

FACTORS TO THE FAILURE OF SUSTAINABLE ASPARAGUS PRODUCTION OR AGRICULTURAL EXPORT ECONOMY IN LESOTHO

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ABSTRACT

The research question addressed in this research study is to what factors can the failure of sustainability in Lesotho's asparagus production or agricultural export economy be closely linked to? Findings from the primary data collected and analyzed in this study confirm (a) poor management of production and (b) processing and marketing services that inhibited the expansion of asparagus production and made it impossible for Lesotho's asparagus to compete effectively in the Western European markets as the factors to unsustainability in Lesotho's agricultural export economy through asparagus. Lesotho as a developing country therefore lost the comparative advantage she had in asparagus production/export economy. This is found to have had an adverse impact on the lives of the participating farmers in asparagus, who have not been able to build their assets and therefore escape poverty and attain sustainable livelihoods/development.

The research study provides the demographic characteristics of the sample population-asparagus farmers, asparagus production as a commercial undertaking, Cannery as a marketing channel for farmers' produce, relations between farmers (Setla-Bocha Farmers Association) and the Cannery (Basotho Fruits and Vegetable Cannery/BFVC), relations between the Cannery and Lesotho National Development Center/LNDC and international linkages and their implications for asparagus sustainable production/export economy for a developing country. (N.B. Lesotho's monetary currency is called Maloti (M) (singular is Loti which is equal to 100 cents), 11 Maloti (M11) is equivalent to 1 US Dollar).

Keywords: Sustainability, Asparagus and Vulnerability, Export Economy and Poverty Reduction, Sustainable Development, Contract Farming, Poor Management, Processing and Marketing Services

INTRODUCTION

The purpose of this research study is to critically assess the widely supported development policy argument that international trade through contract farming can improve farmers' incomes and therefore attain sustainable development/livelihoods and reduce poverty. The study uses the case of Lesotho's asparagus production project which ran from 1974 to 1999, the only agricultural project managed through contract farming for export in Lesotho. The main objective of this study is to establish whether participation in commercial farming for export can sustainably increase the incomes of rural farmers to an extent of building their livelihood assets and therefore increase their welfare on a sustainable basis.

The Relevance of the Study: In the 1990s, Lesotho like other developing countries intensified implementing structural adjustment programmes. This has been accompanied by intensions to diversify crops production for export and the production of high-value crops is considered to be a crucial area where Lesotho holds a comparative advantage as revealed by some official documents and the mission statement of the Ministry of Trade and the reopening of the cannery which collapsed in 1999.

The viability of such programmes is questionable, taking into account the collapse of the asparagus project after almost three decades of massive investment, which was supposed to have contributed to growth and improved the life of those who participated on a sustainable basis. This study therefore serves as an investigation as to what caused the collapse of the project using a micro-meso-macro analysis that is linking contract farming, national policies and international environment and policies.

LITERATURE REVIEW

Definition of Some Key Concepts Used: Contract Farming, Poverty and Vulnerability

Contract Farming: It will be observable in the following section of findings and analysis that asparagus production bore features of *contract farming* involving a central processing or exporting (marketing) agency (food processing firm) buying harvests of farmers to maintain a corresponding steady raw material/primary product inflow to the high capacity and high fixed costs for processing, which an open market cannot guarantee. At times, the firm's farm, contract growers and the open market are simultaneously used. This distributes growing risk to the farmers and marketing risks to the processing firm. Buying terms are previously agreed through contracts which are usually signed during planting time tabulating price and amounts to be bought and sold by the farmer. This agency usually gives farmers credit, inputs, farm-machinery rentals, technical advice and little or maximum supervision. It can reject substandard produce (Glover David and Ken kusterer, 1990, p. 3-5)

Poverty: What really constitutes *poverty*, as well as the dynamics of the relations between poverty and international trade is a highly contested issue. Poverty is mostly described as the state of being in need, hardship and lack of resources across a wide range of circumstances. For some it is a subjective and comparative term while for some it is a moral and evaluative

description of human conditions. It is usually used to describe material need including deprivation of essential goods and services, multiple deprivations and patterns of deprivation over time.

Poverty has also been explained in terms of social relations such as social exclusion and the ability of individuals to live the socially acceptable and normal life including the capability of raising healthy families, educating their children and participating in the affairs of their societies. It is also used to describe economic circumstances including lack of wealth understood as capital, money, material goods or resources. Definitions of poverty, though they shed light on the issues of poverty, they do not reflect some facts about poverty. For instance, deprivation is closely related with the ability to cope with risk as is to income. The more recent and dynamic concept of poverty arising from such arguments is the one that sees poverty as vulnerability to adverse events outside the control of the rural poor which can result in poverty and destitution. It is with this type of deprivation that this paper is concerned. This is because poverty itself is not always a permanent situation, people are said to move in and out of poverty (World Bank, 2000/2001).

Poverty Reduction: Given the above conceptualization of poverty, it becomes clear that poverty eradication or reduction is something beyond income provision. It involves making the development efforts self-sustaining over a long period, that is, any development effort should aim at and be able to build the livelihoods assets of the rural poor to make them to be able to cope with risks, shocks, stresses and defencelessness imposed by the events occurring outside their control.

Vulnerability Context of Farmers in Lesotho

Lesotho is a small, mountainous, landlocked country with no substantial natural resources other than land, water and labour (its population). Being a landlocked country and based on the historical creation of the country in which it was turned into a labour reserve and an export destination for South African products, Lesotho depends heavily on South Africa for employment and food imports and to a lesser extent for export market of a few commodities. The rural households depend on the supermarkets as much as do the urban areas. This puts the rural areas at more risk of being affected by the shocks and stresses since they do not depend on the markets only for selling their crops but also for basic needs and employment. More than 85 percent of the population lives in the rural areas engaged mainly in agriculture. However, agricultural productivity and its share in the GDP has been constantly declining, from 31.4 percent in 1979 to 18.2 in 1998 (World Bank 2001). All the accounts on poverty in Lesotho indicate that the country has one of the highest income inequalities in the developing world, while nearly half of its population is poor. The rural households constitute 85 percent of the population and 70 percent of the total population derive their subsistence from agriculture (Senaoana, 1996). Poverty is notably worst in the rural areas.

The agricultural sector has been largely undermined by a host of factors, the most salient of which is the “absent men” working in South African mines and industries as migrant workers, leaving agriculture for women and children. This has with time reduced agriculture to a supplementary source of rural income since about half of the rural household income comes from family members’ wages from the mining and other sectors in South Africa and the urban areas in Lesotho. The remittances help the rural households to meet their food and other requirements. From the late 1980s, the developments in South African mining and industry started to reverse the benefits of migrant labour system. Thousands Basotho mineworkers

were retrenched from South African mines and continue to be. This has been compounded by the introduction of SAPs in Lesotho which saw more thousands of Basotho workers lose their jobs from the formal sector in Lesotho, increasing the unemployment and underemployment levels to 35 percent.

History of the Problematic Situation

Lesotho has had since independence an experience of various development projects' and co-operatives' assistance including asparagus production for sustainable rural development and incomes. There is little evidence of sustainable progress from such interventions. This disappointing incidence is among others worsened by declining development assistance, environmental problems, general constraints to development for change and lack of gender-aware planning. Environmental degradation is mainly due to change in land use patterns. Factors to the change include encroachment of rangelands by cultivation escalated by high population density, loss of arable land through expanding settlements, urbanization aggravated by sprawling character of towns and villages and soil erosion. This degradation is also caused by partial collapse of traditional and ecologically sound seasonal grazing patterns put in danger by increased stock theft, transhumance discouragement, too many new settlements disabling herds' mobility and confusion about authority concerning land use. Burning of pastures by the herd boys and ineffective methods of cultivation that is just cultivating for fear of loss of traditional right of use of arable land also worsen degradation. Soil loss, widespread shrub encroachment reducing wool and mohair production and toxic weeds characterize this degradation. There is still a problem of destructive agricultural practices, combined effect of extensive grazing and marginal agriculture (GoL Reports, 2012).

General constraints to sustainable development are attitude, political and financial constraints. Attitudinal problems calling for transformational and sustainable development include a lost sense of responsibility of a community for its own development destiny and disintegration of government (GOL) mainstream support services for development project services. Negative attitudes to change are also caused by a lack of commitment by beneficiaries to the project objectives, the handing out of development assistance unconditionally and unwillingness of the government ministries to intervene appropriately when development process is in jeopardy (GoL Reports, 2012)..

Political structures have been fragmented at national and local levels. This led to confusion and impeded progress of coordination towards achieving community development goals. Decentralization, local governance and community-based development have become more urgent to remedy this situation. Respective roles of traditional leadership versus Village Development Committees (VDCs) and/or local government institutions are not yet well understood if not well defined. This creates tensions, conflicts and struggles for power disabling development initiatives. This includes farmers' associations and NGOs' in land and range administration and management. Farmers associations/co-operatives and NGOs are not yet transformed into inputs and outputs producers for effective price instability tackling either for inputs or products and as such consumer-welfare is non-existent. On the part of financial constraints, land and livestock holders are not motivated by commercial opportunities. They act like people not conversant with the ideas of production costs and profit. This financial management attitude in livestock and crops production is premised on cultural attitudes. The effectiveness of farmers

associations is constrained by lack of proper maintenance of financial accounting and integrity (GoL Reports, 1997 and 2012).

Though it has now become the official stand of GOL that development designs need to accommodate the private sector in the pursuit of overcoming mismanagement, many development agencies have not yet significantly integrated this element. Insufficiently addressed gender and herd boys development issues and relations partly contribute to this stagnant position. The outlook of development initiatives has so far not visibly considered gender and herd boys in development planning. Livestock production is still a male dominated sector. The gender division of labour allows women to be in-charge of home-based animals or intensive livestock (mostly poultry). Men are responsible for extensive grazing livestock. In the event of increased male mineworkers' retrenchment, women's de-facto household headship is diminishing, meaning their diminishing user-rights as well. Development projects and co-operatives still function within unreformed discriminatory practices and regulations, group lending is not yet massively done, gender-aware planning is still lacking among development officials and institutions. Skills impartation programmes and co-operatives are not gender sensitive and female and herd boys' participation not only in implementation but in policy formulation and decision making levels is not yet effectively practiced (GOL Reports, 2000). Ellis (1998, p.285) has also stated that, "Sometimes a policy (Coop/programme) fails precisely because of its adverse impact on the role and status of women. Sometimes a policy succeeds in its own terms but has adverse side-effects on women, to a degree that is unacceptable from the view-point of the goal of equality of participation in development of women and men."

RESULTS AND ANALYSIS

Demographic Characteristics of Sample Population

The study on asparagus production and export was carried out during October-November 2005 in eight (8) villages in the Maseru District which has the longest period of participation in asparagus production. The villages are Makhoathi, Mosalla, Nazareth, Maliele, Lenono, Ha Liile, Mapetla and Matala. In all these villages, asparagus was produced on small land-holdings belonging to the individual farmers or lent out by relatives on few occasions. Two methods of data collection were used; a) a questionnaire for household level and b) meetings with groups of farmers to get information on general issues related to asparagus production not pertaining to individual farming households. Initially, the intention of the study was to interview 50 farmers but due to the hostility of farmers towards anything to do with asparagus production, a total of only twenty-nine (29) farmers were interviewed. The intention of the study was to obtain a sample that is equally distributed among all the areas that participated in asparagus production to see the different "regional" experiences of farmers. However, this did not work out because some areas had larger numbers of farmers than others.

The sample was drawn from the lists provided by the re-opened Basotho Fruits and Vegetable Canners. In each village, the interviewees self-selected themselves because the strategy was to ask local chiefs to call public gatherings of former asparagus growers due to the realization that farmers are no longer interested to participate in studies dealing with asparagus. The twenty-nine farmers are the only ones who participated in public gatherings and were willing to answer household level

questionnaires. The purpose of the public gatherings was to get a clear indication of the perceptions and feelings of the farmers about asparagus production and to probe into the issues raised in the questionnaires which were believed to be sensitive to individual farmers as well as to supplement the information provided by the questionnaires. Interviews were also held with the officials of the Cannery and Lesotho National Development Centre/LNDC and the Ministry of Agriculture. Among the farmers who were interviewed were also the members of the farmers' cooperative, Setla-Bocha.

The first section of the questionnaire dealt with the characteristics of the farm household. The data present the characteristics of 101 people in 29 households. Table 1 below shows that the average household size is four people per household.

Table 1: Household Size

Household Size (A)	Frequency (B)	Percentage	A*B
1	9	31	9
2	2	7	4
3	7	24	21
4	3	10	12
5	1	3	5
6	3	10	18
7	2	7	14
8	1	3	8
9	0	0	0
10	1	3	10
Total	29	100	101

Source: Researcher's Survey October – November, 2005.

The data obtained indicate that on average there are as many males (49%) as females (51%) in the sampled households. According to the conventions on the rights of children, those aged below 16 are considered to be children and therefore not supposed to participate in production. However, in Lesotho's agriculture in general and in asparagus in particular, this group is very much active and does as much as other groups can do. They do crucial tasks like weeding and harvesting. In this sample 10% of the population is aged below 16 while 50 percent is aged between 16 and 55 years, which are regarded to be the "active labour age". A further and significant (25%) number is aged between 61 and 90 years. The data also indicate that among the farmers, males constitute only 17 percent as opposed to 83 percent females. Around 66 percent of the farmers are married while 34 percent are widowed. A further analysis reveals that most (90%) of the widowed are women aged between 49 and 87 years and 10 percent are men. Though gender representation is balanced within households, it is biased towards women in terms of participation in asparagus production.

It has been observed by many scholars analyzing contract farming (out grower schemes) in developing countries that a large number of participants usually have little or no formal education. Table 2 below shows the highest level of education attained by participating farmers and their family members.

Table 2: Educational Level (Farming Household)

Years in School	Frequency	Percentage
Primary		
0	11	11
1	4	4
2	5	5
3	6	6
4	11	11
5	7	7
6	17	17
7	17	17
Secondary		
1	2	2
2	9	9
3	4	4
4	0	0
5	4	4
Under graduate	4	4
Total	101	100

Source: Researcher's Survey. October – November, 2005.

The analysis of educational levels attained by both farmers and their household members shows that 11 percent of the sample population has either not yet started attending or never went to school while a stunning 66 percent are doing or have only attained primary education and a further 19 percent, mostly children of the farmers have reached secondary school with only a few managing to complete. Only 4 percent has managed to enter tertiary level institutions. Analysis further indicates 3 percent of participating farmers to be having no formal education while 41 percent have not completed more than five years of school. In general, 97 percent of farmers have not gone beyond primary school certificate. This can be interpreted as low literacy level among asparagus farmers, which is problematic since contract farming involves crops that require adoption of certain technologies and methods as well as complex relationships.

The study has established that most of the households did not depend on asparagus only for generating income. Households engage in a variety of activities, both formal and informal to cope with the seasonality of asparagus income. Table 3 below

shows that in 59 percent of the households either the household head, one or some members were working as a migrant while 41 percent did not have anybody working as a migrant.

Table 3: Family Participation in Migrant Labour?

	Frequency	Percentage
Yes	17	59
No	12	41
Total	29	100

Source: Researcher's Survey. October – November, 2005.

Even where there is/are no household member/s engaged in formal employment, it appears that asparagus did not become the only source of income for families. Table 4 below shows that of the 12 households that did not have migrant remittances, 8 depended on asparagus income only while 4 engaged in other activities including sale of staple crops such as maize, sorghum, vegetables, beans and peas (Researcher's Survey, October-November, 2005).

Table 4: Asparagus the Only Source of Income?

Response	Frequency	Percentage
Yes	8	67
No	4	33
Total	12	100

Source: Researcher's Survey. October – November, 2005.

Farm Level Information

This section deals mainly with the access to and allocation of resources (land, labour and technology) for asparagus production by the farming household. The data collected from 29 households indicate that fifty-eight (58%) of the growers participated in the scheme for period of 6 to 27 years. The majority (90%) grew asparagus on their own land. The remaining 10 percent used the land under such arrangements as renting, sharecropping or family ties (lending by relatives). This reflects the country's land policy which gives user rights to most of the rural population though allowing concentration in the hands of some, leaving others landless. This is supported by the fact that while 41 percent of the sample population owns only 1 field per household, 28 percent owns 3 fields per household. According to the records of the extension workers from the Cannery, the minimum size of asparagus plots was 0.06ha while the maximum was 0.54ha. The plot size was restricted to ensure that the crop gets enough attention since it demands intensive labour and management, and to make sure that production does not exceed the demand for raw material by the Cannery (Senaoana, 1988 and Researcher's Survey, October-November, 2005).

Most of the farmers (97%) grew asparagus and other crops for subsistence while only 3 percent planted asparagus only. This shows the social and cultural attachment of the farmers to subsistence crops. Even those who had more than 1 field did not use one whole field for asparagus but rather used a portion of one field.

Table 5: Crops More Significant for Income Generation and Consumption

Crop	Frequency	Percentage
Maize	18	38
Sorghum	11	23
Asparagus	10	21
Beans	8	17
Pumpkin	1	2
Total	48	100

Source: Researcher's Survey. October – November, 2005.

Table 5 above shows that only 21 percent of the farmers who planted asparagus with other crops regarded asparagus to be important for their survival, both as a source of income and for consumption. This determines the allocation of labour between asparagus and other crops.

Availability of labour is crucial in asparagus production to ensure that activities are carried out on time. Selection criteria included availability of at least adults per farming household. However, data show 55 percent of the households seem to have been using less than three family members. It appears that majority (69%) of the households used 1 person for asparagus production while only 31 percent used 3 people and above to work the asparagus plot. On the contrary, for other crops the data show that only 38 percent of households use less than three people to work the fields while a stunning 62 percent use a minimum of three people. The shortages in labour were never even complemented through hiring since it seems 69 percent of the households never used hired labour as shown in Table 6 below.

Table 6: Use of Hired Labour by Asparagus Growers

Number of People	Frequency	Percentage
0	20	69
1	3	10
2	2	7
3	2	7
4	0	0
5	1	3
6	0	0
7	1	3
Total	29	100

Source: Researcher's Survey. October – November, 2005.

Farmers did not use hired labour because it resulted in loss of profit. Family labour is preferred because it is free and at the control of the household, giving more working hours per member per day (self-exploitation without financial consequences). Some farmers did not use hired labour because asparagus income was insufficient to cover labour costs. Hired labour was also not used because of the uncertainty due to heavy deductions made by the Cannery which were always not known in advance by the farmers. Sometimes farmers who had to sell their other assets and sources of income such as livestock and remittances in order to pay the workers who harvested, which requires more labour. This has an adverse effect on the farmers' efforts to accumulate assets. Table 7 below shows different daily rates that farmers who used hired labour paid.

Table 7: Daily Wage Rate per Worker

Amount (Maloti)	Frequency	Percentage
3	1	11
7	3	33
10	1	11
Depend on Yield	4	44
Total	9	100

Source: Researcher's Survey. October – November, 2005.

The table above indicates that some farmers paid wages according to the yield. This had a discouraging effect on off-farm employment. For small families that have few members inability to secure hired labour affected their productivity badly because they could not afford to do weeding and harvesting in time, which exposed their crops to weeds and pests and reduced the quality of their produce.¹

¹ An interview with a widowed female farmer at Ha Mosalla on 15/11/2005.

Among asparagus growers, there appears to have been a greater use of child and women's labour. Tables below show that 59 percent of the households used child labour and that in 76 percent of the households, asparagus production has been mainly done by women.

Table 8: Child Labour Usage

Child labour use?	Frequency	Percentage
Yes	17	59
No	12	41
Total	29	100

Source: Researcher's Survey. October – November, 2005.

Table 9: Gender Participation

Gender	Frequency	Percentage
Men	1	3
Women	22	76
Both	6	21
Total	29	100

Source: Researcher's Survey. October – November, 2005.

This confirms that Lesotho's agriculture has always been the work of women, children and old men due to labour migration of young able bodied men Table 10 below shows that in 52 percent of the households there was someone (*mostly men*) working as a migrant either in local towns or in South African mines leaving women as *de facto* household heads.

Table 10: Family Member/s Engaged in Labour Migration

Response	Frequency	Percentage
Yes	15	52
No	14	48
Total	29	100

Source: Researcher's Survey. October – November, 2005.

A significant number of female farmers are widowed and therefore responsible for the survival of their families. In households where there are males, there is still a division of labour based on gender. Men are responsible for tasks that involve the use of cattle such as harrowing and ridging while women do most of the labour intensive activities involved in asparagus production such as planting, weeding, harvesting, transporting asparagus from the fields to the collection points and washing of asparagus. This division of labour in asparagus production places a heavy workload on women especially during peak seasons which coincide with peak seasons in subsistence agriculture, considering other roles of a rural woman; reproductive and productive areas, including participation in subsistence agriculture that require a minimum of 13 hours

(Gay, 1982). In order to balance between asparagus production and other roles, women have to depend mostly on their children, especially girls for care and household chores. This leads to further exploitation of children. Table 11 below shows the hours spend by women in asparagus production per day.

Table 11: Hours Spent by Women on Asparagus per Day

Hours	Frequency	Percentage
1	0	0
2	0	0
3	1	3
4	4	14
5	7	24
6	6	21
7	5	17
8 & above	6	21
Total	29	100

Source: Researcher's Survey. October – November, 2005.

Out-grower schemes provide credit, define production technology and skills. Lesotho's asparagus production has not been an exception. However, in Lesotho asparagus service delivery has been poor. For example, tractors have failed to be there on time and therefore farmers have had to rely on different types of equipment for cultivation. Table 12 below shows what farmers used for cultivation.

Table 12: Cultivation Technology

Technology for cultivation	Frequency	Percentage
Cattle	4	13
Tractors	25	81
Shovels	2	6
Total	31	100

Source: Researcher's Survey of Asparagus Production. October – November, 2005.

The above table shows that although a large number (81%) of the farmers use tractors for cultivation, a significant number (19%) still uses backward technologies such as cattle and shovels. Although these are cost saving to farmers, they however badly affect the productivity and the quality of the produce.

Asparagus Production as a Commercial Undertaking

This section looks at the working relations between the agro-industry, other stakeholders and the farmers in order to assess the viability of asparagus production. It looks at the flow of inputs and outputs, institutional linkages in asparagus production. These are important because the bargaining and operating relationships of all the actors can determine the success or failure of the industry (Austin, 1987 and Ellis, 1998).

Farmers' - Agro-Industry Relations

The information obtained from both the farmers and the management of the Cannery, shows that the Cannery through Basotho Farm Produce (BFP) provided inputs such as seeds, fertilizers, pesticides and implements, extension services on credit which was payable at harvest time. The Cannery would also buy the farmers' produce, process it and export it to the West European markets. On the other hand farmers had supply the Cannery with raw materials. Table 13 shows farmers' characterization of these relations

Table 13: Working Relationship with the Agri-business

	Frequency	Percentage
Bad	14	48
Fair	12	41
Good	3	10
Total	29	100

Source: Researcher's Survey. October – November, 2005.

The above table shows that only 10 percent regarded the relationships good. The issues involved here included services provision, prices, bargaining power and marketing.

Services Provision

Farmers complained about the way they were treated by staff of the BFP, especially during collection and transportation of asparagus. They claim they had to harvest, wash and bring asparagus to the collection points where BFP truck would collect it. They had to provide own transport from the fields to the collection points (self-loading), only to miss the "scooter man" who would go before the truck from one collection point to another in a rush to weigh the produce. This would force farmers to walk about 3 kilometers with the loads to avoid waste of their produce.² Transportation was also not good. In the beginning farmers had to wait by the road side in sun, which affected harvested produce badly. They were also dissatisfied with poor transport services which resulted in the delay of collection of their produce, causing depreciation of quality.³

² An interview with a group of farmers at Ha Mosalla on 15/11/2005

³ An interview with a group of farmers at Ha Makhoathi on 16/11/2005

Farmers also blame poor extension service delivery for some of their production problems. They claim that they were not advised properly on how to use inputs (e.g. – fertilizer) in a way that produced good quality asparagus demanded by the Cannery. Some farmers said their asparagus was always rejected because of thickness, abnormally large.⁴ Farmers argued that extension agents (EAs) did not go to the fields and when they did, could not keep time. EAs are also said to have not been interested in their work and sometimes showed lack of training when they failed to solve farmers’ problems. There has always been low motivation among the staff of the Ministry of agriculture and one of the problems of Lesotho’s agriculture has been poor extension service. Some of the field operations, especially heaping and de-heaping which were done by BFP tractors were blamed for damaging farmers’ asparagus, later to be rejected by the Cannery as damaged (Green, 1995 and Researcher’s Survey, October-November, 2005).

Prices and Payments

The research aimed at establishing the profitability of the venture for the participating farmers. The response of some farmers, especially those who joined the venture during its early years was that in the beginning asparagus provided good income until the early 1990s. However, (72%) of the farmers said that the venture was not profitable. Table 14 below shows that most farmers (86%) claim to have received incomes not sufficient to cover their production costs.

Table 14: Income Sufficient to Cover Production Costs

Income enough for input costs?	Frequency	Percentage
Yes	4	14
No	25	86
Total	29	100

Source: Researcher’s Survey. October – November, 2005.

This lack of profitability has been closely linked with the deductions made by the agro-industry from the farmers’ payments. Farmers complained that they have never ending debts that even the farmers who joined earlier still had deductions made from their payments. Farmers were never told of the extent of their liabilities at the beginning of the season; the prices of the inputs and services rendered are only disclosed during payment time. Some farmers say they used to receive their payment cheques with statements while others say they never received statements. For some, the statements reflected big amounts from which deductions would be made until they get “zero cheques” (Researcher’s Survey, October-November, 2005).

The general opinion is that the equipment and inputs advanced to the farmers were never worth what they were charged. This has been explained by the former management of the Cannery as a misunderstanding that was a result of the mismanagement of the revolving fund which was funded by European Union (EU) before the 1990s.⁵ The deductions that were supposed to be made yearly from farmers’ payments for the costs of establishment were never made. This changed in the 1990s when EU

⁴ An interview with a group of farmers at Ha Mosalla on 15/11/2005

⁵ An interview with Mrs Motaung, former Manager of the Cannery

demanded that the funds be recovered leading to big deductions. Even for those who did not owe anything in the revolving fund still had heavy deductions from other services. Also, the prices of different grades of asparagus were disclosed just before harvesting. Farmers allege that the Cannery and the farmer's cooperative representatives, not conferring with their constituency, would gather and set the prices. The Cannery says that the prices were agreed by both sides based on the prices in the West European markets as given by the sales agent.⁶ Farmers claim that sometimes prices were changed halfway through the harvest period. Prior to 1993, the Cannery was paying farmers the price per kilo for all asparagus supplied. However, in 1993 quality grades were introduced. Initially there were three grades; white, green and salad. In 1996 six grades of asparagus as per Cannery's demand were 1A, 1B, 1C, 2A, 2B and Salad Cut. Even small differences in asparagus like the length of green on white asparagus would be considered grades. Grades were based on asparagus colour, thickness and length. Grading has been one area of contention between farmers and the Cannery staff (Researcher's Survey, October-November, 2005).

The main problem with these grades is that the classification given is mostly not a result of asparagus growing in the soil but post-harvest changes. Asparagus is very sensitive to heat and light. This can result in weight loss and change to different colours depending on the length of exposure and intensity of the conditions which make it less marketable. Farmer's income was affected by grading and weight loss. One farmer indicated that most (78.4 kilos out of 109 kilos) of his asparagus was classified under low paying grades, salad cut that paid M1.40, 1A, 1B and 1C which paid M3.35, M2.69 and M3.65 respectively. If all the asparagus, especially white supplied by this farmer was bought for one price (M4.04), he would have gotten M322.89 before deductions. If he did not have a weight loss of 9 kilos he would have made a further M36.36, giving him M359.25 before deductions leading to a net pay of M256.08. Almost half of the produce is graded salad cut which is low paying, reducing farmer's income (Researcher's Survey, October-November, 2005).

Farmers reported the worst case of loss of income to have been due to weight loss. This loss can be a result of extensive scraping at the factory to remove fiber that forms on asparagus as a result of loss of moisture due to heat. Fibrousness is directly a result of the conditions under which the crop is harvested and transported to the Cannery. Weight losses of 30-50 percent are alleged to occur as a result of this operation. This is probably the case with all farmers because from records there seems to be huge weight losses across grades except salad cut. Some farmers lost 63 (M182.69 out of M288.33 and M252.75 out of 399.03) percent of their income and this compounded with other deductions gives the farmers returns next to nothing (Researcher's Survey, October-November, 2005).

There appears to have been a lot of cheating on the part of the Cannery with regard to grading. The problem of asparagus farmers has been that their asparagus lost too much value between the field and the Cannery gate. Farmers, with the help of their association would grade their asparagus at the collection points before it is picked by the Cannery truck. At the Cannery gate asparagus would be checked, re-graded and weighed for the second time. The information from one official of the Cannery is that faults in asparagus that occurred between the collection points and the Cannery were accepted only if they did not exceed 14 percent. If the faults exceeded 14 percent the asparagus would be re-graded into lower grades. This official

⁶ An interview with Mr Ntsoti on 06/01/2006

argued that sometimes farmers' asparagus had deviations up to 36 percent. On the contrary, one of the former agronomists argues that these deviations have never exceeded 6 percent, meaning that the Cannery has never had a good reason to re-grade farmers' produce though it did most often. Where farmers had under-graded, he argued the Cannery never corrected this. This implies that the Cannery was degrading farmers' produce in order to maximize its own profits. Farmers also complained about weighing scales used to weigh their asparagus. Firstly, some of the scales were old and erroneous. Secondly, scales were adjusted for different people. This was witnessed by the researcher on 15/11/2005 when the officials of the re-opened Cannery came to collect asparagus (Researcher's Survey, October-November, 2005).

These issues have always strained the relations between farmers and the Cannery. Farmers complain that produce rejected as substandard was never returned. Farmers do not know exactly what happened to this produce. Some alleged that this was sold to dairy farmers, an allegation rejected by the Cannery (Khathi, 1984, Lesuo, 1999, Makoa, 1994 and Researcher's Survey, October-November, 2005).

Farmers also had to wait before getting paid. Table 15 shows the time range farmers had to wait before they got paid.

Table 15: Waiting Period for Payment

Waiting Period for Payment	Frequency	Percentage
1 Month	20	69
2 Months	6	21
3 Months & above	2	7
Never Paid	1	3
Total	29	100

Source: Researcher's Survey. October – November, 2005.

Although majority of farmers (69%) received their payments within a month of harvest, a significant number (28%) took 2 to 3 months to get paid. A further 3 percent was never paid. The reason advanced for this is that asparagus was paid for after processing and exporting it to Western Europe. Upon receipt of asparagus companies in Europe would pay the Cannery who would channel the money to Setla-Bocha (farmers' association) for distribution to its members. The association would then allow Basotho Farm Produce to make deductions for inputs advanced to farmers (Researcher's Survey, October-November, 2005).

This shows that asparagus production can neither be regarded as a source of income for meeting the basic needs nor as a way in which farmers can build their livelihood assets to reduce their vulnerability to shocks. It also cannot provide sustainable employment. Sometimes farmers were not even rewarded for their labour and land at all. All farmers (100%) in the sample maintain that asparagus production cannot provide sustainable employment. When asked what livelihood assets they acquired through participation in asparagus production, 79 percent said none. Of the remaining 21 percent, 14 were able to educate their children while 6 said they were able to buy a car and build a house (Researcher's Survey, October-November, 2005).

Table 16: Livelihood Assets Acquired Through Asparagus Income

Asset	Frequency	Percentage
None	23	79
Car	1	3
House	1	3
Education of Children	4	14
Total	29	100

Source: Researcher's Survey. October – November, 2005.

The Cannery as a Marketing Channel for Farmers Produce

One of the main arguments against contract farming is that it excludes farmers from the markets. In Lesotho the justification for setting up the Cannery was that it would become a vital channel for farmers to get access to the international markets so as to improve their incomes and welfare. However, like in most cases this has not been realized. The observation is that the whole arrangement of production, procurement, processing and marketing only managed to exclude farmers from the input and output markets. The Cannery maintained a statutory monopoly over asparagus processing and export. It was the only industry dealing with asparagus. The contract between farmers and the firm bound farmers to supply only to the Cannery. In one public gathering farmers claimed that they were not allowed to sell even the produce rejected by the firm. This was despite the existence of alternative markets such as hotels and a few supermarkets. Those who smuggled their produce to these channels say that they got better prices than those offered by the Cannery. For example, the Cannery has never paid farmers a price higher than M5 which farmers received from supermarkets and hotels by 1995. One interviewed farmer showed that he would have gained M591.50 in other markets as opposed to M375.15 (from which deductions would still be made) for all his asparagus classified 1A to 2B by the company because these markets were not using these classes but just paying a price for white asparagus. The adoption of asparagus itself was somehow an exclusionary market practice because asparagus is not consumed in large quantities in the country. Thus, farmers were excluded from supplying the local vegetable marketing channels. This is a market system in which the farmers are dominated by the Cannery which is in turn dominated by the West European market (consumers). Farmers do not have power to influence the prices at which their produce is bought, this rests with the Cannery which says it follows the market signals in Western Europe. Table below shows the effect of the imbalance in the terms of trade which leaves farmers in a subordinate position on their incomes. However, it does not show the gains accruing to the Cannery since there are no data to check this (Researcher's Survey, October-November, 2005).

Table 17: Farmer's Share in the Value of their Asparagus, 1996-2000

Year	Price Paid to Farmers Per Kg in Maloti (LSL) (A)	International Market Prices (EU) Per Kg In US\$ (B)	Loti Value of (B) C	C-(A)	Farmers' Share of the Total Income (%)
1996	2.78	6.2	37.2	34.42	7.47
1997	2.95	5.8	34.8	31.85	8.48
1998	3.04	6.2	37.2	34.16	8.17
1999	3.40	6.7	40.2	36.80	8.46
2000	4.36	6.8	40.8	36.44	10.69

Source: Based on Agronomist's Reports and Euro Stat

The table above confirms the theory of commodity chains arguing that farmers are marginalized in the international trading system by the production and marketing which adds more value to the other parts of the chains beyond the farm gate. The table indicates that farmers have never received anything more than 11 percent of the market value of their produce.

Relations between Farmers, Setla-Bocha Farmers Association and the Cannery

Working relations among the stakeholders is very crucial for the success of contract farming. The finding of the research pertaining to the working relations between farmers and their cooperative is that there was a lot of confusion among farmers as to who Setla-Bocha represented. Asked whether they were members of any farmers' association 41 percent said yes while 59 percent said no. To a question about services provided by Setla-Bocha, the answers were various and in most cases reflected lack of understanding as to what the role of the Setla-Bocha was in asparagus production. 86 percent was not satisfied with the services of Setla-Bocha. Dissatisfaction arises from issues like lack of transparency of the coop's Management Committee concerning deductions made from farmers' payments and poor financial accounting. Farmers also feel that rather than serving as their representatives to the Cannery, the coop is self interested and does not give feed back to the constituency. Thus, to farmers, Setla-Bocha is working with the Cannery to cheat them, especially in payments (Researcher's Survey, October-November, 2005).

The management of the Cannery on the other hand claims that the relations with the coop were sometimes not good. The main complaint is that the way the coop communicated issues discussed with the Cannery to its constituency sometimes portrayed them not to have agreed with the decisions taken by the Cannery, especially concerning prices, which would lead to disputes between the Cannery and farmers (Chere, 1997 and Researcher's Survey, October-November, 2005).

Relations between the Cannery and LNDC

According to the former management of the Cannery, the LNDC held 100% ownership of the Cannery and the director of LNDC is the head of the Cannery Board of Governors. The LNDC was also responsible for management backstopping and monitoring of the Cannery. Although the relations are claimed to have been good, one's evaluation is that they were not so good for the success of asparagus production. Firstly, the financing mechanism does not show LNDC to have been committed to the development of the project. LNDC did not invest enough in training of local staff for management, production, marketing and technical services in which case the Cannery had to rely on staff seconded by the Ministry of Agriculture. Secondly, the Cannery had to pay a management fee to the LNDC which could increase by 5 percent per annum. This clearly raises questions as to what the role of LNDC was in asparagus production and whether it has not been one of the unnecessary liabilities to the Cannery (Researcher's Survey, October-November, 2005)

International Linkages and their Implications for Asparagus

The research here probed into the impact of input and output markets as well as logistics on asparagus production.

Dependence of Foreign Capital, Equipment and Services

The use of foreign capital by developing countries has been criticized for many reasons. Among others, dependence on donor funds can give immeasurable power to donors to determine the priorities and decisions of governments as well as determine the success or failure of projects. Lesotho has not been an exception. For example, according to former staff of the Cannery, European Union expatriates who were part of the funding dominated almost all decisions such as where to start new plots. This led to wasteful use of resources such as starting asparagus production in the agro-ecological zones that were not suitable for asparagus such as Semonkong which was also far away from the Cannery. In the Leribe District asparagus plots started by EU expatriates were very far apart from each other making it difficult for extension workers and transport trucks to service this area. Dependence on EU funds which were tied to buying equipment from the EU member countries meant that resources would be wasted on inappropriate technology. Examples are the Iveco truck that was imported for the purposes of transporting asparagus but was never used because there was no Iveco in Southern Africa and therefore spare parts and technical know-how for service were not available and the planters which no one knew how they were used and ended up rotting in the Cannery yard. In other cases no proper training was given on the use of equipment and this led to equipment being spoiled.⁷

Lesotho's asparagus production also depended on foreign services such as transport, middlemen and sales representatives who were responsible for market research. Former management of the Cannery argues that these relations had a direct bearing on their failure in that their inefficiency impacted on the efficiency of the Cannery. For example, one of the problems that led to the failure of the project was inability to take advantage of the shift in consumer preferences in Western Europe which meant an increased demand for fresh asparagus. Because Lesotho does not have cargo planes, fresh asparagus would be trucked in coolers to Johannesburg Airport and other airports where it could stay for days before being freighted to Europe

⁷ An interview with the Agronomist Mr Ntsoti

due to delayed planes, only to be rejected because it had lost quality.⁸ Cargo for fresh asparagus is also said to have been very expensive since quoting was done in US\$, making fresh asparagus exports expensive (Bereng, 1991, Beunk, 1996 and Bolila, 2001).

CONCLUSION

The failure of Lesotho's sustainable asparagus production/agricultural export economy/sustainable development/poverty reduction can be closely linked to poor management of production, processing and marketing services which inhibited the expansion of asparagus production and made it impossible for Lesotho's asparagus to compete effectively in the Western European markets, thus, losing the comparative advantage that Lesotho's asparagus had. This had an adverse impact on the lives of the participating farmers who have not been able to build their assets and therefore escape poverty and attain sustainable livelihoods/development. Such a failure/unsustainability in agricultural export economy has been analytically illuminated through the analytic review of field findings on the demographic characteristics of the sample population-asparagus farmers, asparagus production as a commercial undertaking, Cannery as a marketing channel for farmers' produce, relations between farmers (Setla-Bocha Farmers Association) and the Cannery (Basotho Fruits and Vegetable Cannery/BFVC), relations between the Cannery and Lesotho National Development Center/LNDC and international linkages and their implications for asparagus sustainable production/export economy for a developing country.

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⁸ An interview with Mr Mokhesi, former Manager of the Cannery

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