

**REPORT ON THE IDENTIFICATION OF INCOME DIVERSIFICATION
OPTIONS AND DEVELOPMENT OF SMALL TO MEDIUM ENTERPRISE
FOR HIGH QUALITY COFFEE AND MACADAMIA IN KENYA**



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Acronyms and Abbreviations

ADB	African Development Bank
AFC	Agricultural Finance Corporation
ASARECA	Association for Strengthening Research in Eastern and Central Africa
CABI	CAB International
CABI-ARC	CAB International – Africa Regional Centre
CFC	Common Fund for Commodities
CIRAD	Centre de co-opération Internationale en recherche agronomique pour le développement
COMESA	Common Market of Eastern and Southern Africa
CORNET	Coffee Research Network
CRF	Coffee Research Foundation
DFID	Department for International Development
EAFRINET	East African Network of Bio-net International, the Global Network for Taxonomy
EAFCA	Easter African Fine Coffees association
ECA	Eastern and Central Africa
FAO	Food and Agricultural Organisation
FFS	Farmer Field Schools
GDP	Gross Domestic Product
GMR	Graduated Minimum Return
ICO	International Coffee Organisation
ICRAF	World Agroforestry Centre
KARI	Kenya Agricultural Research Institute
KIOF	Kenya Institute of Organic Farming
NGO	Non Governmental Organisation
NYBOT	New York Board of Trade
SACDEP	Sustainable Agriculture for Community Development Program
TCM	Thika Coffee Mills
SIDA	Swedish International Development Agency
SME	Small to Medium Enterprise

Table of contents

Background.....	1
Proceedings of the 1 st stakeholders' workshop.....	3
Workshop objectives.....	3
Workshop structure and Methodology.....	3
Session I: Background information.....	4
Session II: Group of discussions.....	5
Session III: Conclusion and final wrap-up.....	11
Annex 1: List of participants	13
Annex 2: Program for the 1 st workshop.....	17
Proceedings of the 2 nd stakeholders' workshop.....	18
Workshop Structure and Methodology.....	18
Session I: Background information.....	18
The role of coffee certification.....	20
Session II: Plenary discussions.....	20
Annex 4: List of participants.....	22
Analysis commodity sub-sectors.....	24
Coffee.....	24
Constraints and opportunities.....	24
Main players in the coffee commodity chain.....	26
Honey.....	28
Constraints and opportunities.....	28
Main players in the honey commodity chain.....	30
3. Macadamia.....	31
Constraints and opportunities.....	31
Main players in the honey commodity chain.....	33

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PART I

BACKGROUND INFORMATION AND PROCEEDINGS OF THE FIRST AND SECOND WORKSHOPS

Background

Coffee plays a central role in the economies of most countries in Eastern and Central Africa (ECA). It provides a major source of foreign exchange and supports the livelihoods of millions of rural families. It is estimated that over 22 million workers in Kenya, Rwanda, Ethiopia, Tanzania and Uganda alone are directly employed in the coffee industry.

Despite the pivotal role played by coffee in the economy of the sub-region, both production and export of coffee from East Africa has been on a downward trend. Returns from coffee have fallen in line with the overall fall in world prices, which itself is due to the imbalance between production and consumption of coffee at the global level. The resultant loss in household income associated with the depressed global coffee prices has discouraged the adoption of improved agronomic practices thereby leading to the observed decline in productivity and quality.

The impact of the prolonged low prices on the coffee sector of the high-cost producers such as Kenya has been far reaching. Exports from Kenya fell from around 1.6 million 60kg bags in 1984 to a low level of around 751,000 bags by the year 2004, a decline of over 50% in annual exports. Earnings from coffee to the country also fell during the period, declining from US\$ 285 million in 1984 to about US\$ 90 million by the year 2003, that is, over 60% loss in foreign currency earnings from coffee. The continued loss in income from coffee resulted in a massive neglect of agronomic practices among small-holder farmers leading to declining quality of coffee, low productivity and overall decline in production and exports. Poverty has subsequently increased in the coffee growing zones resulting in loss of livelihoods for the small-holder farming communities in the highlands of Kenya where coffee is the main cash crop.

In order to militate against the effects of coffee price volatility on the household income and the livelihoods of the small-holder coffee farmers in Kenya, the FAO's 'Mountain Products Project' identified the possibility of reversing the downward trends observed in the coffee industry by supporting the development of certified quality coffee (organic and/or "appellation of origin") that could fetch premium prices in the niche markets. The project also contributes to the stabilisation of household incomes of small-holder coffee farmers through the development of complementary high-quality, high-value commodities.

CAB International's Africa Regional Center (CABI-ARC) through the Coffee Research Network (CORNET) subsequently conducted a sub-sector analysis to identify possible diversification options for the development of Small to Medium Enterprises (SME) in the coffee-based small-holder farming systems. A constraints and opportunities analysis was also conducted to identify bottlenecks to the development of sustainable SME for the identified commodities.

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Two workshops were organised to engage the main stakeholders in refining the outcome of the studies, identify additional constraints, determine requisite interventions and propose possible providers who could partner the producers in providing sustainable solutions to the identified constraints. The outcomes of the two workshops were also used to complete the sub-sector analysis earlier initiated and to construct sub-sector maps for the three commodities. This report deals with the outcomes of the two stakeholder workshops and the sub-sector reports for Coffee, Honey and Macadamia.

Proceedings of the 1st stakeholders' workshop held on the 30th September 2005 at the Prime lodge, Embu, Kenya

Workshop objectives

The first workshop was organised to validate the outcome of a study conducted by CABI in respect to options for diversification in the small-scale coffee sector in the highlands of Kenya. More specifically, the workshop aimed at identifying the constraints and opportunities for the development of sustainable 'Small to Medium Enterprises' (SMEs) incorporating Coffee, Honey and Macadamia. The workshop objectives were:

1. To sensitise the stakeholders on the SMEs approach to poverty alleviation
2. To determine the main constraints/opportunities for SME development in the identified commodities
3. To analyse and validate the proposed SME project for Coffee, Honey & Macadamia

The workshop mainly targeted smallholder farmers and farmer-groups, and was aimed at realising three main outputs:

- Constraints/opportunities for SME development agreed upon
- Potential players in the SMEs for the selected commodities identified and potential partnerships initiated
- Draft proposal for the SMEs discussed and consensus reached on scope and implementation of the project

Workshop structure and Methodology

The workshop was attended by 40 participants comprising of farmers, representatives of farmers cooperative societies, processors, marketers, financing institutions, public research institutions, representatives of various government ministries, regulatory bodies and CAB International (Annex 1). Two activities were included to foster maximum contribution from all participants (Annex 2). The first activity involved the plenary presentation of background information on the coffee situation in the region, the proposed SMEs and the honey industry in Kenya. This was followed by group discussions during which the main constraints to sustainable SMEs in Coffee, Honey and Macadamia were identified and possible interventions agreed upon. The results of group discussions were presented in a plenary session for discussion and consensus building.

**Session I: Background information on the ECA coffee sub-sector
(Chair: Simeon Onchere)**

Two background presentations were given during the first session of the workshop to provide the basis for discussion. The first presentation was given by the regional Coordinator for CORNET who gave an overview of the coffee sub-sector in Eastern and Central Africa (ECA) with emphasis on the constraints to and opportunities for sustainable coffee production in Kenya. During the presentation, it was observed that both productivity and quality of coffee from the highlands of Kenya continued to decline despite the favourable edapho-climatic conditions characteristic of the areas. It was further observed that the household income of small-holder farmers in the coffee zones have likewise declined given that coffee was one of the main commercial activities among such farmers. Poverty levels have thus increased leading to deteriorating livelihoods in the coffee-growing highlands of Kenya. The presentation demonstrated the need to increase and stabilise income of the coffee-dependent households living in the coffee zones by identifying complimentary high-value commodities which could be used to diversify the income base of the small-holder farmers. The workshop was further briefed on the activities which had been undertaken by CORNET during which Honey and Macadamia were identified as possible complimentary commodities in which SMEs could be developed within the small-holder coffee systems in Kenya. The presentation identified viable seed systems, optimum farming system, processing, value addition through grading/differentiation, and access to markets as the main pillars upon which viable SMEs could be developed for the coffee-dependent small-holder farmers in Kenya.

The second presentation was given by Mr Ernest Simeoni, the Managing Director of the African Beekeepers Company Ltd. The presentation noted that beekeeping was a multi-million dollar industry in the first world although the commodity was still underdeveloped in developing countries such as Kenya. Mr Simeoni also noted that the most important function of honey bees is pollination and that pollination was known to increase crop and fruit yield both in quantity and quality. Concerning compatibility of beekeeping with Coffee and Macadamia enterprises, Mr Simeoni emphasised that beekeeping is conducive as a complimentary enterprise to both Coffee and Macadamia since the basic management requirements for beekeeping are simple and easy to follow and that the enterprise has low demand on land and labour. He noted that Coffee produces a lot of honey whereas Macadamia benefits immensely from insect pollination. Thus by integrating beekeeping in Coffee-Macadamia intercrops, bees would provide pollination services for Macadamia while the farmer benefits from Honey produced from coffee. Three Longstroth hives per Acre would be required for the Macadamia to benefit fully from bee pollination and hence realise the desired impact on yield and nut quality. The presentation concluded by indicating the services offered by the African Beekeepers Company which included beekeeping, honey processing, fabrication of beekeeping equipment and training.

**Session II: Group of discussions and plenary presentations
(Chair: Fabrice Pinard)**

Following presentations and discussions of the background papers, the participants were sub-divided into four working groups as shown below. Each group was assigned the task of identifying the main constraints to sustainable production of high quality Coffee, Honey and Macadamia and to identify existing opportunities which could be targeted by the project on small to medium enterprises of the three commodities. The groups were further tasked to critically analyse the five pillars for sustainable SMEs proposed in the three commodities and suggest possible issues to be addressed during the pilot phase of the project.

Group 1

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Jones Muthiani Macadamia
Margaret Nyaga, Honey
Anne Muthoni
Patrick Onchieku
Benard Gichovi
Joseph Mwaniki Namu
David Karanja

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Mr Benard Mwaniki

Group 4

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Cyrus Danson Njiru
Sheth Kamau Jason
Kabichiru Gicovi Leonald
Boniface Mbilu
Mr A N Mutura

The results of the group discussions were presented in the plenary by the respective rapporteurs. The Group presentations were followed by general discussion during which consensus was built where necessary. The key highlights of the constraints and opportunities identified by each group are summarised in Tables 1-3 below.

Table 1: Constraints to sustainable production of high quality Coffee from Kenya

Constraint	Group 1	Group 2	Group 3	Group 4
high cost of farm inputs	✓		✓	✓
Inadequate access to research services	✓			
Lack of affordable credit	✓	✓		✓
Poor access to information	✓		✓	
Inefficient marketing chain	✓	✓		
Inefficient processing equipment				
Poor governance of farmers' societies		✓		
High cost of production		✓		
Poor extension, research-farmer linkages		✓		
Coffee research not need oriented		✓		
Low domestic coffee consumption		✓		
Lack of high quality planting materials		✓	✓	
Low capital base				
Monopoly in coffee trade			✓	
Inadequate awareness			✓	
Delayed payments to farmers			✓	
Poor husbandry practices				✓
Poor coffee Prices				✓

Table 2: Constraints to sustainable production of high quality Honey from Kenya

Constraint	Group 1	Group 2	Group 3	Group 4
High cost of modern equipment	✓		✓	✓
Increased consumer sophistication	✓			
Inadequate promotion and awareness	✓			
Inadequate access to research services	✓			
Lack of affordable credit	✓			✓
Lack of production & market information	✓	✓	✓	
Inadequate quality assurance	✓			
Inefficient processing equipment			✓	
Low yield levels		✓		
Poor quality due to product adulteration		✓		
Phobia of bees		✓		
Entrenched cultural & social perceptions		✓		✓
Inadequate skills and knowledge				✓
Increasing deforestation				✓
Poor marketing strategy			✓	
Low capital base				✓
Resistance to change			✓	

Table 3: Constraints to sustainable production of high quality Macadamia from Kenya

Constraint	Group 1	Group 2	Group 3	Group 4
Poor nut quality	✓			
Low household income & high poverty	✓			✓
Lack of high quality seedlings	✓	✓		✓
High cost of seedlings	✓			
Low level of production	✓			
Export unprocessed/raw nuts	✓			
Inadequate value addition	✓			
Lack of modern equipment	✓			
Inadequate access to information	✓			
Unethical business practices by brokers		✓		
Insect pest which damage nuts		✓		
Lack of farmer awareness		✓		
Inadequate information & knowledge				✓
Lack of / high cost of farm inputs				✓
Poor access to information		✓		
Poor extension, research-farmer linkages		✓		
Lack of high quality planting materials		✓		
Poor husbandry practices				✓

The identified constraints were subsequently analysed based on the constraint tree approach to determine the underlying cause-effect relationships. Based on the identified constraints/opportunities, the potential intervention points which could be targeted during the pilot phase of the project were determined and current providers of the requisite solutions identified (Table 4).

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Table 4: Main constraints to sustainable SMEs in Coffee, Honey and Macadamia, potential solutions and providers of the requisite solutions

Constraints	Potential Commercially viable solutions	Current providers of solutions
High cost of purchased inputs	Access to inputs at whole sale prices	Farmer organisations Stockists Manufacturing firms
Inadequate agro-industries		The private sector
High cost of labour	efficient labour-saving technologies	Coffee Research foundation Manufacturing firms
High cost of credit	Access to low-cost credit	Micro-finance institutions Rural SACOS Mainstream banks
Lack of entrepreneurial skills by farmers	Training on small business development	Government ministries NGOs CRF
High cost of transport	Improved road infrastructure	Government ministries Local Authorities Constituency development funds
	Bulk transportation of farm produce	Private entrepreneurs Farmers societies
Low system productivity	Utilisation of productivity enhancing technologies and innovations	Coffee Research foundation Private sector
Inefficient management along the value chain	Improved leadership and management of farmer organisations Improved milling and handling Improved marketing efficiency	Ministry of Cooperative development Members of farmers societies
Poor linkages between producers and consumers	Producers to be organised and empowered to access markets directly	Exporters Marketing agents
Poor leadership in farmers' institutions	Training in small business management skills	NGOs Private consultancies
Inefficient farmer organisations		
Inadequate private sector participation in research and production activities	Private sector to be encouraged to participate in adaptive research	Government
Poor access to production, processing and marketing information	Research, marketing and regulatory bodies to provide depositories for production, processing and marketing information through websites	CRF Ministry of Agriculture Coffee Board of Kenya Millers and Marketing agents
Inefficient processing facilities	New processing technologies which conserve the natural resource base be adopted	Manufacturers agents
Lack of innovative farm based cherry grading system	Payments to reflect the quality of cherry delivered	Farmer organisations CRF
Weak forward and backward linkages in the value chain		

The workshop also reached an agreement on the areas to be targeted by the pilot project including the following:

1 *Viable seed systems*

- Projections on seedling requirement covering a period of 5 years in the first instance
- Document existing seed systems in Manyatta and the constraints/opportunities for long-term economic viability
- Based on the constraint/opportunity analysis, design a viable coffee factory-based seed system for the pilot site (for example Farmer-Research partnerships in the supply of Macadamia rootstock and coffee pollen stock)
- Capacity building for farmers, for example, training and extension manuals

2 *Optimum farming system*

- Formulate optimum Coffee-Macadamia-Honey enterprise combination
- Evaluate existing agronomic and husbandry practices and design ways for optimising the practices based on participatory approaches
- Document the existing information pathways and design web-based targeted participatory/interactive information gathering, processing and delivery system for the pilot site
- Capacity building through Training (e.g. Farmer Field Schools)

3 *Harvesting and grading*

- Develop and avail quality control standards for the three mountain products based on participatory approaches
- Develop improved harvesting and drying procedures for coffee and macadamia harvested from the pilot site
- Formulate grading and differentiation options for the three mountain products (e.g. size, shape colour, taste, density, variety, geographic origin)
- Formulate incentive system for premium-grade mountain products from the pilot site in collaboration with producers, processors and marketers

4 *Processing*

- Identify value-addition options for coffee, honey and macadamia from the pilot site including blending, packaging and branding

5 *Access to markets*

- Develop systems for enhancing the traceability of products from the pilot site

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- In collaboration with certifying agencies, develop systems for farmer-group certification for the three mountain products from the pilot site
- Identify and/or develop Niche and Speciality market outlets for the mountain products from the pilot site
- Empower the less advantaged members of the farming community in the pilot site to effectively and efficiently access markets for the three mountain products.
- Develop web-based market information system for the three commodities from the pilot site

6 SME Development

- Capacity building on production, processing, marketing and SME management
- Group certification
- Partnership development

Members recommended that the identified entry points be used to develop a complete project proposal for SMEs in Coffee, Honey and Macadamia (See Annex 3 for detailed proposal).

Session III: Conclusion and final wrap-up (Chair: Charles Agwanda)

Subsequent to the plenary discussions, representatives of various stakeholder categories were requested to give concluding remarks and suggestions with respect to the workshop deliberations. The Ministry of Agriculture was represented by Mr Onchieku who emphasized the need to have a clear implementation strategy and legal framework for the project. Responding to the suggestion that the Graduated Minimum Returns (GMR) should be re-introduced to act as a safety-net against income fluctuations from farming, Mr Onchieku informed the meeting that the scheme had been withdrawn since the beneficiaries were not normally compliant regarding the rules guiding the administration of the scheme. The workshop was further informed that alternative schemes such as crop and livestock insurances were being evaluated and would be rolled out once the Government had finalised evaluating the usefulness of the scheme.

Concerning the SME initiative for coffee-based small-holder farming, Mr Onchieku observed that an Agri-business approach to farming had not been exploited adequately and that the Ministry of Agriculture supports the idea fully since it provides a good opportunity for realising vertical integration of the economic activities in the rural areas. Institutional support to such an initiative will be through the Departments concerned with Agri-business and Policy within the Ministry of Agriculture.

Similar sentiments were echoed by the representative of the Ministry of Cooperatives Development and Marketing who noted that the SME initiative was worthwhile. He further observed that most of the financing packages from the mainstream banks were not tailored to suit the farmers' requirements and expectations thereby making the small-holder farmers disenfranchised.

Although access to affordable credit was identified as one of the main constraints to sustainable coffee, honey and macadamia production, the Regional Manager for the Agricultural Finance Corporation (AFC) observed that Coffee and Macadamia farmers were not requesting for loans availed through the corporation. He observed that the loans offered by the AFC were relatively cheaper than those offered by the mainstream banks and invited the farming community to take advantage of the facility.

In his concluding remarks, the Regional Coordinator of CORNET observed that the workshop had realised its objectives and that the key issue remaining concerned mobilisation of funds to support the proposed project. He gave an outline of the next steps to be undertaken in developing the project document and to identify the Development Partners who could be approached to provide the initial funds to operationalise the pilot project. He thanked the members for having taken their time to participate in the workshop and informed the meeting

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that the participants will be informed of any developments with respect to the project.

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(GCP/INT/886/FRA)*

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Annex 2: Program for the workshop on development of small and medium enterprises for high quality coffee, honey and macadamia
Prime lodge Embu: 30th September 2005

Time	Activity
Workshop 1	
8.30 – 9.00	Registration of participants
9.00 – 9.15	Introductory remarks
9.16 – 10.15	Keynote presentations on the SME concept and proposed project
10.16 – 10.30	Coffee Break
10.31 – 11.00	Question and answer session
11.01 – 13.00	Group discussions
13.01 – 14.00	Group Lunch
14.01 – 15.30	Group presentations and Plenary discussions
15.30 – 16.00	Wrap-up and concluding remarks
16.01 –	Coffee Break

Proceedings of the 2nd stakeholders' workshop held on the 27th October 2005 at CAB International, Africa Regional Centre

Workshop objectives

The second workshop on SMEs in Coffee, Honey and Macadamia was held at the CABI Africa Regional Office on the 27th October 2005. This focus-group workshop was organised as a follow-up to the stakeholder workshop held on the 30th September 2005 at the Prime Lodge, Embu. The workshop was organised in order to critically analyse and validate the proposed SME project and identify ways for sustaining the project beyond the initial three year phase. The specific objectives of the meeting were as follows:

- Analyse and validate the project on Small to Medium Enterprise for Coffee, Honey and Macadamia
- Identify areas requiring private-public partnerships, and the roles the private sector could play in developing sustainable SMEs for Coffee, Honey and Macadamia.
- Identify possible donors

Workshop Structure and Methodology

The workshop was attended by 12 participants representing processors marketers, financing institutions, NGOs, public research institutions, regional networks, and CAB International (Annex 4). The workshop was conducted in two parts. The first activity involved the presentation of background papers on the regional coffee situation, including highlights on the key outcomes of the first stakeholders' workshop on Small to Medium Enterprises for Coffee, Honey and Macadamia. This was followed by a video presentation on coffee certification. Participants were then invited to give their views on the proposed project interventions and to identify the types of public-private partnerships required. The possible roles of the private sector in the project were also discussed in a plenary session.

Session I: Background information on the ECA coffee sub-sector (Chair: Charles Agwanda)

As an introduction to the day's deliberations, an overview of the coffee sub-sector in Eastern and Central Africa (ECA) was given by Dr Agwanda. The presentation focused on the trends in coffee production, export and quality during the past 20 years in relation to the world coffee trade during the same period. The main highlights of the presentation were as follows:

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- Coffee continues to play a key role in the economies of the eight coffee-producing countries within the ECA sub-region, in terms of employment to the rural communities, contribution to the Agricultural Gross Domestic Product (GDP) and foreign currency earnings
- Production, quality and export of coffee from the sub-region has declined sharply during the last decade due to poor returns from the commodity, which in turn is the result of low world coffee prices
- The impact of the low world coffee prices on production and quality was more severe for the high-cost coffee producers such as Kenya since the prices realised fell below breakeven prices
- The decline in coffee exports from the sub-region coupled with the low world coffee prices has led to significant loss of household income and livelihoods of the small-holder coffee growers in the highlands of ECA.
- Given the recurrent nature of coffee price volatility, there is a need to identify feasible income diversification options for small-holder coffee farmers as a means to reduce food and income insecurity and to make small-holder coffee farming in the ECA highlands more sustainable

This was followed by a presentation of the components of the project designed to improve the resilience of the small-scale coffee farmers in the ECA sub-region and to reduce food and income insecurity of the target category of farmers. The proposal was developed based on the outcome of the stakeholders' workshop on SMEs for high-value Coffee, Honey and Macadamia held at the Prime Lodge, Embu on the 30th September 2005. The project's goal is "Enhance the livelihoods of small-to-medium scale coffee farmers in Eastern and Central Africa" whereas the purpose of the project is "enhance household income and income security of coffee-based small-holders in Kenya". The project purpose will be realised by undertaking a series of activities aimed at achieving six main results:

1. Baseline information on Coffee, Honey and Macadamia in Manyatta area documented
2. Viable seed systems for Coffee and Macadamia nuts formulated and piloted by end of project
3. Optimum Coffee-Macadamia-Honey enterprise combination for small-to-medium scale farmers formulated and piloted
4. Grading and classification system for Macadamia and Honey formulated
5. Access to information for SME in Coffee, Honey and Macadamia enhanced
6. Capacity for SME development in Coffee, Honey and Macadamia strengthened

As a concluding remark, it was noted that the successful implementation of the project will require the establishment of strategic partnerships between the service providers in the three commodities, the producers and the marketers.

The role of coffee certification

A presentation on the role of coffee certification was given by Mr Kamau Kuria, the field representative for UTZ KAPEH in Africa. The presentation was in the form of a video show, demonstrating the link between certification and quality, traceability, and market access. Based on the UTZ KAPEH model, the presentation elaborated the role of certification in ensuring sustainable coffee production by small-holder farmers in the ECA sub-region. The main benefits of certification were summarised as:

- Increased access to niche markets
- Better premium prices
- Improved traceability

Two possible limitations were however noted in respect to commodity certification. One of the main limitations identified was the high cost associated with the development of structures and facilities necessary to ensure compliance. It was also noted that commodity certification was constrained by its specific nature whereby the certification is normally limited to the target commodity and may not extend to other commercial products grown in association with the certified commodity. Some concerns were also raised on the high cost of professional fees charged for certification.

Session II: Plenary discussions (Chair: Charles Agwanda)

During the group discussions, there was consensus that enterprise diversification was the best option to cushion small-holder coffee farmers from the undesirable effects coffee price volatility. The workshop participants were therefore unanimous that the proposed project provides a good opportunity for improving the household income of the small-holder coffee farmers in Kenya. It was however recommended that the current proposal be expanded to cover more than one country in the ECA sub-region. The participants further identified the entry points through which their institutions could link with the proposed initiative (Table 5).

A number of proposals were given concerning the potential donors for the project. The main ones included the Common fund for Commodities (regional projects only), The World Bank (mating grant), CIDA (capacity building component), ASARECA Competitive Grant Scheme, the Africa Development Bank (ADB) and DFID. The potential donors were identified based on past relationships with the participants. It was noted that some of the donors may be interested only in certain aspects of the project. It was further observed that some of the donors may not be interested in small projects and will fund only regional projects.

Table 5: Potential entry points for public and private institutions in developing SME for coffee, honey and macadamia in Kenya

Entry point							
	Development of seed systems	Improved access to information	Extension services	Incentive systems	Linking farmers to markets	Access to affordable credit	Capacity building
Institutions							
African Beekeepers Ltd.							
TCM							
AFC							
UTZ KAPEH							
SACDEP							
KIOF							
EAFRINET							
CRF							
KARI							

Annex 4: List of participants for the 2nd workshop held on the 27th October 2005
at the CABI Africa Regional Centre, Nairobi

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PART II

SUB-SECTOR MAPS AND ANALYSIS OF THE RELATIONSHIPS BETWEEN PRIMARY PLAYERS ALONG THE COFFEE, HONEY AND MACADAMIA VALUE-CHAINS

Analysis commodity sub-sectors

1. Coffee

Coffee is one of the most important agricultural commodities in the Kenyan economy. First introduced to Kenya around 1898, the crop has evolved to become one of the main foreign currency earners for the country. Over 60% of Kenya's coffee exports are produced by small-holder farmers who own less than one hectare of land under the crop.

The coffee industry in Kenya is liberalised, although all of the country's coffee is still sold through a central auction system. The auction has the advantage of providing a good prices discovery mechanism in the coffee sub-sector. It helps concentrate supply i.e. growers compete on quality and concentrate demand i.e. exporters compete on prices. It fosters transparent and competitive operations in the market place, eliminating most unethical market influences. However the auction system is still constrained, especially where there is skewed market information and the existence of government controls.

Constraints and opportunities in the Coffee sub-sector

Over the last two decades, the coffee sub-sector has registered declining performance in production, productivity, quality and coffee revenue. The declining trends are attributable to a number of factors. Low farm-gate earning is perhaps the single most important factor affecting production, productivity and quality of coffee from Kenya. This in turn is the result of inefficient marketing chain emanating from poor governance of farmers' institutions along the value-chain. Inefficient marketing affects the proportion of the coffee realisation which trickles from the consumer back to the farmer and is manifested as low farm-gate earnings. The high cost of production characteristic of the Kenyan coffee production system, coupled with the low farm-gate earnings, impacts directly on the levels of husbandry and processing practices by the small-holder farmers, hence reducing both productivity and quality.

Other constraints experienced within the Kenyan coffee sub-sector include inadequate access to critical services such as the soil and leaf analysis services to guide husbandry practices, inadequate access to affordable credit both as individual farmers and as societies thereby limiting reinvestment in coffee farming, inadequate access to superior quality planting material thereby limiting the impact of improved varieties on the livelihoods of the rural poor, inadequate access to information at various levels of the value-chain, high cost of farm inputs, inefficient processing equipment, poor extension and research-farmer linkages, low domestic coffee consumption, coffee research not in tandem with current needs and delayed payments to farmers. The relationship between these constraints and the secondary causes are shown in Figure 1.

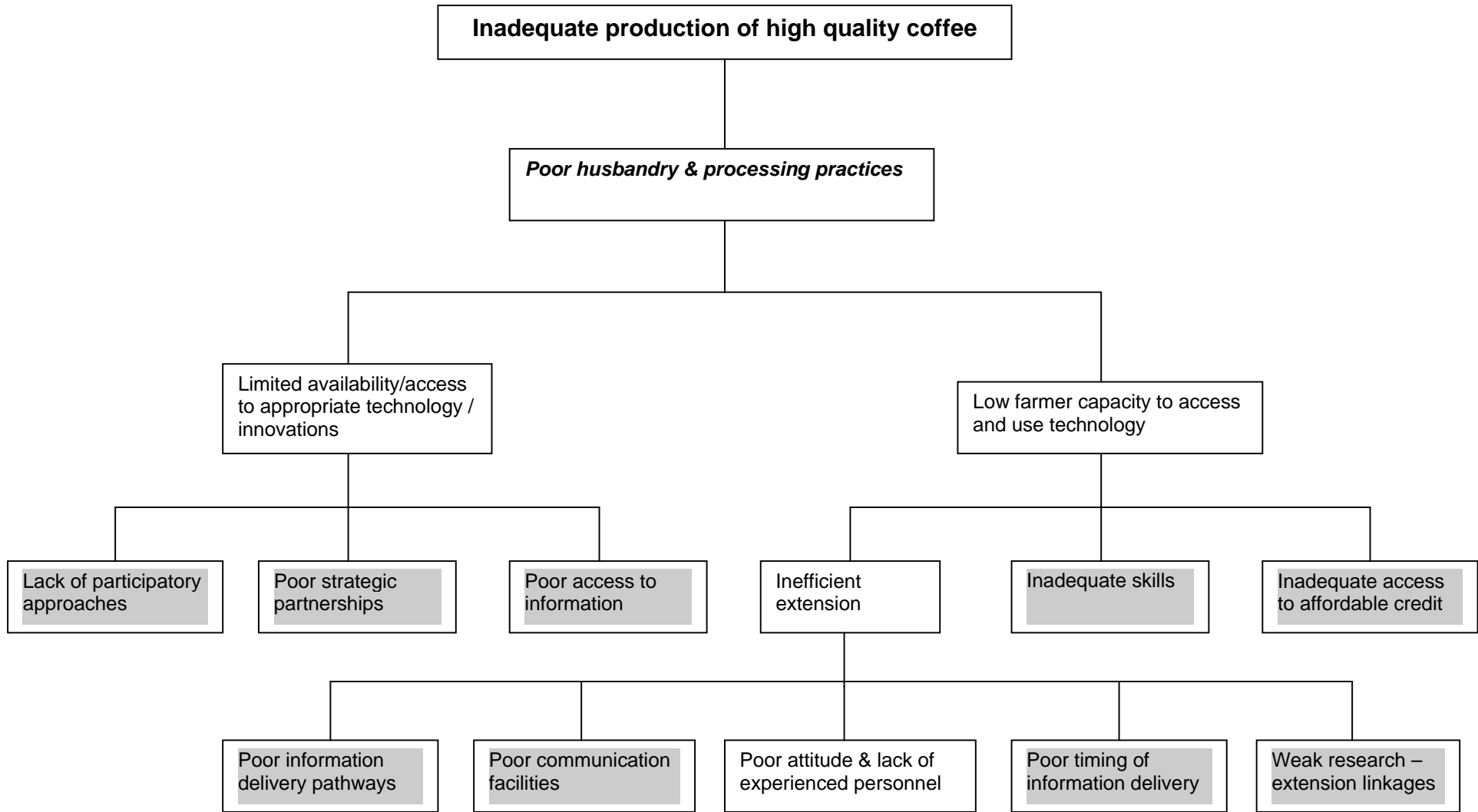


Figure 1: Perceived cause-effect relationships amongst the constraints to sustainable coffee production in Kenya (Shaded areas show potential intervention points are)

Despite the prevailing constraints, the Kenyan coffee industry possesses great potential for growth and development. The favourable edapho-climatic conditions are well suited to provide a unique opportunity for the production of high-quality coffee of rare character. The unique character of Kenyan coffee has enabled the country to attract premium prices, earning between +10 and +15 above the New York Board of Trade (NYBOT) currently. Increased quantity of high quality coffee therefore provides an avenue through which the household incomes of small-holder farmers in the coffee producing highlands of Kenya could be improved. This requires reorganisation of the farming practices to focus on on-farm value-addition during production and processing, differentiation of coffee according to grades, quality and geographic origins as well as certification.

Main players in the Coffee commodity chain

Coffee has an elaborate value-chain, with each player having well defined roles. The key players include the growers whose role include production and primary processing of coffee, the farmer cooperative societies which provide communal processing and storage facilities, the millers whose role is to provide milling and quality classification services, the marketing agents whose main roles are to provide bonded warehousing and are also responsible for selling the coffee on the trading floor, the regulatory bodies who are the government arms responsible for policy regulation of the sector and promotion of Kenya coffee and the research organisations responsible for research and advisory. Entrepreneurs of local coffee houses are also becoming important players in the coffee sector, driven mainly by two roasters targeting the high quality segment of the domestic market. The interrelationships among the various players are summarised in Figure 2.

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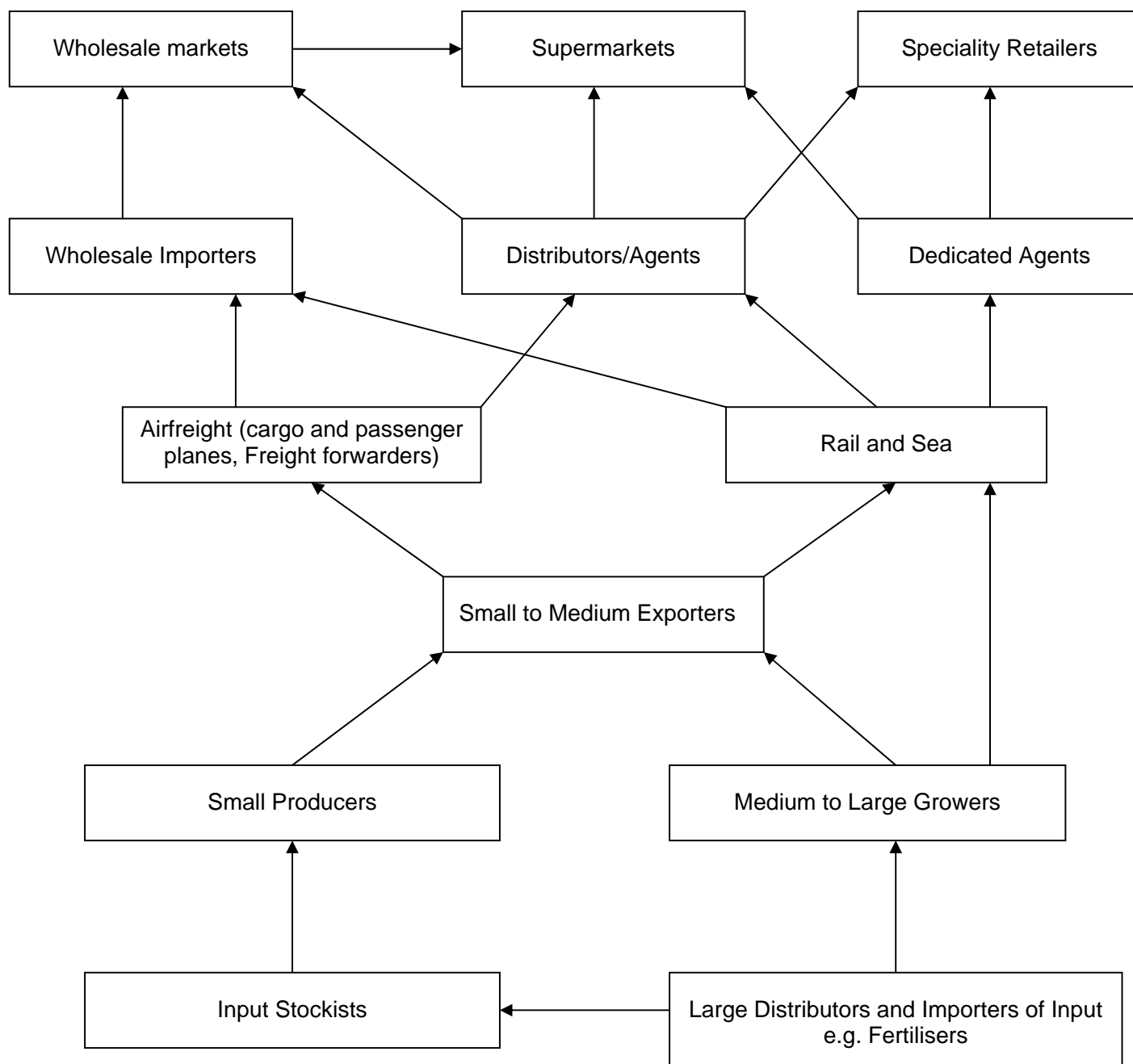


Figure 2: Sub-Sector map for high quality mountain coffee originating from Kenya

2. Honey

Unlike coffee and macadamia, the honey sub-sector is still highly underdeveloped. Production of honey is mainly by small-scale producers, usually living in marginal areas of Kenya, and where it is seen as an 'old mans' activity. The commodity has the potential to be produced in all parts of the country and is viewed by the Kenyan Government as an important avenue for income generation and improved livelihoods. In this regard, the government's policy is to develop a modern beekeeping industry in the country in order to increase honey production for domestic consumption and surplus for external market. Honey production follows the rainy seasons and is harvested twice in a year.

Constraints and opportunities in the Honey sub-sector

There are a number of factors which limit the growth of the honey industry in Kenya. Notable factors include environmental degradation such as deforestation and increased use of agrochemicals. Lack of affordable credit limits the ability of small-holders to acquire modern beekeeping and honey processing facilities. The inadequate use of modern equipment coupled with inadequate knowledge and skills in modern beekeeping techniques leads to low honey productivity on small-holder farms. Other factors include inadequate access to information on modern beekeeping technologies, the high cost of modern equipment, increasing consumer sophistication, lack of market information, poor quality due to inappropriate production techniques and adulteration of products, inadequate quality assurance, phobia of bees and entrenched attitudes and perceptions that beekeeping is a job of old men living in arid areas, are some of the major constraints in the sub-sector. The cost of modern equipment for beekeeping is still beyond the financial means of most small-holder producers who do not have access to initial capital required to initiate honey business.

In spite of the constraints observed in the honey commodity chain, a number of opportunities which could be exploited to the benefit of the players in the honey business also exist. The commodity is highly amenable to integration with other commercial farming activities such as coffee farming. Local demand for high quality honey is high and is expected to increase as more consumers appreciate health benefits associated with honey. Good prices prevail, particularly for high quality honey. The country is naturally endowed with wide variety of reputable nectar sources due to the diversity of the indigenous flora making it possible to produce differentiated honey for niche markets. Access to modern technologies is improving due to private sector and government initiatives. A number of by-products with potential for use in other industries e.g. the beauty industry can be used to diversify the income sources and to cushion honey producers in the event that honey prices fall. Figure 3 gives a summary of the main constraints to sustainable honey production in Kenya and their perceived cause-effect relationships.

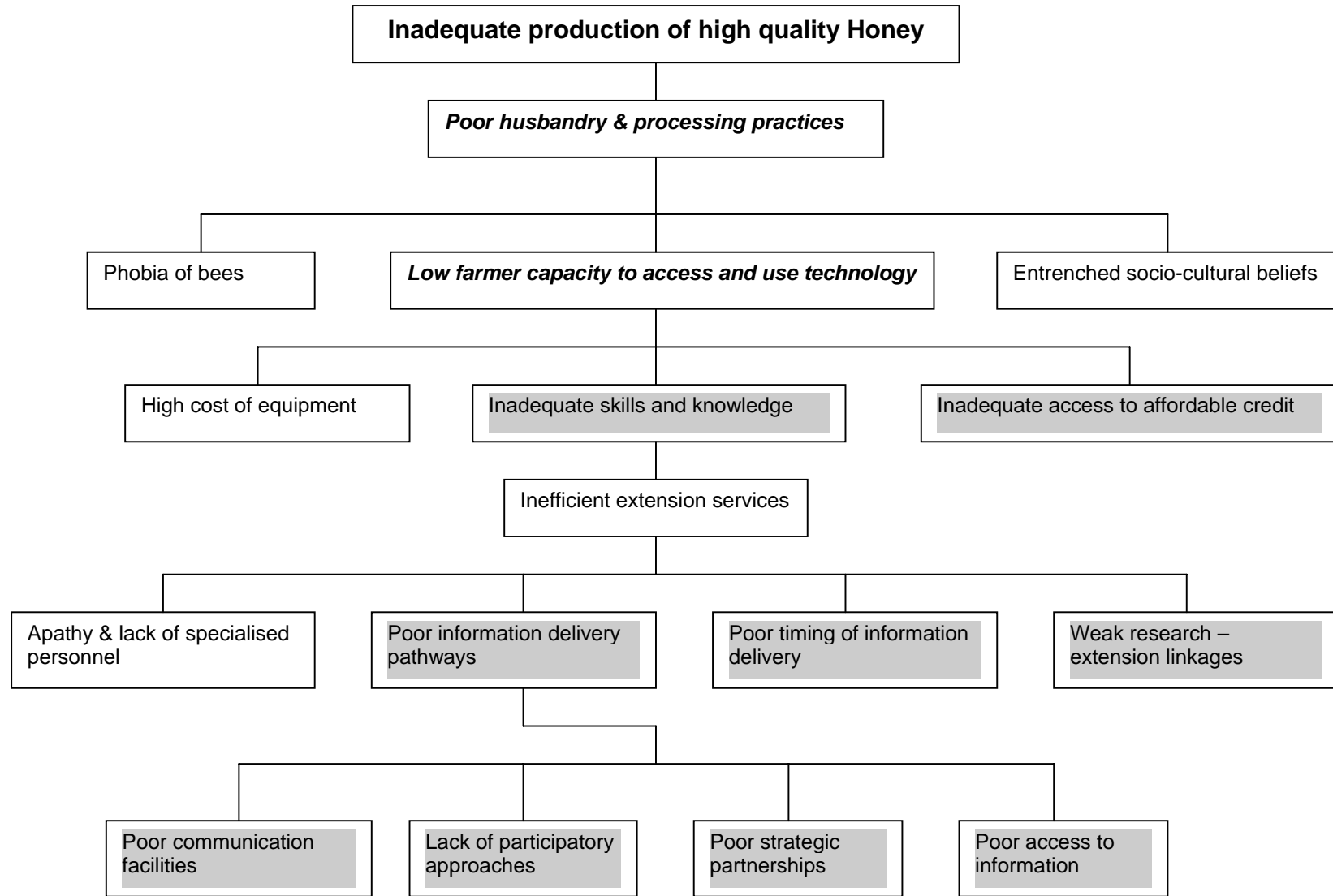


Figure 3: Perceived cause-effect relationships amongst the constraints to sustainable production of honey in Kenya (Shaded areas show potential intervention points are)

Main players in the Honey commodity chain

The honey industry is fully liberalised and has a number of players (Figure 4). Notable ones include the farmers, researchers (public & private), extension personnel (public & private), NGOs, community initiatives, church organisations, and research and training institutions. The roles of the players are varied ranging from capacity building, provision of equipment, technological development and transfer, production, marketing research and policy formulation. Marketing is done mainly by the Kenya Beekeeper's association, beekeeping societies, NGOs, Community initiatives, Development Authorities and other private individuals and companies.

Quality and safety for consumption is a major issue when it comes to honey production and marketing. A number of laboratories provide quality control services, including the National beekeeping station (basic quality control), Kenya Plant Health Inspectorate Service (KEPHIS) for analysis of heavy metal residues, Kenya Bureau of Standards for basic quality control and heavy metal residue analysis, the University of Nairobi for the analysis of antibiotics, and the International Centre for Insect Physiology and Ecology (ICIPE) for basic quality control analysis.

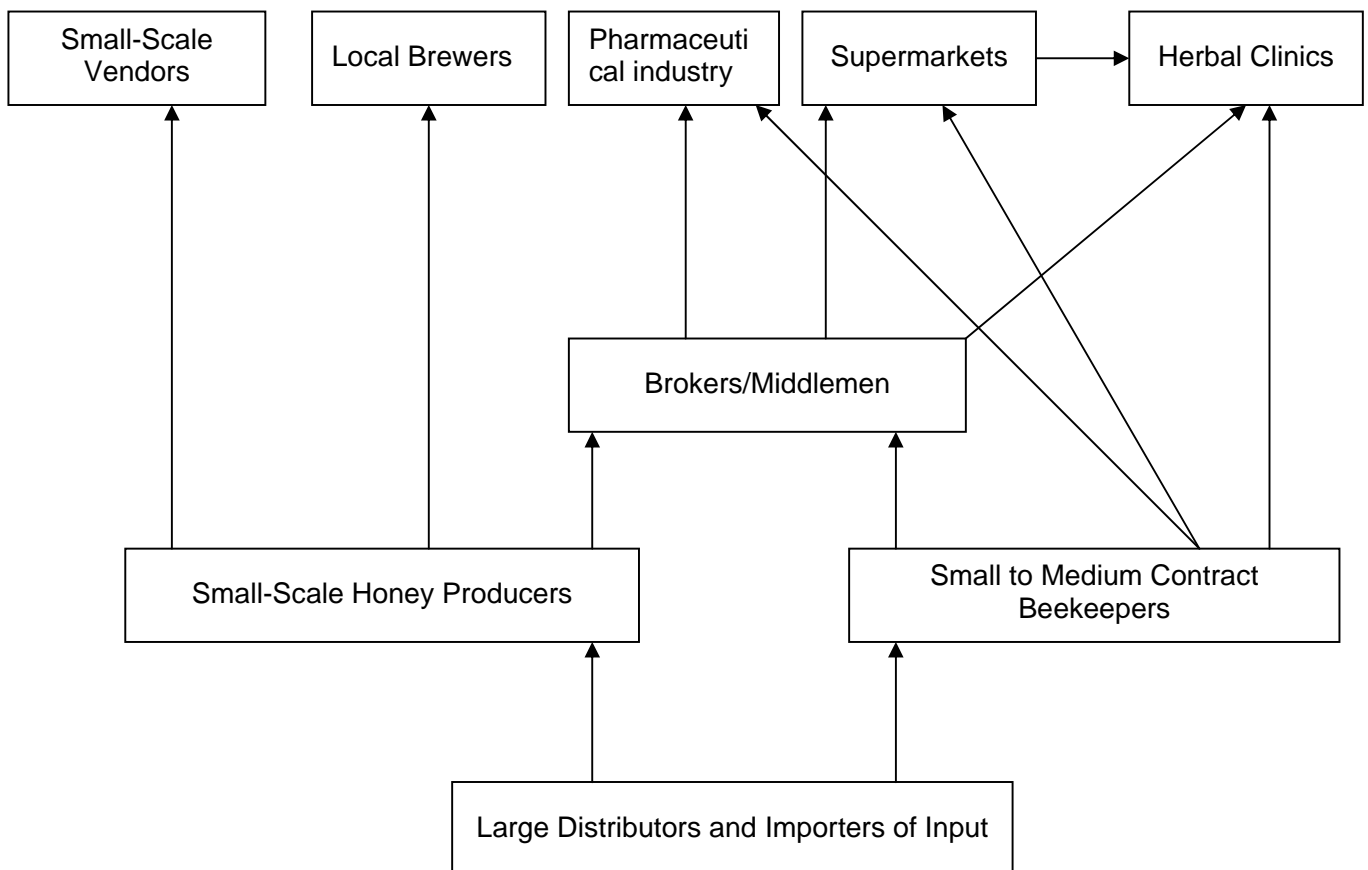


Figure 4: Sub-Sector map for high quality mountain Honey in Kenya

3. Macadamia

Macadamia has a long history in the Kenyan Agricultural sub-sector, first introduced in Kenya in 1944 from Australia via Hawaii. Wide-spread production started in the late sixties and is mainly by small-scale farmers with individual farmers owning from 5 – 100 trees of various ages and under a wide-range of husbandry practices. The commodity is grown mainly as an intercrop with other cash crops e.g. coffee and food crops. Steady growth in export has been realised since the early 1990s, increasing from an export level of 4,000 tonnes in 1993 to 7,300 tonnes in the year 2004. The growth rate of the sub-sector is nevertheless below the country's potential and is relatively slow when compared to the growth rate of competing countries such as South Africa to which Kenya has lost some of her market share.

Constraints and opportunities in the Macadamia commodity chain

Productivity from the small-scale sector is low and the quality of the nuts inferior to those of their estate counterparts. The low productivity and poor quality are a reflection of the poor prices which the commodity attracted during the period when only one market outlet prevailed. With good prices currently being realised however, inadequate availability of high quality seedlings and the high cost attached to the available planting materials is a major bottleneck to rapid expansion of Macadamia. Other factors constraining macadamia development in Kenya include inadequate value-addition, lack of modern equipment for production and processing, the tendency to export 'in-shell' nuts thereby killing the local industries, inadequate access to information, inadequate information on the right varieties for the various Agro-ecological zones, inadequate extension services for macadamia, unethical business practices due to a large number of brokers, lack of farmer awareness on the final products, insect pest damage to nuts thereby lowering quality, high cost of farm inputs, inadequate information and knowledge, low household incomes leading to poor living standards, and poor agronomic and husbandry methods leading to poor quality of nuts. The interrelationships among the constraints are shown in Figure 5.

The country nevertheless has great potential for further improvement in both production and value of Macadamia from Kenya. The country is endowed with favourable edapho-climatic conditions for the production of high quality Macadamia and with minimum disruption from both biotic and a-biotic stress factors. The existence of unexploited scope for using Macadamia by-products in other industries e.g. as animal feed, increasing global demand for Macadamia due to the low cholesterol level of the product, increased competition from buyers leading to higher farm-gate prices are among some of the opportunities which are yet to be tapped fully by Kenyan Macadamia producers. Scope also exists for alternative uses of Macadamia and Macadamia by-products in the food and beauty, building, tea and feed industries.

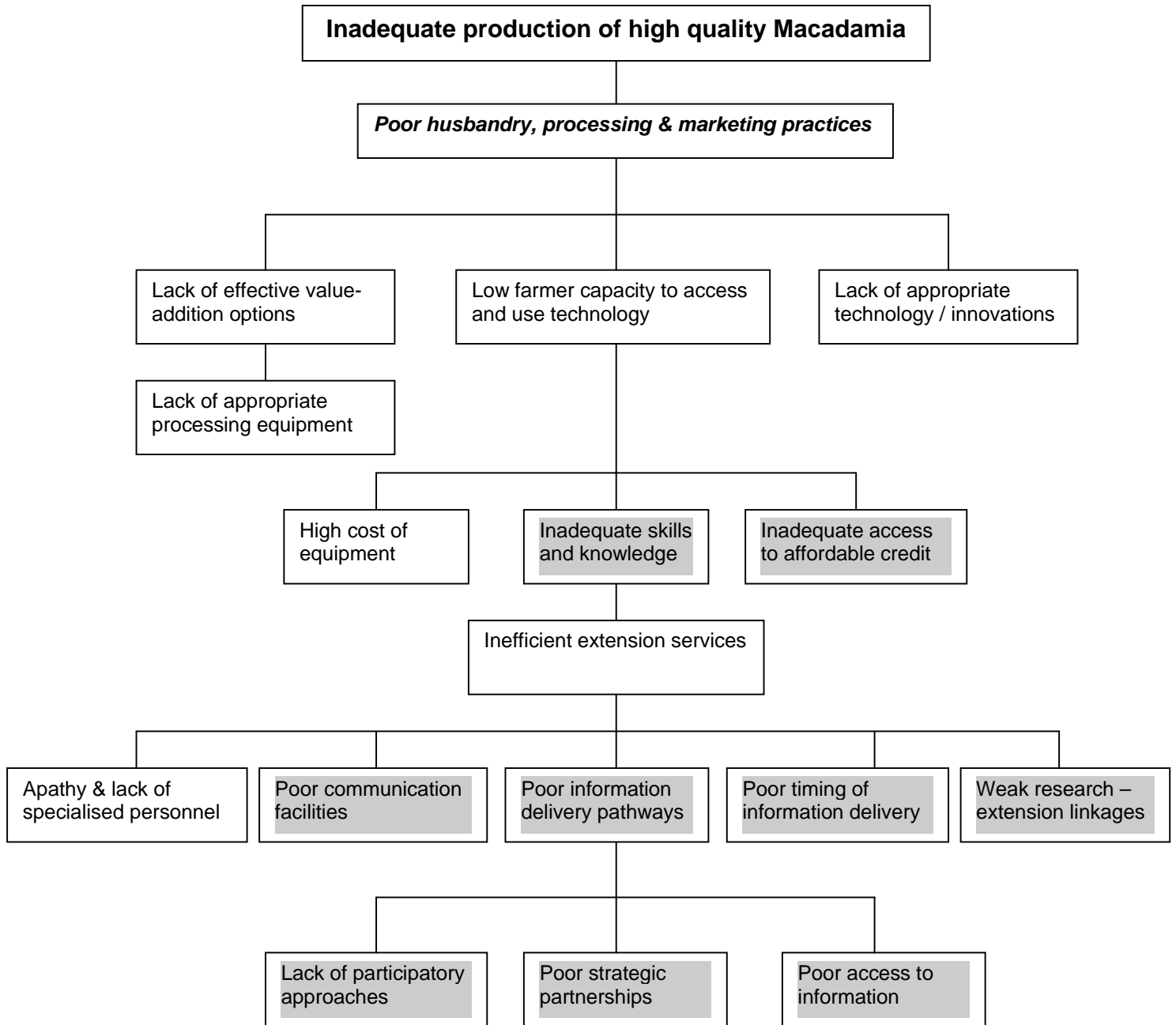


Figure 5: Perceived cause-effect relationships amongst the constraints to sustainable production of high-quality Macadamia in Kenya (Shaded areas show potential intervention points are)

Main players in the Macadamia value-chain

The macadamia value-chain is relatively short (Figure 6). At the primary end of the Macadamia value-chain are the farmers, the majority of whom are small-holders. Farmers are responsible for the production and initial nut processing including harvesting, drying and storage. The farm-dried nuts are sold mainly at the farm-gate, although some collective marketing through cooperative societies may occur. Farm-gate purchase of nuts is either done directly by the main processing companies or through brokers who purchase the nuts on behalf of the processors. Most of the services to nut growers are provided by the processors. This includes advisory services, training of nursery men and provision of planting materials. Similar services are provided by the research services. In addition, the research system selects varieties with specific adaptation to various agro-ecological conditions. Credit is provided through agricultural-based banks and other micro-finance institutions.

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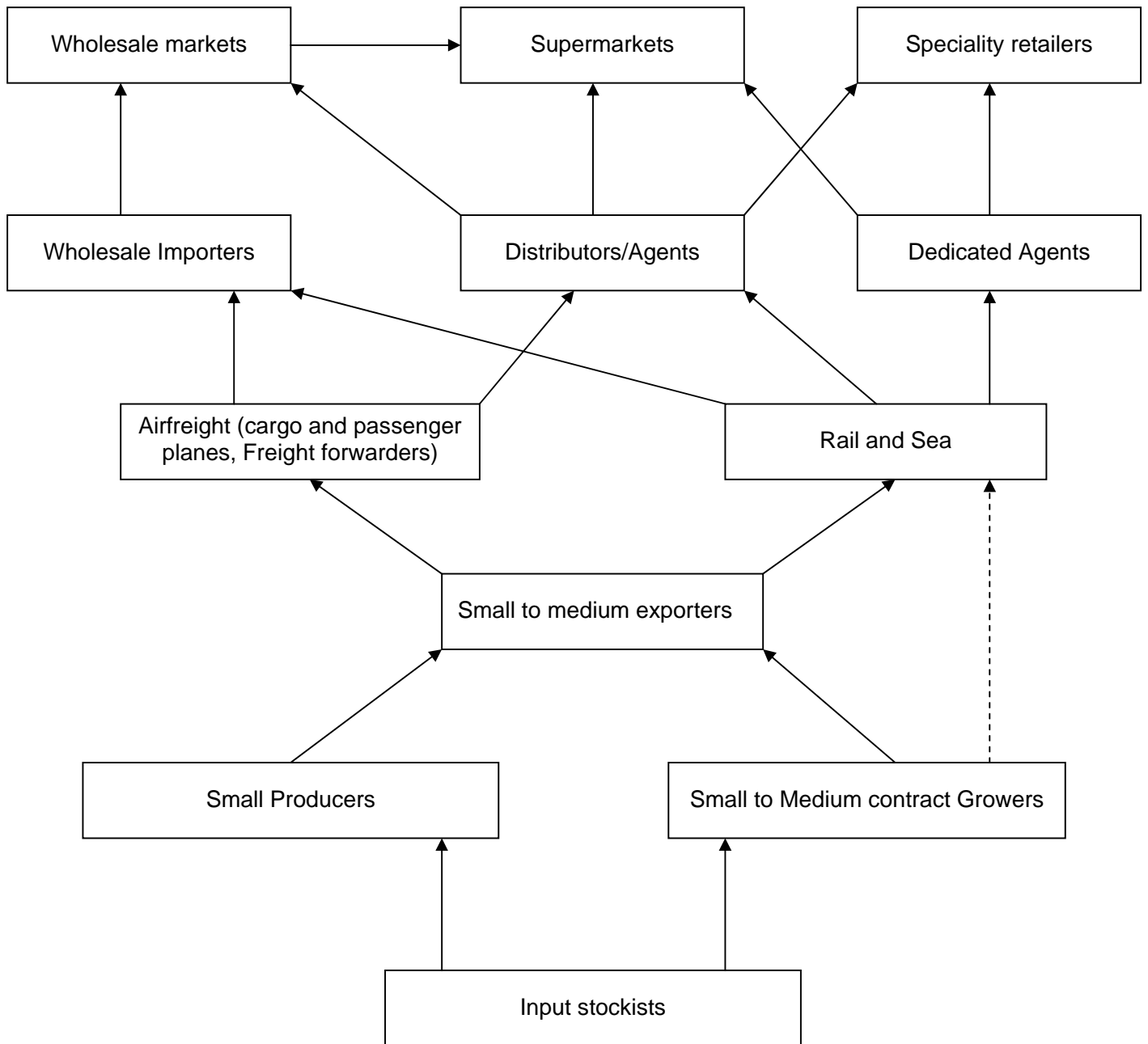


Figure 6: Sub-Sector map for high quality mountain Macadamia originating from Kenya