made large investments and some of the smallest companies complained of significant losses through investments in groups of farmers that ultimately either failed to complete certification or could not be re-certified due to the high costs of maintaining compliance.

All of the companies and farmer groups had received significant levels of donor support, which had helped in the short-term to pay for training programmes, leaflets and signage and in a few cases for protective clothing and other equipment. However, donor support was not sustainable and the farmer groups could not maintain EurepGAP certification without continued external support. In the most successful schemes certification has been implemented and maintained through very large investments and ongoing support by the export company. It is unsurprising that only the three largest companies in Kenya are providing this level of support, and only the largest company could afford to provide the highest level of support required to support both EUREPGAP and TNC certifications for ~1,000 SSGs.

In Kenya, the most common causes of being dropped from a EurepGAP scheme by an exporter were an inability to pay for the cost of EurepGAP compliance or lack of economic viability when the costs of compliance were compared with produce sale. Of the 5,475 SSGs excluded from EU retail markets, 54% were dropped for reasons of cost; the remaining 46% were dropped by their exporter who was seeking an efficient and manageable number of growers to get through EurepGAP.

All of the exporters interviewed had had good relationships with the small-scale sector in the past, and most still valued SSGs as a source of supply because of quality and attention to detail and flexibility of operation associated with well-managed small-scale schemes. However, all companies felt that the future of SSG involvement was threatened by a combination of static or falling prices for export vegetables, increasing costs of air freight, increasing costs of standards compliance and fluctuations in the value of the Kenyan Shilling. The rising cost of standards compliance was viewed as a serious issue. The overall trend for smallholder involvement is downwards and complete exclusion is not an unreasonable possibility. Some of the observations made during the fieldwork are detailed below.

Three of the exporters commented that they have new policies on minimum farm size for economic viability ranging from two to ten hectares, as they have found that the high cost of technical support for large numbers of farms of <1ha is not justified by the level of income derived from produce sales. These policies effectively spell the end of SSG involvement for these companies (one exporter has already stopped purchasing from the small-scale sector). One of the largest exporters in Kenya was concerned over the idea that EurepGAP is starting to ask for one MRL test per farm site. This exporter had 306 SSGs and pointed out that

testing for all sites would cost £40,000 per annum, which would not be affordable (or justified in the opinion of the exporter).

A company technologist for one of the major exporters highlighted how fragile the viability of SSGs can be in the face of rising costs for compliance with private standards. She noted that until 2006, the standard required by the UK supermarket accepted cotton overalls costing £14 per annum for spray operators. However, the standard has been changed and now requires spray operators to have a waterproof overall costing £40 per annum – a significant portion of their income. The technologist also noted that since small-scale growers handle very small quantities of chemicals (max. 15 litres per spray) a spray suit designed to meet the needs of tractor boom spray operators handling very large quantities (several thousand litres of mix per spray) of chemicals is an unnecessary and unaffordable expense.

4.2 Is EurepGAP certification viable for smallholders and what were the lessons learnt from Kenya?

The findings from the review of the eleven export companies in Kenya confirmed that small-scale growers have the technical ability to be EurepGAP compliant given the right level of support of financial and technical support. Individual certification under option 1 of EurepGAP was not cost effective for growers with productive areas of less than 8.0ha, leaving option 2 as the only possibility. The relative levels of income of the small-scale producers were too low to enable them to obtain certification under option 2; external support was required both for the establishment and maintenance of EurepGAP. This support had to be provided by an export company or independent commercial marketing organisation often subsidised at the establishment stage by external agencies in the form of donors.

Sustainable EurepGAP compliance by small-scale growers was found to be related to the level of commitment and resources made by the export company. Only two of the schemes examined were running sustainably. These two were operated by the largest exporters in Kenya. The exporter for one of these schemes evidently had the resources but was expressing doubts about continuing with small-scale growers for business reasons. The other appeared happy to pay for 86% of the maintenance costs of a large and very well managed EurepGAP compliant SSG scheme. Farmers within this scheme made comments about the costs of EurepGAP but did not see these costs as a big issue and were highly positive about growing EurepGAP compliant produce. This was due to the fact that the farmers were unaware of the real costs of standards compliance as most costs were met by the exporter.

Smaller export companies were in a very different position; most had relied heavily on donor support amounting to 40-100% of establishment costs as compared to 15-28% for the large companies. Smaller companies were more likely to push more of the costs of compliance onto the farmer and to operate a cheaper system with many inefficient or technically unsustainable features to reduce costs. Some of these companies were frank in saying that they cannot see how the system can be maintained once donor support is withdrawn. Interviews with farmers associated with these schemes showed how such farmers are more aware of the very high costs of compliance than those supplying large companies and that they cannot see how a compliant system can be maintained without a dramatic increase in income. All of the failed and failing schemes are associated with the smaller companies who lack the necessary resources to operate an efficient and sustainable EurepGAP compliant scheme.

Financial support by the export company was vital for the small-scale growers but was not sufficient. The second key role for the exporter was as provider of both managerial and technical support for the growers. The largest of the export companies had well staffed and resourced outgrower management teams, comprehensive annual training programmes, internal auditors and programmes for sampling and laboratory analysis. The company was clearly fulfilling the role of primary marketing organisation (PMO) for the growers and was capable not only of providing the necessary managerial, technical and logistical support but was also able to represent the growers effectively during the certification audit. There was also evidence that the larger companies were in a better position to source high quality, disease resistant planting material and other agricultural inputs in bulk and hence at a more competitive price. In contrast, the smaller exporters had very limited outgrower management teams or in some cases the team was virtually non-existent. Training programmes were more limited in scope and some of the smaller companies hoped that the training programmes funded by donor agencies could be considered as a one-off and would not have to be repeated at the exporter's expense in future years.

Support from external agencies such as donors was most effective when applied to large companies with well resourced outgrower programmes where the donor support formed a useful adjunct to the establishment process, but the exporter could easily take over funding in the absence of the donor. With the medium-scale exporters there was concern that the company would not be able to afford to continue to fund activities once donor support was withdrawn. The smallest companies were unable to fund their compliance system properly and hence areas not covered by the donor such as infrastructure and outgrower management support were woefully inadequate in many cases. It was clear that these companies could not possibly continue the programmes started by the donors due to the lack of resources.

Export companies often complained that donor activities dealt only with short-term recurring costs such as training, laboratory analyses and certification audits and provided no infrastructural support for the farmers. This was not an entirely accurate statement although it could be applied to the work of the PIP. However, it would be wrong to imagine that simply investing a lot of money in infrastructural support will solve the growers' problems. This was the situation in Zambia where a high percentage of the infrastructural requirements including elaborate produce handling facilities were paid for by donor agencies. The missing link in Zambia was the absence of an effective PMO following the collapse of the farmers original export partner. However, it remains vitally important to look at the commercial sustainability of the VMO's activities post-donor funding. The VMO examined in this work is undoubtedly commercially viable, but there were some concerns that the margins made by the VMO are insufficient to fund the necessary level of support for a EurepGAP compliant outgrower scheme.

Annex 1: Case studies of Kenya smallholder export schemes

A1 Case study 1

Introduction

The export company associated with case study 1 is the biggest in Kenya with the highest level of resources and the most developed EurepGAP compliant outgrower scheme. The scheme consists of 900 outgrowers. 750 of these are quite small and deliver produce to communal collecting sheds; the remaining 150 are large enough to have their own on farm collection shed.

Features of the system

The scheme starts with comprehensive farm site infrastructure, which was largely the farmers' responsibility to provide (Table 1.1). Interestingly enough there was little attempt by the company to reduce costs by centralising key features of the farm infrastructure. Instead each farmer was expected to have his or her own CPP store, fertiliser store, seed store, knapsack sprayer and PPE. Farmers were responsible for their own spraying. These facilities are very expensive for the growers, for example a CPP store cost £48 to build and most farmers had incomes of around £417 per annum making this a significant expenditure for the grower. For the 750 smaller farmers, there were 60 collection sheds based around rented village shop units. These were well fitted out and again most of the costs for establishment of the system were paid by the farmers.

The farmers only paid for the farm site and collection sheds, and these components cost £636 per farmer for establishment and £175 per annum to maintain (Table A1.4). The farmers had evidently been carefully selected on the basis of land area and income potential which ranged from £417 to £1,250 per annum, which was much higher than that seen with most of the other schemes in Kenya. Even so farmers complained at the high costs of standards compliance and noted that it took between two and three years to recover the costs of investment. However, the farmers interviewed appeared happy and confident in the export company and in their ability to continue to access a EurepGAP compliant market.

This was hardly surprising given the very high level of investment made by the company in the both the establishment (50%) and maintenance (87%) of the costs of the outgrower scheme (Table A1.3). Without company support the scheme would have cost £1,819 per grower to establish and £1,319 (Table A1.4) to maintain which would obviously be impossible for the small-scale growers.

The company support was not purely financial; the outgrower management team associated with this scheme was very large with 128 staff, 70% of which were purely concerned with issues of standards compliance. In addition the company was providing a comprehensive annual training service for the growers, extensive laboratory analyses and documentation for traceability purposes.

The company benefited from donor contributions towards the establishment costs of the system amounting to 15% of total cost (Table A1.3). However, the company could clearly maintain the system without donor support, although the lead author of this report would expect the company might consider reducing its sampling programme once donor support was

withdrawn as the company had made good use of donor funding to get a large number of pesticide residue analyses done for the outgrower scheme, thus creating a valuable body of evidence on the risks of chemical contamination associated with small-scale growers.

Table A1.1 Distribution of costs for establishment of a EurepGAP compliant system for 900 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£279,547	17	£259,533	£10,800	£9,194	
Central system	£326,350	20	£312,948	£8,592	£4,810	
Outgrower management team	£285,312	17		£285,312		
Operational costs	£502,005	31		£502,005		
Overheads	£680	0.04		£680		
Training	£65,009	4.4			£65,009	
Documentation	£23,319	1			£23,319	
Laboratory analysis	£144,343	9		£1,077	£143,266	
Certification	£10,857	1		£5,920	£4,937	
Total cost:	**£1,637,423**		**£572,501**	**£814,387**	**£250,535**	

Table A1.2 Distribution of costs for maintenance of a EurepGAP compliant system for 900 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£56,052	5	£56,052			
Central system	£108,228	9	£101,316	£6,912		
Outgrower management team	£285,312	24		£285,312		
Operational costs	£501,915	43		£501,915		
Overheads	£680	0.06		£680		
Training	£52,196	4.3		£52,196		
Documentation	£23,319	2		£23,319		
Laboratory analysis	£144,343	12		£144,343		
Certification	£10,857	1		£10,857		
Total cost:	**£1,182,902**		**£157,368**	**£1,025,534**	**£0**	

Table A1.3 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	35	13
Exporter	50	87
Donor	15	0

Table A1.4 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 900 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors**
Capital cost for establishment of the system	£636	£1,819
Annual cost for maintenance of the system	£175	£1,314
Estimated net annual income from export vegetables	£417-£1,250	£417-£1,250

The scheme outlined under case study 1 had enabled 900 small-scale growers to attain EurepGAP and Tesco Natures Choice (Base standard) and retain access to lucrative export markets. The scheme was evidently sustainable as long as the exporter continued to provide the same level of support, but could not be maintained without the exporter on either financial or technical grounds. The authors saw little to criticise in the main approach although there appeared to be potential to reduce costs for storage and application of CPP if a centralised system could be introduced.

The SSGs are attractive to the exporter as they take personal care of the product (small areas and family labour) and the exporter only pays for the exportable percentage, the cost of rejects are met by the SSG. Losses incurred due to fluctuations in market demand are absorbed by the SSG, which is another attraction from the exporter's viewpoint. In effect, the exporter is concerned with hiring management and land capacity via the SSG scheme without bearing many of the risks associated with production on their own farms. In return, the exporter is responsible for most of the costs and all the management associated with a EurepGAP compliant system. According to the outgrower manager, 70% of this system is purely related to standards compliance with the remaining 30% being essential for management of production and collection of produce. The outgrower manager would get rid of 70% of his staff tomorrow if standards compliance were no longer necessary.

The export company associated with this scheme appears happy to continue to support small-scale growers, but the level of support and sophistication seen in this scheme are beyond the means of most of the exporting companies in Kenya as the case studies of their schemes revealed.

A2 Case study 2

Introduction

The export company in this case study is one of the largest companies in Kenya and worked well with some 1,180 small-scale growers (1 hectare average area) for about six years and was very happy with the quality of produce and cash payment at purchase relationship that suited both parties. Growers scattered around a given area were formed into groups of ~30 growers with a central collection shed in one of the villages. Small scale producers meet 65% of exported volume annually. This is broken down into: French beans 50%, snow peas 30%, passion fruits 15% and avocados 5%.

Prior to the introduction of EurepGAP the company used to procure produce either from the farmers directly or via middlemen known as brokers. The exporter was only obliged to pay and collect the produce without any lasting or contractual relationship with the producers. The producers were in turn free to sell to any exporter offering the best price.

After the introduction of EurepGAP, the company realised that certification of small producers under option 1 was not feasible but Option 2 was practical and the setting up of QMS required farmer group formations. The company management employed out grower managers in different regions of the country for the formation and organization of groups, namely: Mt Kenya, Central & Nairobi, Mwea, Mbarichu & Embu regions. The exporter contribution to the groups included technical support through technical assistants, free training in safe use of pesticides, hygiene, codes of practice such as EurepGAP and TNC.

Mt Kenya region Naromoru ,Mweya, Timau and Nanyuki

The company started with 48 groups with an average of 20 members registered as self help groups under the Ministry of Culture and Social Services. The farmer groups paid for their registration fees. To facilitate compliance with the standard the exporter disbursed credit facility to the group.

The credit facility covered seeds, pesticide store, fertilizers/seeds store, crop protection personal protection clothing and equipments, disposal pits, toilets/bathrooms, grading sheds, hand washing facilities and harvesting/grading personal protective clothing. The credit is recovered through deductions from sales of produce.

Nine groups pulled out of involvement with the exporter. Only two groups, Jericho SHG & Makena SHG complied and were certified in December 2005 by Africert certification body. The cost of certification, sampling and analysis of water, MRLs, soil and manure was met by the Horticultural Development Centre USAID/FINTRAC Project.

Jericho SHG had 22 members in the implementation phase and only 12 were certified; 10 pulled out because they were not willing to pay credit back to the exporter. The farmers that pulled out are still producing and selling to other exporters.

Makena SHG has now pulled out due to internal wrangles and members not willing to repay credit. The remaining members are still growing export produce and selling to other companies. The exporter has made unsuccessful attempts to recover the group.

Mwea, Mbaricho, Embu region

The region had initially two major groups known as Kendat farmers at Karii in Mwea and Royal Group Limited in Embu. There were six groups under Kendat farmers, namely: Nyangati-Murima, Kiwe, Koka, Kionereria, Kanguma and Murumbara. Each had between 25 and 30 members. The farmers had two to three acres of active growing for export.
The farmers were supported by Kendat Ltd. to put up structures for compliance to the EurepGAP standard. The company only gave credit in seeds. They also provided technical support through technical assistants and free training.

Currently, only Nyangati-Murima is supplying the exporter; the others have all pulled out. The information provided shows that there were issues from both the farmers and from the exporter. Farmers complained of low prices per kg of produce whereas in other cases the exporter ditched them for lack of commitment to compliance.

Nyangati Murina, certified in December 2005 by Africert, has 28 active members and was recently re-certified for EurepGap and TNC in May by CMI. Active growing area from the group is 79 acres. The group has central structures i.e. pesticide store, fertilizer/seed store, grading shed, office, charcoal cooler, portable hand washing facility and disposal pit. To facilitate the group's compliance the exporter provided credited towards PPE, harvesting containers and seeds, which is recovered from produce sales. Residue, water and soil analysis and certification costs were met by HDC in 2005 and PIP in 2006.

The ditched farmers that were initially under Kendat farmers are still growing for other export companies. For the ditched groups all the structures are incomplete except family toilets.

Central/Nairobi area

The area has about ten certified individual farmers. The company supported the farmers on technical issues. Trainings and water, soil and residue analysis ware paid for by USAID/FINTRAC.

The coming of standards has dramatically increased costs and technical requirements for plot level traceability. The company has decided that the costs incurred in achieving compliance with the standards are not matched by the level of returns from the smallest growers (described above) and has decided to set a minimum outgrower size of eight hectares. The company noted that 80% of SSG production has been lost as a result of this change in policy and it looks as though they will soon stop using small-scale growers completely. The company had six groups of 30 SSGs certified successfully for EurepGAP in late 2005 by Africert (with PIP support) but has now dropped all but one of these groups due to the problems mentioned above.

Increased costs also effect the farmers themselves. Larger farmers can meet the increased costs and can pay in instalments for expensive equipment but the very small growers cannot cover such repayments. The company cited the TNC requirement for waterproof CPP spray suits rather than cotton overalls, which have increased the cost of overalls to £40 as opposed to £14 for cotton overalls. Given that many small-scale growers will make £400 per annum income from export vegetables, the water-proof spray-suit alone will consume 10% of their annual income. However, small-scale growers use very small amounts of chemicals so an elaborate suit might not be justified.

Several of the larger growers have withdrawn as they are upset with the way that standards seem to keep on rising and cannot see the necessity for the extra measures. The company said that some of the smaller groups have had to invest in structures for certification purposes that are never used (except during an audit!). Examples included central CPP stores that are not used because of the risk of theft and besides each farmer only has one bottle of pesticide at any one time. Some have built seed and fertiliser stores but these were not used as they only purchased one or two bags of fertiliser at a time and generally used them on the day of purchase.

The exporter feels that EU people do not understand the small-scale sector and rely on perceptions of risk rather than objective risk assessments.
There have been problems with lack of competence by auditors creating unnecessary expense. For example, one auditor on seeing a hand-wash station outside a field toilet asked for proof that every worker visiting the toilet washed their hands before returning to the field. To overcome this "non-compliance" the farm was required to start a toilet and hand-wash usage log where workers sign off to show that they have followed correct procedure. This is an example of poor auditing practice. The auditor should look for evidence of structures in place and correct written procedure in the QMS, observe activity in the field and then confirm findings by asking workers to explain what procedure they follow when using the field toilet.

The exporter was much in favour of documentation because of vertical and horizontal traceability but felt the example given above highlighted how documentation can go to extremes, wasting time and money just to comply with a pedantic interpretation of a standard.

Features of the system

The system described here deals with 40 small-scale growers who were certified under option 2 of EurepGAP in October 2005. The farm sites have basic infrastructure and all farmers have their own set of PPE and knapsack sprayer as the farmers are responsible for spraying of CPP.

To reduce costs the group had one central management unit on rented land consisting of seed and fertiliser stores and a CPP store. The collection shed was a separate facility built on land purchased for the purpose.

The exporter provides an outgrower management team and undertakes to provide for training, documentation, laboratory analysis and certification audits.

The system seen in case study 2 is similar to that found under case study 1 with an elaborate system in place. However, for case study 2 the level of donor support was 64% as compared to just 15% for case study 1. All the discussions with the export company under case study 2 indicated that they did not feel that the returns matched the level of investment in standards compliance and for this reason were moving away from small-scale growers and going for much larger farms (with a minimum of eight hectares) that can sustain EurepGAP compliance much better with a lower level of involvement from the export company. At the time of the survey the company had dropped 80% of their small-scale growers and it looked as though they might drop the remainder within the next twelve months purely because of the high costs of standards compliance.

Managing director of the export company said the introduction of annual or bi-annual MRL testing for all farm sites within an outgrower scheme would be sufficient to force this move as even annual testing with the current scheme of 300 growers would represent an outlay of £45,000/annum which could not be justified when compared to returns from produce sales.

Table A2.1 Distribution of costs for establishment of a EurepGAP compliant system for 40 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£9,525	15	£9,525			
Central system	£1,234	2.2	£1,234			
Outgrower management team	£5,184	8		£5,184		
Operational costs	£6,280	10		£6,280		
Overheads	£0	0				
Training	£7,520	12			£7,520	
Documentation	£960	2		£960		
Laboratory analysis	£31,040	49			£31,040	
Certification	£2,244	4			£2,244	
Total cost:	**£63,987**		**£10,759**	**£12,424**	**£40,804**	

Table A2.2 Distribution of costs for maintenance of a EurepGAP compliant system for 40 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£1,840	3	£1,840			
Central system	£25	0.04	£25			
Outgrower management team	£5,184	9		£5,184		
Operational costs	£6,280	11		£6,280		
Overheads	£0	0				
Training	£7,520	14		£7,520		
Documentation	£960	2		£960		
Laboratory analysis	£31,040	56		£31,040		
Certification	£2,244	4		£2,244		
Total cost:	**£55,093**		**£1,865**	**£53,228**	**£0**	

Table A2.3 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	17	3
Exporter	19	97
Donor	64	0

Table A2.4 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 40 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors**
Capital cost for establishment of the system	£269	£1,600
Annual cost for maintenance of the system	£47	£1,377
Estimated net annual income from export vegetables	£970	£970

Farmers' views on standards

The farmers are very positive about the EurepGAP Standard, because of the slightly higher selling price offered by the company and other indirect benefits. However, the price increase is hardly enough to meet the cost of compliance.

The little income gained from the business does not meet the farmers' domestic needs. The farmers have so far depleted all their development and personal savings towards the structures for compliance and still needs more to improve on them.

The standard is good and the farmers would only be comfortable if there was reasonable price difference.

Farmers benefits from standard compliance

1. The farmers have had training in the safe use and handling of CPP and fertilizers. The training leads to Good Agricultural Practice that has enabled the farmers to:

    - Produce better quality crops
    - The farmers have previously been using CPP without advice and could even misuse and mishandle them, exposing themselves, consumers and the environment to risk of contamination. With the safe use and handling training the farmers now are able to use and handle the CPP properly with minimal risk of contamination
    - The hygiene requirements implemented and know-how gained through training have improved the general health and hygiene practices of the people

2. The field subdivisions into traceable plots have enabled the farmers to calculate the cost of production per plot

3. Crop rotation.

A3 Case study 3

Introduction

The export company for case study 3 is a small company in the 500-1,000 tonnes per annum range concentrating on export to Belgium, France, UK and the Netherlands. Small producers met 100% of the export volume during the low season and 25% during peak seasons; at peak season the remaining 75% is procured on a cash basis from brokers. Produce handled includes French beans, garden peas, snow peas, sugar snaps and baby corn. The company has had two abortive attempts to meet the requirements of EurepGAP with small-scale growers (described below) and has not seen any added value associated with EurepGAP compliance and hence is concentrating effort on supplying markets that do not require EurepGAP as a minimum for market access.

Initially the company worked with 400 SSGs in two groups in Mwea and three groups in Ndaragua Nyahururu. With the introduction of EurepGAP the company decided to approach the implementation in phases whereby the company selected two groups to assist it in the compliance process in 2004, with one group in Kimbimbi and the other in Ndaragwa Nyahururu, and a total of 128 SSGs.

For the 128-member Nyahururu group field structures (collection shed, CPP store, fertilizer store, equipment store and toilet/bathroom) had been completed with 50% farmer contribution in the form of labour and 50% company contribution in the form of cash for all materials required for construction. The company also offered training and technical support via technical assistants. The Kimbimbi group had almost completed the construction of a communal collection shed and were about to begin the other structures when the company decided to ditch the groups.

Throughout the period the company was involved with implementation of the standard, a lot of resources were spent in terms of credit towards purchase of construction materials, certified seeds and salaries to technical assistance staff that did not match the production gains, thus not justifying the expenditure. These amounts were not recovered from the farmers. The expenditure is summarised in table A3.1.

Table A3.1 Distribution of costs for establishment of a EurepGAP compliant system for 128 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site						
Central system	£4,360	32	£2,180	£2,180		
Outgrower management team	£8,960	66		£8,960		
Operational costs						
Overheads						
Training						
Documentation	£320	2		£320		
Laboratory analysis						
Certification						
Total cost:	**£13,640**		**£2,180**	**£11,460**	**£0**	**£0**

Table A3.2 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	Establishment	Maintenance
Farmers	16	NA
Exporter	84	NA
Donor	0	NA

Table A3.3 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 128 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	With no direct financial support from exporter or donors
Capital cost for establishment of the system	£9	£107
Annual cost for maintenance of the system	NA	NA
Estimated net annual income from export vegetables	Not determined	Not determined

As can be seen from tables A3.1 to A3.3 the company's first attempt at EurepGAP compliance was mainly (84%) company funded with no donor support. The level of production from these growers did not match the level of funding provided by the company for standards compliance and the growers proved disloyal with a tendency to side sell company produce to brokers during the peak season when the company had most need of reliable deliveries.

The company then opted to stop dealing with the 128 small producers and concentrate on individuals who had >2ha of active growing land, excluding the homestead plots. The logic in this decision is that the production and income from these farms would justify the structures in terms of finances and space without involving the company. These farmers produce from 0.5 to 3 tons of produce per picking thus minimising the possibility of selling to brokers who more often than not will not pay in full for such large consignments of produce and may never pay balances owed at all. The company declared most of the TAs redundant and has retained only one agronomist and one TA for all company operations as this is all that is required for a smaller number of larger farms.

The company is currently involved with ten individual farmers in Mwea, four individual farmers in Ndaragwa and their own farm. The production volumes are maintained because of the loyalty of these farmers. The company views own farm production as the only solution to small producers' intensive monitoring and assistance and hopes to increase own farm production to 50% in the future.

The company has received substantial financial support from PIP towards the cost of getting the current group of fourteen medium growers through EurepGAP certification (Tables A3.4 to A3.6). Donor funding has focussed on training, laboratory analyses and some aspects of operational costs and the donor would also pay for certification should the scheme reach this stage. However, certification is very unlikely to occur as the exporter from previous experience is unwilling to commit any funds towards standard compliance and the growers have made no financial commitment towards farm or central structures as they find the costs too high relative to the level of income derived from fresh produce sales.

Table A3.4 Distribution of costs for establishment of a EurepGAP compliant system for 14 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site						
Central system						
Outgrower management team						
Operational costs	£6,928	18			£6,928	
Overheads						
Training	£30,020	78			£30,020	
Documentation						
Laboratory analysis	£1,539	4			£1,539	
Certification						
Total cost:	**£38,487**				**£38,487**	

Table A3.5 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	0	NA
Exporter	0	NA
Donor	100	NA

Table A3.6 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 14 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors**
Capital cost for establishment of the system	£0	£2,749
Annual cost for maintenance of the system	NA	NA
Estimated net annual		

income from export vegetables	£15	£15

Company view on funding by external agencies

PIP has funded the company. The funds were for one-off activities such as training, certification, soil, water and residue analysis, QMS development, risk assessments and consultancy on the implementation process. A local consultant selected by the company has been contracted by PIP to take the farmers through the implementation process to certification. So far only training sessions have been conducted. The company management says that these activities impact positively on the beneficiaries, however the key constraint remains that even after imparting know-how, lack of finances prevent implementation or maintenance of the EurepGAP system. The company proposes that PIP should strike a balance between enabling know-how and financing the erection of structures and purchasing of necessary equipment (this would be against the remit of the PIP programme).

Benefits of compliance for SSGs

The management and the farmers themselves confirmed that training on good agricultural practices and correct use of CPP and hygiene practices improves the quality of food produced both for local and international consumption. The general health of the farmers is significantly improved upon application of these good practices. The know-how imparted to farmers enables them to view farming as a business and not a family operation, thereby increasing their ability to calculate profit margins and make better-informed decisions on farm inputs usage. This reduces the cost of production raising the net income (but this must be set against the high costs of standards compliance).

Small scale producers' challenges

The farmers raised the following as the challenges to export horticulture:

- Cost of implementation of the standard is too high
- Cost of farm input hence cost of production is very high
- The income earned from the export farming is very low and hardly enough for daily needs besides farming
- The exporters' delayed payments, based on unpredictable packable weights, leaves the farmer without operating capital to continue with business
- The prices are constant during peak and off peak seasons, subjecting the farmers to the temptation to sell to brokers who may offer twice as much as the exporter during peak seasons
- The exporter lacks commitment to collection of all produce picked even though the farmers have followed the planting programme. The farmers at times lose the already harvested produce due to non-collection of produce.

Farmers' views on standards

The farmers are very positive about EurepGAP. However, the prices are too low to justify the cost of implementation. The farmers feel that if only the prices would be adjusted upwards to counter the cost of compliance then all would be willing to comply. The farmers believe that with the current prices even if the exporters offer free training and technical advice, the net income will not justify the implementation, hence the unwillingness to make any commitment to investing in farm site or centralised infrastructure.

A4 Case study 4

Introduction
The exporter is one of the oldest export companies in Kenya, and exports 4,200 tonnes of fresh produce annually to Europe. The produce includes mainly runner beans, French beans, baby corn, passion fruits and avocados and a small percentage of Asian vegetables.

60-70% of the produce is sourced from small-scale growers and brokers; 40-30% comes from own farms. The company has two farms on Thika and Nanyuki.

Company view of standards in the production and marketing chain
The company's client requires compliance with EurepGAP, LEAF and TNC. The company management view standards as the right direction for the horticultural industry as they reflect food safety concerns. However, the management was quick to mention that there is no added value to compliance despite the increased cost of production as a direct result of cost of implementation of standards both to exporters and producers. The prices have remained constant or even lower in the destination markets. Although freight charges and increased energy costs have significantly increased the cost of production, the cost of compliance is far higher than these. This is compounded by unpredictable currency exchange rates fluctuations.

Company involvement with SSGs
With the market requirements getting tighter year by year, the company had at first thought of doing away with all the small-scale producers due to logistical and technical difficulties. The certification of small-scale producers under option 1 was recognised as impractical. Option 2 certification is more practical and feasible, but requires the formation and organisation of small-scale producers into groups. Recently the management decided to adapt the quality management system used on their own farms for use by small-scale producers. The company organised the groups. The implementation of QMS and the compliance criteria of EurepGAP are already in process with eight groups in Karii and five groups in Thika. An external audit was carried out at the end of August 2006. In future, the company intends to be further involved with a group called Meru Greens, which is in the process of implementing EurepGAP.

Features of the system
The small-scale grower scheme consists of 360 growers in thirteen groups, but the company chose 70 growers in seven groups as the initial batch for EurepGAP certification under option 2.

All farm sites under the scheme had basic infrastructure in place and the scheme relies heavily on centralised systems to reduce overall costs.

Each group has a central CPP store and fertiliser store in rented premises. Spraying has been centralised with a two-man spray team and four sets of PPE per group. Empty CPP containers are incinerated at the exporter's premises.

The two groups have thirteen collecting sheds; these are elaborate structures built at the farmers expense but on rented land which is obviously a relative risk depending on the length of the lease. Each collecting shed has a seed store reserved for central storage of seed provided by the exporter. The farmers employ six staff members to act as record clerks and field supervisors.

A key feature of the establishment of the EurepGAP system for this exporter was to shift as many expenses as possible to the farmer and minimise the direct cost to the exporter. Thus, for example, the exporter takes the role of printing and laminating procedures but the farmers must pay the costs for production of the material.

The export company has provided a minimal level of outgrower support in the form of an outgrower management team consisting of two staff members for field visits to growers, one senior staff member for occasional visits to the growers and two staff members to cover issues of traceability. This is a wholly inadequate system that cannot possibly provide the necessary level of technical support for a small-scale grower scheme.

Training provision was comprehensive but was viewed as a one-off exercise for the outgrowers, which seems unsustainable.

A limited programme of laboratory analyses was conducted and this was funded by external agencies. The company confirmed that they will expect the growers to pay for recurring costs of laboratory analysis in ongoing years.

At face value this scheme seems reasonably well organised and sustainable as long as the exporter maintains a high level of support for the growers. However, the absence of ongoing training programmes and the low level of support provided by the outgrower management team raise grave doubts as to the long-term sustainability of the system. In addition (Table 4.4) the growers' income from export vegetables is very low at £98 per annum and at this level a maintenance cost of £61 per annum would appear to be unacceptably high and make growing of EurepGAP certified vegetables non-viable.

Table A4.1 Distribution of costs for establishment of a EurepGAP compliant system for 360 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£23,340	13	£23,340			
Central system	£81,600	45	£80,400	£1,200		
Outgrower management team	£4,160	2		£4,160		
Operational costs	£9,664	5		£9,664		
Overheads	£29,952	16		£29,952		
Training	£7,994	4		£480	£7,464	
Documentation	£13,862	8	£42	£5,540	£8,280	
Laboratory analysis	£1,950	1			£1,118	£832
Certification	£9,683	5		£8,907	£775	
Total cost:	**£182,154**		**£103,781**	**£59,904**	**£17,638**	**£832**

Table A4.2 Distribution of costs for maintenance of a EurepGAP compliant system for 360 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£265	0.3	£265			
Central system	£19,824	23	£19,824			
Outgrower management team	£4,160	5		£4,160		
Operational costs	£8,936	10		£8,936		
Overheads	£29,952	35		£29,952		
Training	£0	0				
Documentation	£9,722	11	£42	£9,680		
Laboratory analysis	£1,950	2	£1,950			
Certification	£10,458	12		£10,458		
Total cost:	**£85,267**		**£22,081**	**£63,186**	**£0**	**£0**

Table A4.3 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	57	26
Exporter	33	74
Donor	10	0

Table A4.4 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 360 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors**
Capital cost for establishment of the system	£288	£506
Annual cost for maintenance of the system	£61	£237
Estimated net annual income from export vegetables	£98	£98

Impact of funding by external agencies

The company has the support of PIP and HDC. HDC and PIP funds focus mainly on implementation of the food safety system, training, crop protection and residue analysis. Since HDC and PIP funds are similar, to avoid the replication of allocation funds the company allocates proportions of funds from the two agencies to different activities. The company concentrates on marketing the programmed planting and collection of produce as per agreed schedule.

Impacts of funded activities

1. The funds have enabled general creation of awareness of private standards to the farmers
2. Technical staff capacity building
3. The funds have also enabled operation of expensive activities that the farmers and the exporters would have found difficult to bear
4. Needs assessments are carried out prior to implementation process, which makes it easier to fill the gaps than with an untargeted general approach to implementation
5. Development of tailor-made QMS by the exporter, its staff and associated growers on a wider consultation with the owners.

However the management feels that the donors should involve key stakeholders before initiation of funding to allow rational allocation and distribution of funds with respect to key activities.

Farmers' views on standards

The Farmers are generally very positive about the EurepGAP standard because of the indirect benefits gained from its implementation. However, the major issue is the high cost of implementation of the standard. The farmers have drained all their savings into putting up field structures and central structures and purchasing all the equipment required by the standard. These farmers hope that the company will offer higher prices after certification (although this seems unlikely to occur in practice).

Benefits of compliance for SSGs

1. The hygiene practices at the collection shed and field coupled with hygiene training have enabled the farmers to extend the same to their homesteads thus improving the general health of the community.
2. The Good Agricultural Practices with regard to safe use and handling of crop protection products, empty containers, washings and leftovers is not only improving the general health of the handlers but also conserving the environment.
3. Initially the farmers had blanket weekly spray programmes with or without pests or diseases. With the standards requirement to make justification for sprays, the farmers have employed staff who scout the crops and the company agronomist assist them to make decisions on when, how and what to apply. This way the amount of pesticides used has been reduced significantly, thereby reducing the cost of production.
4. The groupings of farmers for EurepGAP option 2 certification has enabled the farmers to organise central structures such as collection sheds, CPP and fertilizer stores. The farmers are benefiting from bulk purchasing of inputs and equipment again reducing the costs of production and operation respectively.

The groups have employed documentary clerks, field supervisors, and sprayers, thus creating employment opportunities.

Challenges for small-scale producers

1. The costs of farming inputs such as certified seeds, CPP and fertilizers are very expensive
2. The selling prices are too low to compensate for the high cost of compliance.

A5 Case study 5

Introduction

The exporter is a small Kenyan-owned company, exporting 1,000 tonnes per annum of fresh produce to the UK, France and Scandinavia. Produce range includes French beans, baby corn, snow peas, sugar snaps and garden peas. 70 to 80% of this produce is produced by small-scale producers and 20–30% by the company's own farms. However, due to increased production controls and supply consistency the company looks forward to increasing own farm production to 40–50 % and also shifting to high care processing.

Company view on standards

The company management believes that all producers, big or small, require standards such as EurepGAP for food safety initiatives. Food hygiene and good agricultural practices are applicable whether food is locally consumed or exported. However, affordability of compliance and maintenance of the standards is a key constraint to both the exporter and producer. The company views group organisation as essential as it makes it easier if communal central structures, equipment and personnel are utilised as opposed to reliance on decentralized individual resources. Since residue, water and soil analysis takes a large proportion of the cost, the company feels that centralisation of structures and group management lowers the cost reasonably.

Company involvement with SSGs
The company used to source produce from many farmers in three regions, i.e. Timau, Matuu and Mwea (Kimbimbi/Nguruvani), without any contractual relationship and the only records kept were for weight sourced.

With the introduction of private market standards, the company concentrated on 107 farmers in the three regions. Timau group had 66 farmers. The company later left the Timau group due to very high costs of implementing the EurepGAP standard and because farmers were not willing to spend the little earnings from farming on compliance. The company then concentrated on 33 farmers in two groups who complied and were certified in August 2005.

Despite the reduced number of small producers the company now receives produce volumes over and above those supplied by the higher number of farmers that were initially in their scheme. This has been attributed to producers increased know-how on good agricultural practice. The production per hectare of land has increased. Due to improved pest management (spraying based on pest scouting) and fertiliser application the producers reduced costs of production, which can be set against the increase in costs associated with standard compliance.

Features of the system
The system used by this scheme does not have extensive centralised systems. Farm sites have comprehensive infrastructure with each farm having a seed and fertiliser store. CPP stores are shared on the basis of one store between two to three farmers. Farms do not have incinerators as the company is collecting empty CPP containers and incinerating centrally at the exporters facility. The company pays 100% of the costs for transport and incineration of empty CPP. The exporter paid 50% of most farm infrastructural costs, and 100% of some items such as PPE.

The 33 growers in two groups are served by 18 collecting sheds; this seems a very high number but could be attributable to the farm sites being scattered geographically thus making a larger number of sheds necessary. The company paid 50% of the cost of construction of the sheds and 100% of other costs such as graders' salaries, technical assistants' bicycles and maintenance costs for the TA's bicycles.

The company had support from donor agencies, who paid 50% of the company's contributions towards farm site and collecting shed establishment cost. The company confirmed that they would be unable to continue to offer farmers such levels of subsidy once donor support is withdrawn.

The company has provided a specialised outgrower management team consisting of four technical assistants, one agronomist and two auditors at the exporter's expense.

A comprehensive training programme was provided for the technical assistants and these TAs are then expected to conduct annual training for all growers. However, the training of the TAs was considered a one-off exercise with no plans for annual updates. As donor agencies paid for 70% (Table A5.1) of the training costs for establishment of the EurepGAP scheme this is most likely a cost saving measure on the part of the company and it may be that the company is unable to afford to pay for the required level of training on an annual basis.

A limited programme of laboratory analysis was conducted and 60% of the costs were paid by donor agencies. Certification costs were split between the exporter and donor agencies with the donors paying for 70% of the costs.

Table A5.1 Distribution of costs for establishment of a EurepGAP compliant system for 33 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£11,998	15	£3,930	£6,139	£1,929	
Central system	£5,131	6	£1,472	£2,939	£720	
Outgrower management team	£5,760	7		£5,760		
Operational costs	£15,807	19		£15,345	£231	£231
Overheads	£217	0.3		£217		
Training	£38,364	47		£11,523	£13,420	£13,420
Documentation	£67	0.1		£67		
Laboratory analysis	£1,819	2		£728	£546	£546
Certification	£2,244	3		£673	£785	£785
Total cost:	**£81,408**		**£5,402**	**£43,392**	**£17,631**	**£17,631**

Table A5.2 Distribution of costs for maintenance of a EurepGAP compliant system for 33 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£2,017	6	£289	£1,728		
Central system	£614	2	£16	£598		
Outgrower management team	£5,760	16		£5,760		
Operational costs	£15,807	44		£15,807		
Overheads	£217	1		£217		
Training	£7,666	21		£7,666		
Documentation	£67	0.2		£67		
Laboratory analysis	£1,819	5		£1,819		
Certification	£2,244	6		£2,244		
Total cost:	**£36,211**		**£305**	**£35,906**	**£0**	**£0**

Table A5.3 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	7	1
Exporter	53	99
Donor	40	0

Table A5.4 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 33 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors**
Capital cost for establishment of the system	£164	£2,467
Annual cost for maintenance of the system	£9	£1,097
Estimated net annual income from export vegetables	£188	£188

In case study 5, donor agencies paid for 40% of the establishment costs (Table A5.3) with the exporter and farmers paying for 53% and 7% respectively. The exporter appears to be able to sustain this system to some extent but the approach to training and low level of laboratory analysis indicate a need to keep costs to a minimum. The exporter confirmed that they would be unable to extend subsidies to further groups of growers without donor support. Farmers are only able to meet the costs of compliance with extensive support from external agencies (Table A5.4).

A6 Case study 6

Introduction

Case study 6 is unique in involving two export companies linked to a small-scale grower scheme via a vegetable marketing organisation (VMO). The exporters in this system simply buy produce via the VMO and make no financial commitment to standards compliance as these issues are handled by the VMO.

The VMO was started by one of the export companies in 1988, but is now an independent business that derives income from buying and selling fresh produce for export and taking a margin on the price of produce procured from small-scale growers for major export companies.

In the year 2000, the VMO formed a better service return program with the intention of certifying farmers under EurepGAP V1.0. The approach for implementation of the standard was a centralised system whereby the program had central agricultural officer and sprayers. The programme issued credit to farmers in terms of seed, fertilisers and pesticides sprayed on crops. The program failed because the farmers were unable to sell the produce as the winter season was late in the destination markets.

With increasingly stringent requirements and the need to comply with EurepGAP v2.1, the program was revived in 2004. At this time farmers became scared that non-compliance would lead to market exclusion and thus were more willing to cooperate in the reorganisation. The programme, having dealt with farmers earlier, selected loyal and hard working farmers and trained them on group management.

Twelve groups were formed in Sagana, Karatina region with varied membership. Six of the groups went through the implementation process successfully and were certified in 2005. The active growing area per farmer ranges from 0.25 to 1.5 acres.

Table A6.1 Farmer groups certified under a VMO scheme

Group	Total members	Certified	Production (tons/week)
Ushindi	36	21	2
Igaka	44	15	4
Wamunyoro	27	34	1
Wamwaki	19	19	1
Iruri	22	27	1
Sagana Mitero	34	10	2
TOTAL	181	126	11

All the certified produce is delivered to the main exporter and the smaller exporter takes produce from the currently uncertified growers who are still working towards certification.

Benefits of compliance derived by SSGs

Application of Good Agricultural Practice has helped the farmers to make better-informed decisions on usage and application of pesticides and fertilisers thus reducing the amounts of pesticides used and lowering the cost of production. This has also enabled the farmers to make timely application, significantly reducing losses due to pest and disease infestations. High quality produce is the end result. The hygiene requirements implemented and know-how gained through training has improved the general health and hygiene practices of the people. However the farmers do not have direct financial benefit from compliance since the exporter does not pay higher prices on the compliant produce. The costs of compliance are perceived to outweigh the benefits described above.

SSG challenges

The farmers are paid on packable weights and not delivered weights. The exporter decides on the packable percentage thus the system lacks transparency, which causes farmers to perceive themselves vulnerable to exploitation and manipulation of quality by the exporter.

There are no government policies to protect farmers over this issue in the country. More often than not, the farmers tend to be disloyal to the groups because of low prices after subjecting the delivered weights to rejection percentage, which is distributed and absorbed by all the farmers. In this case the farmers will opt to sell it to brokers who will offer the same or higher prices on delivered weight. Another challenge is the high cost of inputs, which in turn raises the farmers' cost of production thus reducing the profitability of farming as a business.

Features of the system

Each farm site has the basic infrastructure for EurepGAP compliance but heavy reliance is placed on a central management unit (CMU) and collecting sheds. The CMU includes centralised storage of all inputs and a central spray team with sprayers and PPE to reduce the unit cost per farmer.

The VMO has provided a large outgrower management team with 38 operational staff, which is a very high level for 182 small-scale growers. The VMO says that they pay for the cost of the outgrower management team and other aspects of the compliance system by charging a levy of 2.5p per kg of produce sold via the VMO.

Extensive donor support was provided for establishment of the system covering some 55% of the initial costs for compliance (Table A6.4). The donor paid 100% of the costs for training, laboratory analyses, documentation and certification. This raises doubts over the financial viability of the scheme beyond the donor input. Ongoing maintenance costs are likely to be £48,875 for the VMO but the levy of 2.5p per kg of produce sold will only raise £21,000 per annum. This issue was discussed by the authors with the VMO management and they confirmed that they are concerned as to how the scheme is to be funded once the donor input has ceased.

The growers themselves have small plots (0.25-1.5 acres) and make an income of £179 per annum from export produce sales. Given that the estimated cost for maintenance without VMO support would be £270 (Table A6.5) it is clear that the growers could not operate the system without the VMO's support.

Even the figures given above do not represent the true state of affairs as the analysis showed (Tables A6.2 and A6.3) that the VMO is planning to consider the expensive training programme conducted by the donor as a one-off exercise and make almost no commitment to training in future. As annual training programmes are essential for maintenance of a EurepGAP system this would raise the concern that the scheme is unlikely to remain viable unless money is invested in training programmes.

Table A6.2 Distribution of costs for establishment of a EurepGAP compliant system for 182 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**VMO**	**Donor 1**	**Donor 2**
Farm site	£4,887	6	£4,807	£80		
Central system	£11,055	12	£96	£459	£10,501	
Outgrower management team	£14,555	17		£14,554		
Operational costs	£21,273	24		£19,112	£2,161	
Overheads	£0	0				
Training	£22,396	26			£22,396	
Documentation	£3,136	4			£3,136	
Laboratory analysis	£1,113	1			£1,113	
Certification	£8,592	10			£8,592	
Total cost:	**£87,006**		**£4,903**	**£34,205**	**£47,899**	

Table A6.3 Distribution of costs for maintenance of a EurepGAP compliant system for 182 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**VMO**	**Donor 1**	**Donor 2**
Farm site	£144	0.3	£104	£40		
Central system	£729	1.2	£96	£633		
Outgrower management team	£14,554	30		£14,554		
Operational costs	£21,273	43		£21,273		
Overheads	£0	0		£0		
Training	£5	0.01		£5		
Documentation	£2,664	5		£2,664		
Laboratory analysis	£1,113	2		£1,113		
Certification	£8,592	18		£8,592		
Total cost:	**£49,075**		**£200**	**£48,875**	**£0**	

Table A6.4 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	27	0.4
VMO	39	99.6
Donor	55	0

Table A6.5 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 182 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from VMO and donors	**With no direct financial support from VMO or donors**
Capital cost for establishment of the system	£27	£478
Annual cost for maintenance of the system	£1.10	£270
Estimated net annual income from export vegetables	£179	£179

A7 Case study 7

Introduction

The exporter is a small Kenyan-owned company exporting 900 tons of assorted fresh produce annually into the following markets: the UK, Norway, Sweden, Netherlands, France and the United Arab Emirates. The produce range includes French beans, snow peas, sugar snaps, baby corn, passion fruits and Asian vegetables. Specific market requirements are EurepGAP, BRC and ISO 22000. EurepGAP is almost a mandatory requirement from many of the clients but the company has reservations about the standard as there is no price premium for compliance yet compliance does increase costs substantially.

Before introduction of EurepGAP the company procured produce by cash buying either from middlemen or directly from farmers. After the introduction of EurepGAP, the following two strategies were developed in 2004 to enable the company to comply with the market standards: 500 farmers were organised into three groups in three regions and production also continued from two company-owned farms. Cash buying was still practiced for less strict markets. The three groups are in the following regions: Karatina, Mwea, Matuu. The groups are registered as Self Help Groups under the Ministry of Culture and Social Services. Karatina group is known as Kamunu SHG and Mwea Kimred SHG with a membership of over 100 farmers each. The groups produced 70%–80 % of exported volumes. The remaining percentage came from own farms and cash buying from others.

The exporter offers the farmers credit in terms of: seeds, pesticide store, fertilizer/seeds store, PPE, disposal pits, toilets/showers, grading shed, hand washing facility and first-aid kit. Technical assistance is free to all farmers. The farmers also get advances towards agro-inputs and produce pickers. This credit is recovered through deductions from sales.

In the company's endeavour to comply with the market requirements over 400 farmers were ditched, including Matuu group. Remainders were in Karatina Kamunu SHG (60) and Mwea Kimred SHG (60) in two groups. In 2005, the company picked nine farmers from each group for certification. The company limited the farmers to eighteen because, despite support from PIP for certification, produce, water and soil analysis, they could not afford to provide credit for structures for 120 farmers. To boost the company's produce volumes it picked two existing semi-established groups that do not require a lot of assistance in terms of putting up structures: one was formerly selling to ADHEK in Nyangati Mwea with and another was located in Karatina. Each group has 25 member farmers. Njogu-ini North group at Nyangati has nearly all the structures complete and looks forward to certification towards the end of August. The Njogu-ini East in Karatina has semi complete structures.

1.4

Reasons for ditching growers from the EurepGAP compliance scheme

- Farmers' low production and income could not support the cost of farm structures.
- Farmers could not afford the high cost of implementation and certification.
- The exporter could not afford to provide credit to all producers towards implementation of the standard.

Features of the system

The system used in case study seven relies heavily on structures at individual farm sites with only a limited central system based around the collection sheds. Storage of CPP, seeds, fertilisers and PPE are all done on an individual basis. However in this scheme although most sites had field toilets, one storage facility was shared between three farmers so as to save on costs. One PPE set was shared between five farmers, illustrating the difficulties faced by farmers with low farm incomes (Table A7.4) working with small export companies that cannot afford the high level of support offered by the major companies.

For the farm site infrastructure the company paid for between 20% and 50% of most establishment costs and 50% of the cost for construction of collection sheds. The company was in turn subsidised by donors who subsidised between 50% and 75% of the company's contributions to the farmers' costs for establishment of the EurepGAP system.

The company has been unable to provide a specialised outgrower management team for the small-scale grower scheme, but relies instead on existing company staff who receive no extra pay or facilities for supporting the small-scale growers.

Training is provided on an annual basis for company staff, who are then expected to pass on knowledge to the farmers, there is no provision for specific training for the growers within the scheme.

Donor agencies paid 66% (Table A7.3) of the total costs for establishment including most of the costs for training, laboratory analyses and certification.

Table A7.1 Distribution of costs for establishment of a EurepGAP compliant system for 18 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£1,411	8	£904	£507		
Central system	£2,578	14	£1,274	£1,304		
Outgrower management team	£0	0				
Operational costs	£0	0				
Overheads	£0	0				
Training	£5,468	31		£480	£432	£4,556
Documentation	£72	0.4		£72		
Laboratory analysis	£5,402	30		£1,560		£3,842
Certification	£2,927	16				£2,927
Total cost:	**£17,858**		**£2,178**	**£3,923**	**£432**	**£11,325**

Table A7.2 Distribution of costs for maintenance of a EurepGAP compliant system for 18 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£256	3	£56	£200		
Central system	£166	2	£62	£104		
Outgrower management team	£0	0		£0		
Operational costs	£0	0		£0		
Overheads	£0	0		£0		
Training	£1,344	13		£1,344		
Documentation	£72	0.7		£72		
Laboratory analysis	£5,402	53		£5,402		
Certification	£2,927	29		£2,927		
Total cost:	**£10,168**		**£118**	**£10,049**	**£0**	**£0**

Table A7.3 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	12	1
Exporter	22	99
Donor	66	0

Table A7.4 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 18 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors**
Capital cost for establishment of the system	£121	£992
Annual cost for maintenance of the system	£7	£565
Estimated net annual income from export vegetables	£136	£136

Company views on key constraints to SSG involvement in exporting fresh produce from Kenya

These are the key constraints that directly or indirectly affect the small producers for the simple reason that the company cannot offer better prices to the producers' hence they have low incomes and production levels:

1. Increased freight charges to Europe at nearly US$2.5/kg

2. Market competition from sea freighting North African countries e.g. Morocco
3. No added value through EurepGAP compliance (the company does not consider EurepGAP necessary for export to the EU)
4. Foreign exchange fluctuations in the country
5. Unavailability of air space on the shipping date. Big companies charter airplanes but the small ones must queue for space
6. Entry points and production sites produce analysis costs borne by the exporter raises the production cost
7. High cost of packaging materials in the country due to high cost of some imported raw materials e.g. paper
8. Pre-paid freight charges payment as opposed to free on board system
9. Seasonal markets reduce annual volumes and profit margins
10. EurepGAP compliance does not assure market. Other factors such as prices and quality apply first.

Other issues that impact on SSGs

Application of very high standards of GAP

1. Application of high standards of technology such as sampling for laboratory analysis
2. High standards of expertise required e.g. crop protection adviser
3. Prohibitive costs of implementation of standards and certification
4. The interpretation of checklist is difficult for illiterate farmers
5. No credit facility readily available to producers
6. Producers do not determine the prices of produce. The exporter sets the prices
7. Delayed payments
8. Middlemen in the business are a social problem exploiting the producers.

Case study 7 illustrates an example of a small export company struggling to implement EurepGAP with a high level of donor support for establishment costs. The small-scale growers, with an income of just £136 per annum from export vegetables, were only able to comply with external support (Table A7.4). The export company lacked the resources to extend credit facilities to more than a few farmers within their supply base even with the donor support.

Because of the limited resources available to the export company there is no specialist team for technical support and no proper programme for farmer training. As no donor support is forthcoming for maintenance of the scheme its future seems to be in doubt both on financial and technical grounds. The authors asked the company about their system for subsidising farmers' compliance costs by 20%-50% as this had clearly been highly beneficial for the farmers. The company confirmed that this was a one-off made possible by donor support and could not be continued in the future.

A8 Case study 8

Introduction

The export company in case study 8 is one of the larger operations in Kenya falling in the >10,000 tonnes per annum range. Prior to the introduction of EurepGAP the company worked with 4,000 small-scale growers cultivating high-value peas for export to the United Kingdom, Germany and France. With the coming of EurepGAP the company realised that such a large group would present logistical difficulties and therefore reduced the production base to 2,000 small-scale growers (in 24 groups) and two large-scale growers in the Kinangop area of Kenya.

Under normal circumstances the company would have organised the growers for certification under option 2 of EurepGAP. However, this exporter has been afforded a unique opportunity to become involved in a trial implementation of EurepGAP under option 1 with funding and technical support from the Dutch Government and Dutch contractors (PIP has also been involved in providing BASIS training for company staff and safe use and handling of CPP for staff and farmers). The concept of option 1 for small-scale growers offers many cost saving features but appears to make nonsense of the provision for option 2; this will be discussed in more detail later.

At the time of the survey a single group (Nandarasi Gate Self Help Group) of 200 growers had been certified under a modified form of option 1 of EurepGAP. Other groups were preparing for certification.

Features of the system

The key feature of this system is to treat the group of farmers as a single farm. The chairman of the Self Help Group is considered as the farm manager and the individual growers' farms are considered as blocks of plots on the farm and the growers as employees of the farm.

The export company is named as the farm consultant with the task of providing technical advice, support and training via a network of outgrower managers and technical assistants. The farm consultancy team consists of technical manager (x1), outgrower manager (x1), trainer (x1), agronomist (x1) and technical assistants (x3). Vehicles are provided for the managers and bicycles for the technical assistants.

The individual growers are all trained in IPM, crop scouting and spraying techniques and are responsible for spraying and scouting. The sprayers are owned and stored by the growers although some share equipment. PPE is stored centrally and shared on the basis of one set of PPE between eight growers.

The Self Help Group has maps showing locations of all sprayers and first aid kits and all records are kept centrally.
The farm sites have similar basic infrastructure to farms under option 2, but first aid kits are only available in centrally and shared one between twenty.

The central systems consist of a central management unit (CMU) and collection shed, the CMU includes central storage for seeds, fertilisers and CPP and an incinerator is provided for disposal of empty CPP containers.

Training is provided by the farm consultant (paid by the export company), and consists of annual training in hygiene, first aid and safe use of CPP and one-off training on IPM/crop scouting and knapsack calibration.

Laboratory analysis was conducted on a limited basis. No MRL tests were made as it was considered sufficient to rely on feedback from EU buyers' testing programmes. This is a great cost saving measure but contradicts the EurepGAP specification for at least one MRL test per year for the farm.

Only ten soil tests were made even though there were 200 farm-sites. This was probably justified on the basis that the group is considered as a single farm and it would therefore be reasonable to take a few samples from around the farm.

No water analyses were made as this was deemed unnecessary under the risk assessment. This seems unwise but was acceptable under 10.2.1 of EurepGAP and therefore not a problem for certification.

For auditing purposes the auditor considers the group as a single farm, which greatly simplifies the audit. All discussions are with the farm consultant (the exporter and its staff), which avoids the problem of the auditor dealing with individual growers who may lack the necessary comprehension of EurepGAP requirements.

The costs for establishment and maintenance of this system and distribution of costs are summarised in tables A8.1-A8.4. This system offers advantages in terms of simplicity as it lacks features such as a QMS that are considered essential for option 2. Costs have been kept to a minimum by interpreting requirements for expensive services such as laboratory testing as though dealing with a single farm rather than 200 farm-sites. Auditing costs are also reduced by 65% when compared to the cost for an option 2 audit. EurepGAP registration fees are reduced by 90% over option 2 under the new fee system due to be introduced in January 2007. To register a single farm with >200 ha will cost 100€ whereas under option 2 registration of 200 farm sites having 1-10ha each would cost 1,000€.

The costs of the option 1 audit were as follows:

EurepGAP registration fees	=	£30
Auditors fee	=	£610
Flight	=	£640
Accommodation charges	=	£400
Local travel	=	£160
TOTAL	**=**	**£1,840**

If the scheme was audited under option 2 the costs would have been as follows:

EurepGAP registration fees	=	£885
Auditors fee	=	£2,745
Flight	=	£640
Accommodation charges	=	£630
Local travel	=	£300
TOTAL	**=**	**£5,200**

There is also a cost implication in terms of time as the option 1 audit takes only one day to complete whereas an option 2 audit for a group of 200 growers would take 4.5-5 days and involve field visits to fourteen farm sites.

The option 1 for small-scale growers is clearly attractive as it offers such large savings on cost and is much simpler to implement than an option 2 scheme. The cost for individual growers (Table A8.4) is also much lower at just £35 each for maintenance of the system.

There has been some discussion over the "legality" of this approach under the current version of the general regulations of EurepGAP (2.1). However, close examination of 10.40-10.42 and 10.50 indicates that the approach is legitimate as long as a fairly flexible interpretation of the definition of farm, farmer, farmer group and individual farmer are allowed. At the EurepGAP meeting in Prague in September 2006, a new definition of what constitutes a farm was offered that included an option to consider a group of producers as a farm. If this definition is accepted the option 1 for small-scale growers will be fully legitimate. This being the case, all the existing option 2 schemes would be justified in demanding to convert to option 1 as they should not have to meet unnecessary and costly extra criteria imposed under option 2.

However, the retailers as owners of the EurepGAP standard still have to assess the acceptability of this system. Option 2 was created to provide for increased control of farmer groups as this was considered essential to minimise the possibility of food safety risks associated with chemical and biological contamination. The QMS was added in September 2005 to strengthen these controls (which were considered insufficient by some retailers) and to clarify issues of legal responsibility for management of EurepGAP compliance. In 2006, there was talk of increasing testing programmes for option 2 schemes to one sample per farm site at least once a year, since existing random test programmes were considered insufficient. The option 1 scheme described above removes most of these elements of control and creates a high risk system where errors are more likely to occur. Apart from the perceived risk of the two different systems, in the opinion of the lead author of this report, legal responsibility for EurepGAP compliance would rest with the chairman of the Self Health Group as farm manager. However, this would be unlikely to work in practice and no legal link can be made to the farm sites as these are simply plots on the farm with employees rather than growers who have signed a contract for legal compliance as per the QMS of option 2 of EurepGAP.

Table A8.1 Distribution of costs for establishment of a EurepGAP compliant system for 200 small-scale growers under option 1

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£79,119	69	£79,119			
Central system	£5,725	5	£4,725		£1,000	
Outgrower management team	£16,000	14		£16,000		
Operational costs	£4,781	4		£4,781		
Overheads	£96	0.08		£96		
Training	£5,623	5		£85		£5,538
Documentation	£80	0.07		£80		
Laboratory analysis	£80	0.07	£80			
Certification	£3,840	3			£3,840	

Total cost:	**£115,344**		**£83,925**	**£21,042**	**£4,840**	**£5,538**

Table A8.2 Distribution of costs for maintenance of a EurepGAP compliant system for 200 small-scale growers under option 1

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£1,605	6	£1,605			
Central system	£3,459	12	£3,459			
Outgrower management team	£16,000	57		£16,000		
Operational costs	£4,701	17		£4,701		
Overheads	£96	0.34		£96		
Training	£42	0.15		£42		
Documentation	£80	0.29		£80		
Laboratory analysis	£80	0.29	£80			
Certification	£1,840	7	£1,840			
Total cost:	**£27,902**		**£6,984**	**£20,918**	**£0**	**£0**

Table A8.3 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	73	25
Exporter	18	75
Donor	9	0

Table A8.4 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 200 small-scale growers certified under option 1 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors[1]**
Capital cost for establishment of the system	£420	£577
Annual cost for maintenance of the system	£35	£140
Estimated net annual income from export vegetables	£1,165	£1,165

[1] These costs would increase further if the exporter charged fees for provision of training services.

The case study in question is particularly interesting as the farmers are growing peas, which are high-risk crops from a chemical and biological perspective (trellising reduces biological risks) when compared to baby-corn or French beans. It remains to be seen if the option 1

system for small-scale growers will be accepted by the retailers given these concerns over the level of management and control offered by this system.

Company view of standards in the production and marketing chain
The company management views the standards such as EurepGap and TNC positively and more specifically, the standards give a better understanding of food safety with regard to Good Agricultural Practice, record keeping and environmental conservation. Though compliance to these standards does not guarantee higher prices the company management feels that it gives the market more confidence in the produce.

Funding
The company food safety systems are funded by PIP and NAK-AGRO. PIP funding is mainly on consultancy and training on the whole company operation. Very little has been allocated to small-scale groups. NAK-AGRO, funded by the Netherlands government, purchased PPE for the first group and paid certification costs. NAK AGRO has assisted the farmers on farm risk assessments.

Impacts of funded activities
The company management states that the largest proportion of PIP funds goes to the local consultants. None of the funds are allocated towards empowering the farmers on standard requirements on basic structures and equipments. The main hindrance to small producers on compliance is the cost of putting up structures, which then needs priority of funds.

Farmers' view on standards
The small-scale growers interviewed said that the standard was good except that the cost of compliance was very high. Though the exporter now pays KSh5/kg extra for certified produce the farmers feel that this falls far short of justifying the cost of implementing the standard. The compliance has depleted farmers' financial resources yet the income does not meet daily needs.

Benefits of compliance to small-scale producers
1. The hygiene practices at the collection shed and fields coupled with hygiene training have enabled the farmers to extend the same to their homesteads thus improving the general health of the community.
2. The Good Agricultural Practice with regard to safe use and handling of crop protection products, empty containers, washings and leftovers is not only improving the general health of the handlers but also conserving the environment.

A9 Case study 9

Introduction
The exporter in this case is a smaller operator in the 500-1,000 tonnes of produce /annum range. Initially (see below) the exporter sourced produce from 1,200 small-scale growers (<1.0ha), but logistical problems with implementing EurepGAP option 2 forced a drastic reduction in the number of small-scale growers (1,127 growers were dropped) and a switch to mainly large farms with >40ha of land. Currently the company is working with 73 small-scale growers in two groups working towards EurepGAP under option 2. At the time of the survey, company support was minimal but donor support had just been agreed for completion

of the establishment costs. The description below relates to expenses made by the farmer. No information was available on the donor's intended contribution to establishment costs.

Features of the system
The scheme is divided into two groups of 33 and 40 members respectively; differences were noted for the two groups.

Group 1 (33 farmers)
The farm sites were found to have basic infrastructure for EurepGAP in place. The group relies heavily on a centralised system to reduce costs; this consists of a central storage facility for fertiliser and pesticides in rented premises. The use of rented premises has obvious negative implications as the farmer group may be unwilling or unable to invest in the infrastructure improvements required to meet the requirements of EurepGAP. The central store lacked a first aid kit, PPE, signage and weighing scales. No incinerator has been provided as the growers intend to send empty CPP containers to the exporter for disposal. Growers will have to pay for transport but the exporter will cover the cost of incineration.

A centralised spray-team with four trained operators has been established; it is the farmers responsibility to pay for the operators, whose annual salaries total £1,920.

The growers constructed a collection shed on land purchased for this purpose.

Group 2 (40 farmers)
The farm sites were found to have basic infrastructure for EurepGAP in place. The group relies heavily on a centralised system to reduce costs; this consists of a central storage facility for fertiliser and pesticides in rented premises. The central store lacked a PPE and signage. No incinerator has been provided as the growers intend to send empty CPP containers to the exporter for disposal. Growers will have to pay for transport but the exporter will cover the cost of incineration. In comparison to group 1, group 2 had a much more complete set of facilities and was closer to attaining compliance with the EurepGAP standard.

A centralised spray-team with four trained operators was established. It was the farmers' responsibility to pay the operators' annual salaries totalling £1,440, but the growers were forced to dismiss the CPP team as they could not afford this cost. This is obviously a disturbing development as control of CPP application is put in doubt, but given that no PPE has been purchased yet, the ability of these farmers to meet the maintenance cost of a fully fledged EurepGAP system without substantial external support (which is unlikely to be forthcoming) is in question.

The growers constructed a collection shed on land purchased for this purpose.

This scheme is still at an early stage but already the farmers have invested £21,430 (Table A9.1), giving a unit cost of £294 per grower for establishment at this stage. The growers' net annual income from export vegetables (derived from production data) was estimated at £148 per annum (Table A9.3) and the farmers report investing all of their savings and much of their income from other sources such as local crop and livestock sales. It seems very doubtful that these growers will be able to afford the cost of meeting the standard although this is no reflection on the farmers' ability to grow a high quality crop or handle the technical aspects of the standard. Extensive ongoing support from the exporter would solve the problem of cost of

compliance but this cannot be expected from the smaller companies who themselves lack the necessary resources.

Table A9.1 Distribution of costs for establishment of a EurepGAP compliant system for 73 small-scale growers under option 2

Component	**Total**	**%**	**Contribution**			
			Growers	**Exporter**	**Donor 1**	**Donor 2**
Farm site	£5,344	25	£5,344			
Central system	£16,087	75	£16,087			
Outgrower management team	0					
Operational costs	0					
Overheads	0					
Training	0					
Documentation	0					
Laboratory analysis	0					
Certification	0					
Total cost:	**£21,430**		**£21,430**			

Table A9.2 Distribution of costs (% basis) between stakeholders for establishment and maintenance of a EurepGAP compliant system

Stakeholder	**Establishment**	**Maintenance**
Farmers	100	NA
Exporter	0	NA
Donor	0	NA

Table A9.3 Cost per grower for implementation and maintenance of a EurepGAP compliant system involving 73 small-scale growers certified under option 2 compared with estimated net annual income per grower from sales of vegetables for export to the EU

	With external support from exporter and donors	**With no direct financial support from exporter or donors**
Capital cost for establishment of the system	£294	£294
Annual cost for maintenance of the system	NA	NA
Estimated net annual income from export vegetables	£148[1]	£148

These growers grow rust susceptible varieties under relatively poor agronomic conditions, hence the reduced level of income. The geographical location, farm size and varieties are similar to those pertaining for farmers supplying exporters 5 and 7, which have similar levels of income.

With regard to other aspects of the system, the exporter was unable to provide details of the cost of their outgrower management team and operational costs. No training, documentation, laboratory analysis or audits have been conducted yet but USAID via the KHDP has agreed to provide training, PPE, knapsack sprayers, risk assessments, development of QMS and laboratory analysis, which will cover most of the establishment costs.

Pre-audit and auditing costs will still need to be met by the exporter and ongoing costs for maintenance will have to be shared between farmers and the exporter. Comments made by the company management (see below) indicate that a the business decision is likely to focus on working with larger farms that demonstrate an ability to cover costs of standards compliance without recourse to funds from the exporter. The future of small-scale grower involvement with this company is far from certain.

Company view of standards in the production and marketing chain

The initial cost of implementation is very high to the exporter and the producers. The standard calls for detailed documentation and record maintenance is an added cost. The challenge to small-scale farmers is how to keep and maintain the records. These in turn call for the exporter to assist the farmers.

The management feels that the standard as it is, is only suitable for big farms and that it requires revision to fit small-scale producers. Compliance to the standard does not add any value. As much as it is a food safety approach, producers and exporters do not get higher prices to enable them meet the cost of compliance.

Company involvement with small-scale producers

The company has had two types of farms i.e. individual farms with farm sizes >40 hectares and group farms comprising small-scale producers organized in groups.

Initially the company had over twenty 40 to 60-member groups of farmers in Karii (totalling 1,200 growers). The groups started the implementation of EurepGap on group central structures system. The groups had central structures and common spray team. The teams were created to ensure that only permitted CPP were applied and correct application procedures and techniques were followed.

During the implementation process, the company found it very difficult to handle the logistics of small-scale producers and scaled down the number of groups to four, three in Karii and one in Kianyaga. The management said that the number of groups was likely to be reduced still further in future.

Reasons for ditching over sixteen groups

1. The farmers relied heavily on financial support from the company to implement the standard
2. The farmers had to be fully monitored by the company's technical support to follow the set procedures of operations. The company had increased the workforce for monitoring which greatly increased costs.
3. The technical staff turnover in the farming areas has been very high requiring training of new staff all the time.
4. The farmers' unwillingness to give full information of land ownership.
5. The cost of maintaining the spray teams is very high.
6. The farmers were often disloyal and sold brokers produce grown from credited seeds and company's technical advice greatly lowering the expected produce volumes.

7. Farmers' sometimes purchased produce from relatives or neighbours to make up shortfall in deliveries. This was a violation of the buyers' requirements especially in terms of authenticity and traceability of product origin. The application of pesticides was not controlled or traceable and many times the company has had complaints of exceeding MRLs for produce sourced from farmers who were found to have purchased from un-controlled sources. This completely negates the investment made by the company and growers in a EurepGAP compliant system.
8. The farmers have limited farm sizes and lease pieces of land in different areas within the locality. The history of these pieces is not easily traceable and this situation is incompatible with the EurepGAP QMS.
9. The central systems are not a perfect solution because the farmers do not trust the spray teams and security of central storage of products in these areas is ineffective.
10. Farmers also distrust those handling the groups' money and always have internal wrangles.

The company management has decided to involve more individual farmers who own farms with larger areas rather than going through the logistics of handling the small-scale producers. The management believes that there is economy of scale with individual farmers. The fact that these farmers' compliance is their initiative in order to be able to sell reduces the cost involvement from the exporter. However, the company has assisted these farmers through donor funding such as KHDP. These farmers take farming as a business unlike the small-scale producers who do it out of necessity. It is therefore easier for the company to deal with such producers.

Benefits of small-scale producers on compliance

1. The use of CPP has reduced by about 40%, thus reducing the farmers' cost of production and raising the net income.
2. The various trainings that the farmers go through has enabled the farmers:
   - To make rational decisions with regard to costs and income and view farming as a business.
   - To learn to subdivide growing areas into permanent plots and thus make it easier for them to keep records and know the areas.
   - To learn how to rotate crops for better soil management and thus conserve and enhance the soil fertility.
   - To understand good agricultural practices and good hygiene practices and hence improve the health of communities as a whole.
3. The company has taken the initiative to de-worm and immunize the farmers against typhoid thereby improving the health of the farmers.
4. As an incentive to the farmers the company offer a price premium for EurepGAP compliance, which increases the net income of the farmers.

Funding

The company has received funding from HDC now known as KHDP. These funds are to assist the larger individual farms and four remaining groups of small-scale growers. The funds focus on: training, PPE, knapsack sprayers, risk assessments, development of facilities, water analysis, soil and manure testing and maximum residue testing for pesticides.

The management view on impact of donor funding

1. The funds are limited to short-term issues towards certification and not long-term issues to improve the well being of the farmers. With regard to type of structures, the limited funds cater for short-lived temporary rather than permanent structures.
2. Funding allocation is controlled by the donors rather than the exporter and growers as stakeholders of the system, hence lower priority activities are allocated more funds than high priority ones.
3. The stipulated period of funds utilisation is too short. This does not allow enough time to identify and exclude the kind of farmers who eventually pull out after having spent substantial amounts of funds.
4. The funds concentrate on the training required for compliance, but exclude training on group dynamics and management even though this is a prerequisite to group coherence and continuity.
5. The funds concentrate mainly on high recurrent costs. The management doubts the sustainability of the farmers after withdrawal of the funds.

A10 Case study 10

Case study 10 deals with one of the smaller exporters in the 500 tonne per annum range. This company was very pro-active in attempting to support adoption of EurepGAP by 240 small-scale growers under option 2 (see below). Following problems with meeting the costs for establishment of the EurepGAP system, the company focused attention on a group of twenty growers that showed most promise of success. In late 2004 with support from the EU funded PIP programme these growers became the first small-scale growers in Kenya to be EurepGAP certified under option 2. However, costs for compliance were too high to allow for re-certification once donor support was withdrawn and the system collapsed. The exporter dropped the last of its small-scale growers and now concentrates on sourcing all produce from their own farm. A few of the farmers involved in this scheme have joined other groups that supply a much larger export company (3,000-5,000 tonne range) and thus are still involved in production for EurepGAP compliant markets.

The project team endeavoured to elicit details of the costs of compliance for this example but records were no longer available and the company said that staff involved in the compliance programme had moved on to other employment. However, some information was obtained from the exporter and farmers formerly involved in the scheme. During case study 10, abandoned collection facilities were identified (see figure A10.1).

Company view on standards

The company management views the EurepGAP standard positively since its sets food safety standards for the horticultural sector. However the cost of compliance is too high for both the exporter and the producer. Small-scale producers cannot stand on their own in compliance and the exporter has played a significant role. Despite the high costs of compliance the market prices in the EU remained the same, making group compliance un-attractive as the company could supply EurepGAP compliant produce at lower cost from a single farm certified under option 1 or switch to non-EurepGAP compliant markets.

Company involvement with small-scale growers

The company initially was involved with twelve farmer groups; one in Mwea, six in Karii, five in Makuyu and one in Kibwezi. They later ditched Makuyu and Kibwezi groups due to the high costs associated with standards compliance. Seven groups in Mwea and Karii went to pre-audit stage. The groups had several non-compliances. The company could not pay the costs to resolve these non-compliances and decided to concentrate on only one group through the process of implementation. The other groups were ditched. The remaining group was certified with costs shared between the company PIP and the farmers.

Challenge

The management complained that the biggest challenge other than the cost of compliance was the farmers' lack of loyalty. The farmers were disloyal, i.e. they did not supply enough produce to the company but sold out to brokers leaving the company with very low produce volumes, which did not match the company's contribution to the cost of standards compliance.

On other visits to other company's group's fields, one of the authors came across the abandoned collection shed belonging to the former EurepGAP certified groups associated with exporter 10 (figure A10.1). The author enquired from the people around and gathered the following information. The owners of the abandoned shed were the first to implement EurepGAP and were certified in 2004. The certified farmers operated in the midst of

uncertified farmers selling produce to the same Kenyan exporters. Prices remained the same and given the very costs of compliance the growers' became very demoralized and de-motivated and could not continue selling all the produce to exporter 10 at such prices when the brokers of the day would pay higher prices for produce irrespective of compliance status. The farmers felt justified in taking this action but also accepted that this led to the company ditching them from the export programme.

Figure A10.1 Two views of an abandoned collection shed owned by the first group of small-scale growers in Kenya to be EurepGAP certified under option 2.

A11 Survey of seven farmer groups based in the Karii region of the Mwea Irrigation Scheme

In order to better assess farmers' reaction to the coming of EurepGAP and stability of relationship with export companies, it was decided that one of the authors would make a detailed survey of one section (seven farmer groups) of the Mwea Irrigation Scheme in the Karii region of Kenya. In this region farmers have a strong commercial focus as opposed to traditional subsistence farming, initiated by record keeping in the process of EurepGap implementation. Farmers have organized themselves into groups registered as Self Help Groups as required by Kenyan law. The region is served by three canals from the Thiba and Nyamindi rivers. The farmers have diverted irrigation water from the main canals via furrows. The water is mainly pumped using low horse power diesel or petrol pumps. Where possible the water flows by gravity to the fields and irrigation by furrow. The same water is used for domestic use and where the canal water passes at high speed there are diversions specifically for drawing water for domestic use.

1. KARIKOINI GREEN GROWERS SELF HELP GROUP

The group is due for EurepGAP certification audit under option 2.

Group history and involvement with export horticulture

The group was formed in 1999 with a membership of 33 and registered with the Ministry of Culture and Social Services as required by law. The group has been growing French beans for export selling to local exporters as follows:

Original exporter - one year
Second exporter - four months
2003 to date – third exporter

In between these periods the farmers sold individually to brokers of the day.

Reasons given by the growers for movement from one company to the other

Original farms to second exporter:

1. The company issued seeds as credit to farmers for a programmed planting yet did not collect the produce upon harvest.
2. In some instances the company collected 2,000kg of produce and only paid for 500kg and claimed the rest were unpackable rejects without returning then to the farmers as confirmation. The farmers perceived this as cheating.
3. Due to the above the prices could then be as low as KSh2/kg (compared to the expected price of 35-45KSh/kg), thus frustrating the farmer.
4. There was poor communication between the company management and the farmers and dialogue to resolve the arising issues was not possible.

Second Makindu Growers to third exporter:

The farmers were issued with seeds on credit and promised very high prices upon maturity. The farmers heard rumours from the company staff that the beans were meant to be samples to explore possibilities of selling them together with Asian vegetables. Having realized that the company was more for Asian vegetables, the group enquired further from the company management who were open that they did not have the market to sell the beans. The farmers then sought another exporter.

Current status of the group
Although the farmers met the third exporter when EurepGap was being stressed, the group is happy about the existing relationship. The third exporter introduced the idea of central structures and services, through which the farmers believe they have benefited from economies of scale.

The group has fully footed the cost of all their structures on their own from savings made from produce sales. Every member saves KSh3/kg for group development and they have been able to purchase a plot where they have constructed the collection shed. The individual members have a compulsory saving of KSh3/kg paid for which they receive a lump some annually. The prices are constant throughout the year and the company is very open about rejects, which have been perceived as reasonable by the farmers and are returned as a proof.

Farmers' view of standards
The farmers are happy with the requirements except that the cost of implementation is very high. The group has exhausted all the previous development and personal savings on the compliance. The farmers feel that prices need to be increased to counter the cost of implementation of the standard. However, experience has shown that this is very unlikely to happen.

Farmers' benefits from compliance
Application of Good Agricultural Practice has enabled the farmers to make better-informed decisions on usage and application of pesticides and fertilisers, significantly reducing the amounts of pesticides used and hence lowering the cost of production.
This has also enabled the farmers to make timely pesticide application, significantly reducing losses due to pest and disease infestations. High quality produce and better yield is the end result.

The hygiene requirements implemented and know-how gained through training have improved the general health and hygiene practices of the people.

However the farmers do not gain any direct benefit from compliance since the exporters do not pay higher prices for the compliant produce.

2. KARIMINGUMO SELF HELP GROUP

The group is due for EurepGAP certification audit under option 2.

Group history and involvement with export horticulture
The group was formed and registered under the Ministry of Culture and Social Services in 2000 with a membership of 33. The group was dormant until 2003 when it got involved with an exporter under another group called Kanjurus Self Help Group. Later in 2004, the group left the original exporter and formed a relationship with a second exporter.

Reasons for movement away from the original exporter
The company issued seeds on credit at prices that were double those quoted by other export companies.

The company offered KSh45/kg yet paid as low as KSh15/kg due to very high rejection rates, for which the farmers did not get any proof. As a result the farmers sold out to brokers because the exporter had retained the rejected product. There were differences between the company management and farmers due to farmers not delivering to the company.

Current status of the group
The group is very satisfied with the second exporter with regard to timely payments, scheduled planting and collections, and transparency on rejects. Within six months the group was able to construct the collection shed and has been developing the facilities as finances from savings permit.

Farmers' view of standards
The farmers view the EurepGap standard as good for their operations. However the cost of implementing the standard is very high and the current prices do not compensate for compliance. The little income the farmers get from the business is not enough to cater for families.

Farmers' benefits from compliance
1. Initially the farmers had weekly spray programmes with or without pest or diseases. Now there is better-informed use of CPP thereby lowering the cost of production.
2. The hygiene training and practices both at the grading sheds and fields have been extended to the homesteads, thereby improving the general health of the producers.
3. The farmers had previously been using CPP without advice and could even misuse and mishandle them exposing themselves, consumers and the environment to the risk of contamination. With the safe use and handling training the farmers are able to use and handle the CPP properly with minimal risk of contamination.
4. The farmers have easy access to credit from the group savings with an interest of 10%. Cash advances towards picking labour are available from the group's savings.
5. The group contributes to the purchasing of the farm inputs such as fertilizers and CPP from development savings. The group then orders for the farmers' specific needs and the expenditure is later deducted from the sales.

3. KANGUKA SELF HELP GROUP

Group history and involvement with export horticulture
Kanguka Self Help Group was formed in August 2004 and registered with the Ministry of Culture and Social Services. The group initially sold to brokers of the day within Karii and later formed a relationship with an exporter.

Reason for leaving the brokers
1. The brokers paid cash on collection. This mode of payment did not allow the farmers to save any income for next season or for group development.
2. In most cases the brokers could not pay in full amounts and would collect on credit. The balances were sometimes never paid at all.
3. The brokers' prices were unstable, changing from very high to very low and vice versa. It was not possible for farmers to know when they would be operating at a loss.

A few members of the group recently joined from other disintegrated groups. Among the groups is Karre Youth Self Help Group. The group was formerly selling to a different

exporter to that used currently. The group has now disintegrated. The group had a central collection grading shed and the farmers had put up storage and sanitary facilities in the farms (see case study 10).

The farmer visited had the following reasons for leaving the exporter and group disintegration:

1. The company issued seeds on credit and on harvest collected weights way below the production of issued seeds.
2. The company delayed payments for as much as two months after harvest period.
3. While the company offered constant prices throughout the season it could have brokers working for the same company within the same area offering much higher prices. The collections for the farmers and brokers were made by the same vehicles.
4. The payments were to individual farmers and not the group. This hindered group development and discipline in terms of production and selling to others outside the group.

Current status of the group

The group has 33 members. Currently the group sells to a large export company. The group started selling within Karikoini Green Growers Self Help Group. Due to group savings coupled with prompt payments, the group was able to save enough for grading shed and sanitary facilities construction. The facilities started operating in June 2004. The group is satisfied with their relationship with the current exporter. Unlike in the past, the exporter has scheduled planting programmes and collections matching the issued seeds. The company offers constant price payments paid to the groups.

Farmers' view on standards

The farmers are very positive about the EurepGap standard because of the indirect benefits mentioned below. However, the farmers lament the very high cost of implementation of the standard and the low income from the crops due to low prices. The farmers feel that if the prices were shifted upwards to meet the cost of compliance they would be more comfortable with future involvement in the standard.

Farmers' benefits from compliance

1. The hygiene requirements and trainings offered have been useful even at home. The farmers feel that this has improved their general hygiene practices thereby improving their families' general health.
2. The use of CPP has been significantly reduced. Justification has to be made for any application of CPP.
3. The farmer group has communal facilities, equipment and services and has greatly benefited from economies of scale.

4. KATHANJI SELF HELP GROUP

Group history and involvement with export horticulture

The group was started in 2004 and registered under the Ministry of Culture and Social Services with a membership of 44. The group dealt with their original exporter for six months, transferred to another exporter for four months and are now with a third export company.

Reasons for leaving the original exporter

1. The company paid prices as low as KSh7/kg, which could not even meet the picking cost.
2. Delayed payments.
3. The link between the company management and farmers was very poor.
4. The company could issue uncertified seeds and at times mixed varieties. This could lead to non-collection of the mature variety, which did not match the issued variety.

Reasons for leaving the second exporter

1. The contract terms between the company and the group were unfavourable to the groups; specifically one clause which said that if the company vehicle had an accident between the collection point and the company pack house, the company could not pay for the collected produce and another that if the company lacked the market to sell the collected produce, the company would not pay for the collected produce.
2. Delayed payments up to two months after harvest period.
3. High produce rejection with non-returned rejects giving no proof of rejection.
4. The company issued seeds on credit yet could not collect the produce. These credits were not recovered. The farmers sold the produce to other companies. The company had an existing 50kg bag of seeds on the day of interview.
5. The company issued bouncing cheques with an added cost to the group. The group showed an example of a bounced cheque during the interview.

Current status of the group

The group has 34 members and sells to a large exporter. The group members are happy with their relationship with their current exporter. Payments are based on packable percentage, but the rejects are returned and are considered reasonable. The company has competent and available field staff to assist the farmers. There is timely collection of scheduled planting harvests.

Farmers' view on standards

The farmers view the EurepGap standard positively. However, the cost of implementation and certification of the standard is very high. The prices for the crops are very low thus providing a very low income to cater for farmers' needs, production costs and the cost of compliance.

5. NYANGATI MURIMA SELF HELP GROUP

Group history and involvement with export horticulture

Nyangati Murima SHG was founded in 2003 with a membership of 21. The group initially sold to brokers of the day and later to an export company.

Reasons for leaving the brokers

The major reason that made the group quit the involvement with brokers was exploitation. The brokers' prices were very inconsistent and abruptly changed from low to high and vice versa.

Current status of the group

The group is involved with a major exporter. The company offers constant prices. The group was certified in the year 2005. The group members are happy with the company since they now receive slightly higher prices after certification. The exporter has contributed towards soil, water, and residue analysis, has given training through funding from HDC in 2005 and

PIP in 2006 and has provided harvesting containers. The group in turn has constructed central structures on a rented piece of land, consisting of a collection shed and CPP, fertilizer and seed store.

Farmers' view on standards
The farmers are very positive about the EurepGap standard because of the slightly higher selling price offered by the company and other indirect benefits. However, the price increase is hardly enough to meet the cost of compliance.

The little income gained from the business does not meet the farmers' domestic needs. The farmers have so far depleted all their previous development and personal savings towards the structures for compliance and still need more to improve on them before the next surveillance audit. The standard is good and the farmers would be comfortable if there were a reasonable price difference.

Farmers' benefits from compliance
1. The farmers have had training of safe use and handling of CPP and fertilizers. The training leading to Good Agricultural Practices have enabled the farmers to:
   - Produce better quality crops
   - Use and handle the CPP properly with minimal risk of contamination thanks to the safe use and handling training. The farmers had previously been using CPP without advice and could even misuse and mishandle them exposing themselves, consumers, and environment to risk of contamination.
   - Improve the general health and hygiene practices of the people through the hygiene requirements implemented and know-how gained through training.
2. The implementation of field subdivisions to traceable plots have enabled the farmers to calculate the cost of production per plot and introduce crop rotation.
3. General environmental conservation from the acquired skills and know-how on GAP.

6. NGUMBATHA SELF HELP GROUP

Group history and involvement with export horticulture
Ngumbatha SHG was started in 2001 with a membership of 35 and acquired certificate of registration at that time. Since formation, the group has been growing French beans for the export market for an export company. The group has had a good relationship with the export company. There has been dialogue between the company and group whenever issues arose which has enabled the group to supply the company for so long, unlike other groups. The group purchased a quarter acre plot for group structures construction. Since 2004, the EurepGAP implementation process is still in progress. The group is run by a management committee.

Farmers' view on standards
The farmers view the standards as good for their operation. They have had other indirect benefits since they started the implementation phase but they say that the implementation process has so far depleted over KSh1 million (£8,000 or £228 per grower) that the group had accumulated before introduction of the standard. The standard compliance process is still in progress, prices remain constant and these do not match the cost of implementation. Farmers were extremely concerned that even after compliance they will not be able to get reasonable returns.

Farmers' benefits from compliance

Record keeping required by the standard has enabled the farmers to keep business records thereby evaluating their operations' profitability.

The training required by the standard has raised the farmers know-how in Good Agricultural Practice and hygiene, enabling them to approach their operations better-informed and more hygienically.

Safe use and handling of CPP training and standard requirement made farmers change their attitudes on the same, thus greatly reducing the risk of contamination to operators and the environment.

7. MWIHOKO SELF HELP GROUP

The group was formed in 1998 with a view to growing horticultural produce for the export market. The group originally had 61 members and at the time of interview, there were 40 members. Initially the group sold their produce to the brokers of the day. The group later got involved with an export company, with whom the group is involved to date.

Reasons for moving from brokers to an export company

1. The brokers' prices changed abruptly from high to low and vice versa, which made it difficult for the farmers to plan their operations.
2. The brokers could at times not pay for collected produce.
3. Exploitation by the brokers.

Farmers' view on standards

The farmers say that the standard is good for them and their business but that the implementation process is very expensive for them. For instance, prior to 2004 the group had accumulated over KSh1 million (>£8,000) from their produce sales, which has now been exhausted by the construction of required structures and purchasing of equipment. The farmers are worried that they may not be able to reap better returns after compliance.

Farmers' benefits from compliance

1. The standard hygiene requirement with regard to personal hygiene has generally improved the general personal hygiene for the farmers.
2. The standard requirement to dispose empty CPP containers, CPP, washings and their storage has had a positive effect on the farmers' community and environment due to reduced risk of contamination.
3. The use of harvest containers exclusively for produce has enabled the farmers reduce produce handling damages, thus ensuring better quality produce and subsequently less rejects.

Annex 2: List of exporters, smallholder schemes & other stakeholders consulted as part of the EurepGAP cost-benefit analysis work in Kenya

Growers Limited

Africert Limited

East African Growers Limited

Freshlink Vegetable Marketing Organisation (VMO)

Fresh Produce Exporters Association of Kenya

Homegrown (Kenya) Limited

Indu Farms Limited

Kanguka Self Help Group (Mwea Irrigation Scheme – Karii Region)

Karikoini Self Help Group (Mwea Irrigation Scheme – Karii Region)

Karimingumo Self Help Group (Mwea Irrigation Scheme – Karii Region)

Kathanji Self Help Group (Mwea Irrigation Scheme – Karii Region)

Kenyan Horticultural Exporters Limited

Mwihoko Self Help Group (Mwea Irrigation Scheme – Karii Region)

Myner Exporters Limited

Nandarasi Gate Self Help Group (Kinangop area)

Ngumbatha Self Help Group (Mwea Irrigation Scheme – Karii Region)

Nyangati Murima Self Help Group (Mwea Irrigation Scheme – Karii Region)

Standards & Solutions Consulting Limited

Sunripe Limited

Veg-Pro Limited

Vert-Fresh Growers Limited

Wamu Investments Limited

Woni Vegetables & Fruit Limited

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