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Caribbean agriculture–tourism linkages in a neoliberal world

Problems and prospects for St Lucia

The production of agricultural products for export while relying on imported food has long dominated the agricultural sector in the Caribbean, a legacy of the plantation economy. One strategy that can have a positive impact on reducing this dependency is the use of locally grown agricultural products by the hotel sector. However, the formation of linkages has for the most part not materialised due to the tremendous disadvantages domestic agriculture faces in today's neoliberal world. This article investigates the hurdles that must be overcome if domestic agriculture is to tap into the tourist market. The study of linkages between agriculture and tourism is situated within the theoretical context of agricultural development in the Caribbean. Research in St Lucia suggests that promoting linkages between hotels and groups of farmers such as cooperatives has the greatest potential to stimulate local agricultural production for hotel *and* domestic consumption.

The Caribbean region has long been characterised by mono-crop agriculture for export while relying on costly imported goods to meet basic needs, a lingering legacy of plantation economies. Since World War II the trend has become increasingly evident in a regional shift away from domestic production of agricultural foodstuffs, resulting in an agricultural deficit as production decreased and food imports rose (Harker, 1989). In large part, the decline in domestic production can be attributed to a lack of linkages between domestic agricultural production and other economic sectors, including tourism, commerce, manufacturing and producer services, despite its advocacy by the Caribbean's Economics Nobel Laureate, Sir Arthur Lewis. The all-too-common consequence has been an island economy of disconnected sectors with a high rate of foreign exchange leakages, as export earnings have been squandered on food imports (Beckford, 1972; Brohman, 1996; GSL, 1998; Renard, 2001).

This article focuses on one such disconnected sector in the Caribbean, tourism, and examines its potential to rejuvenate domestic agricultural production through backward and forward linkages. Tourism's relatively non-extractive character and possibilities for stimulating other industries has made it a popular alternative to more resource-intensive activities such as export agriculture, mining and fishing (Pattullo, 1996). Yet the possibilities for extra-sectoral stimulation have yet to be fully realised due to the high use of imported goods in the tourism industry, with current estimates

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of tourism's foreign exchange leakages running as high as 70 per cent for the smaller islands of the Caribbean (Pattullo, 1996)

Past studies of Caribbean tourism's multiplier effects in the agricultural sector have revealed that the particular characteristics of hotel size, ownership and maturity affect the propensity of hotels to satisfy their foodstuff demands with agricultural produce of local origin (Momsen, 1972; 1986; Lundgren, 1973; Bélisle, 1984). However, the linkages have largely been assessed by measuring the changes in amounts of local produce purchased by hotels and the proportion of local food purchased relative to the total. In this article the discussion is expanded to evaluate linkages as relationships between the hotel and agricultural producer where impacts beyond purchases and proportions are conceived and examined. I argue that the need exists to focus linkages on farmers' groups such as cooperatives in order to mitigate the problems of production and distribution, and to spread benefits more widely to the poor.

This article briefly reviews theoretical notions of agricultural development and the linkages between tourism and agriculture in the Caribbean. Then, research from St Lucia illuminates how various linkage forms have differential possibilities for agricultural stimulation in light of the neoliberal structural adjustment policies so prevalent in the Caribbean and other regions in the global South. Are there pragmatic solutions to the growing problems of stimulating agricultural production in light of the neoliberal economic models being forced upon the region?

A theoretical history of agricultural–tourism linkages in the Caribbean

The first attempts to theorise domestic agricultural linkages originated with Sir Arthur Lewis' neoclassical work in the 1950s, in which growth in various economic sectors would create increased demand for agricultural products (Lewis, 1954; 1955; 1958). However, Lewis' theories were not followed precisely, with a resultant pattern of disconnected sectors and a decline in domestic agricultural production. Industrialisation efforts were developed with little or no linkage to the rest of the economy, meaning growth in one sector would not spread the benefits to others (McIntosh and Manchew, 1985). Additionally, the export focus on industry and agriculture came at the expense of domestic agricultural production (Beckford, 1968; Witter and Beckford, 1980). Hence, the lack of local control and focus meant the functioning of the local economy remained underdeveloped and dependent on foreign patronage (Figueroa, 1996).

Today the trend continues as the prevailing neoliberal economic policies have further stymied the development of linkages by focusing almost exclusively on promoting foreign investment for development and hoping that linkages occur spontaneously through 'rational' market forces. Neoliberalism, the modern rendi-

tion of neoclassical economics, advocates the retrenchment of the state and the promotion of free trade through which global economic efficiency will be heightened. Structural adjustment policies, imposed upon countries in the global South through the debt crisis, embrace a supply-side policy that includes devaluation of the currency to make export prices cheaper and trade liberalisation to increase efficiency and quality of domestic suppliers by allowing competition from imported products (Iqbal, 1993; Klak, 1998; Potter et al., 2004; Weis, 2004). While arguments can be made that imported products are cheaper and of better quality, they have often had the negative effect of driving local producers out of business, creating increased unemployment and a populace less able to afford such products, and foreign exchange leakages. In effect, the public at the local scale are forced to pay the costs of structural adjustments designed to solve ills that have their origins at global and national scales (Conway and Timms, 2003).

Goodman and Redclift (1990) explain the differentiation between the domestic agricultural policies of the advanced industrial countries and the agricultural and trade policies imposed on countries in the industrialising world as a visible manifestation of the structural contradictions within capitalist/industrial agriculture. Agricultural overproduction in the advanced industrial nations was due to technologically induced competition, protective policies, and the need to become vertically integrated for greater economies of scale (Marsden and Little, 1990). To solve the crisis of overproduction, markets in other parts of the world needed to be accessed, which is precisely what neoliberal structural adjustment policies promote, furthering the internationalisation of the food system. However, neoliberal policies are not universally followed, as Conway and Timms (2003) describe:

> Unequal power relations between the industrial economies of the North and the industrializing economies of the South allow for trade liberalization to be asymmetrically imposed; invariably, to the benefit of the former at the expense of the latter. Trade liberalization between nations/regions of comparable development levels is problematic by itself and is resisted by many industries and governments. Trade liberalization between nations/regions of incomparable development levels is even more problematic in that the more powerful can dictate the rules to their own advantage, such as forcing the less powerful to remove subsidies, tariffs, and other barriers to trade while retaining their own.

To exemplify this process one only needs to look at the United States Department of Agriculture's monthly magazine *AgExport*, which promotes US agricultural exports. For the Caribbean, a recent article encouraged independent import contracts with St Lucian school cafeterias, and further promotes seeking import contracts through the government of St Lucia to supply food for hospitals and prisons where '[p]rice is more a factor than quality' (Davila, 2003, 9). Such predatory marketing campaigns exhibit

the extent of the penetration of the global food system into the lives of the marginal and vulnerable populations of the world.

It is within this context, and the focus of this study, that tourism has emerged as the fastest and most dynamic economic sector in the Caribbean. In many islands total visitor expenditure averages more than half the Gross Domestic Product (Potter et al., 2004), and employment in the tourism sector can reach in excess of 35 per cent of the formal working population (Pattullo, 1996). Yet tourism has fallen short of its full potential due to weak internal linkages with other sectors such as agriculture, as is evident in high food import bills and substantial overseas leakage of earnings (Brohman, 1996).

The possibilities of extra-sectoral stimulation by the tourism industry are readily apparent. The benefits from growth of local agriculture attributable to hotel sector demand include an increase in marketing of local agricultural foodstuffs. A reliable market and increased production would establish a need to develop the infrastructure for processing and distribution of domestic output, a component that has been neglected at the expense of export agricultural dominance (Beckford, 1975; 1985). Tourism and agriculture may also be seasonally complementary in terms of labour demands, which can raise local incomes by creating jobs and reducing underemployment (Momsen, 1998). Hence, increased linkages and the associated rise in demand for agricultural products can more equitably distribute the benefits of tourism to the poorer segments of the population, a goal of the 'pro-poor tourism' movement (Ashley et al., 2000; 2001; Renard, 2001; Torres and Momsen, 2004).

The increased demand for varied and high-quality food should create an incentive for farmers to expand and diversify agricultural production (CCA/IRF, 1991). In addition, increased demand can facilitate expansion by providing access to capital and technology, both of which have long been denied to local producers of food (Beckford, 1985; Grossman, 1993). Utilising capital and technology can help alleviate two of the main concerns of production: insufficient quantity and the often mismatched seasonality of agricultural production and hotel occupancy.

Further, as put forth by the Organization of American States, 'successful marketing to the tourist market would in itself lead to much improved and more successful penetration of the residential food market by local produce' (OAS, 1984, 4–1). Due to a focus on export agriculture at the expense of domestic agriculture, the Caribbean has been a victim of a high food import bill and the corresponding dependence on imported consumption patterns has only exacerbated the problem (Demas, 1975; Bélisle, 1983; Renard, 2001). Increased use of local products by both the tourist industry and the local population may combat the manifestations of this 'demonstration effect' of global consumerism while promoting local products and industry.

As productivity and efficiency increase, tropical foodstuffs can be marketed regionally and internationally as non-traditional agricultural exports (NTAE) (Deere, 1990;

CCA/IRF, 1991). In addition, processing of NTAEs into items such as jams and hot sauces can establish linkages with tourist sales and manufacturing. This can lead to economic diversification and the better utilisation of the Caribbean peoples' innovativeness and creativity (Wiley, 1998).

Given such potential benefits, it must be asked why linkages between tourism and domestic agriculture in the Caribbean have failed in large degree to materialise. Disappointingly, the answer lies in the high cost and variable quality of local produce, socio-economic divisions that contribute to poor communication between producers and hotels on need and availability (Renard, 2001), poor production planning, and extreme seasonality of agricultural product availability and hotel demand (Levitt and Best, 1975; OAS, 1984). Of particular concern is the lack of access to credit, technology and markets due to the exclusive focus of the state and local commercial capitalist interests on export production (Grossman, 1993).

While it appears that the majority of constraints in linking tourism and domestic agriculture are in the agricultural sector, past research into linkages in the Caribbean have focused largely on hotel characteristics, namely size, ownership and maturity of hotel. Lundgren proposed a three-stage model in 1973 that attempted to determine the type and amount of entrepreneurial activity generated by different forms of and rates of hotel development. The first stage ended with close ties between foreign suppliers and hotels with a resultant dependence on imported foodstuffs. During the second stage a large wholesale/marketing distributor emerges that includes local agricultural producers, which begins to erode the dependence on foreign supplies of foodstuffs. The third stage predicts further expansion of local wholesaling that stimulates domestic agricultural growth and all the benefits associated with agricultural development.

Momsen (1972) carried out a study in St Lucia which found that 70 per cent by value of food had to be imported, and 70 per cent of hotels complained of uncertainty of local supply as a major hindrance to increased use of local produce. There was also a discrepancy between the four largest foreign-owned hotels, which relied extensively on imported foodstuffs, and small locally owned hotels that did not. Momsen (1986) performed an up-dated survey of St Lucia in 1985 and found improvements in terms of a falling percentage of imported food used by the largest hotels (58%) in 1983. These results were further supported by a study of the use of local and imported foods by hotels in Jamaica by Bélisle for 1979–1980 (Bélisle, 1984).

Two recent studies, while not from the Commonwealth Caribbean, do advance the understanding of the process of linkage formation. Telfer and Wall (1996) studied a hotel's initiative to acquire fish and agricultural products from local producers in Lombok, Indonesia. The hotel established a linkage with a local fisherman who served as a middleman to acquire fresh seafood from local markets. In addition, a specific linkage with a local farmer to produce vegetables and herbs was created. In this case,

the use of a fisherman as a middleman proved effective while the project with the farmer ended in failure. Reasons cited included the loss of the chef who initiated the project, seasonality of occupancy rates for the hotel, and the non-commercial 'traditional' status of the farmer.

Torres (2003) conducted a study in Quintana Roo, Mexico, which found that at an advanced mass-tourism stage the potential to stimulate local agriculture is limited if not non-existent. Much of the criticism rested on the failure of the tourist planners to incorporate any agricultural development strategies in the process, leaving the linkages with farmers to occur spontaneously. Instead, a small number of wholesalers with supplies from outside the region came to dominate the provision of food to the hotel industry, effectively excluding smaller suppliers and producers, a process that often occurs in other tourism-linked industries such as handicrafts and transportation.

The following research builds upon past work by re-conceptualising the supply chains as the linkages themselves and differentiating the linkages based on their potential to stimulate domestic agricultural production. The rationale for studying the nature of linkages begins with the view that not all linkages are the same, nor are they likely to have a similar effect on local agricultural producers and hotel purchasers. Redefining linkages as relations, including such characteristics as information flows between demand and supply as well as access to agricultural inputs, a more informed understanding of the effects that hotel demand has on agricultural production can be gained.

The case of St Lucia

Located in the middle of the volcanic arc of the Lesser Antilles, the 238-square-mile island of St Lucia is characterised by a rugged mountainous interior populated by small farmers predominantly producing bananas for export and, to a smaller degree, non-traditional crops for export and domestic consumption. Additionally, small areas of coastal plain are under large-scale banana production for export.

The St Lucian economy is highly dependent on tourism and agriculture. However, the past twenty years have seen agriculture as a percentage of GDP fall from 15 per cent in 1983 to 5.4 per cent in 2003 (World Bank, 2004). The main agricultural product, bananas, has been hit especially hard (Andreatta, 1998). Accounting for 95 per cent of St Lucian agricultural exports on average between 1986 and 1997 (GSL, 1998), the revenue from the banana industry has significantly decreased from a high of US$69.2 million in 1992 to just US$16.3 million in 2003 (GSL, 2004). While the ending of the Lomé Convention, which had provided preferential import policies for Caribbean bananas to the European Union, can be partly blamed for the recent decline, other agricultural crops such as cocoa and non-traditional agricultural exports have concurrently decreased as well, with the latter having fallen from the 1994 level

Table 1 Selected trade and external debt statistics for St Lucia (US$ millions)

	1983	1993	2003
Total exports	48	120	70
Total imports	107	300	401
Total food imports	24	59	71
Total debt	19	101	368
Total debt service	1	11	27

Source: World Bank 2004

of US$2.8 million to US$0.5 million in 2002 (GSL, 2002). The numbers exhibit a struggling agricultural sector reeling from the shocks of volatile international markets, as evidenced by the –11.8 per cent 'growth' rate in agriculture in 2003 (World Bank, 2004).

Much of this can be explained through the wholesale restructuring of the national economy financed by foreign aid and borrowing. Privatisation of the St Lucia Banana Growers Association in 1998 and the purchase of Geest Industries shipping operations by the regional West Indies Banana and Development and Exporting Company (WIBDECO) in 1997 have failed to slow the fall in agricultural revenue. Reductions in governmental services have meant the loss of agricultural extension agents as well. Food imports have risen dramatically over the past twenty years, from US$24 million in 1983 to US$79 million in 2003 (World Bank, 2004) in response to the decline in domestic agriculture, growth of tourism demand, and easing of import restrictions. Meanwhile, the ratio of external debt to GDP has risen from 20 per cent in 1985 to 47 per cent in 1996, and further to 61.4 per cent in 2002 (GSL, 1998; World Bank, 2004). During the same period, GDP growth rates fell from an average of 9 per cent in the period 1983–1993 to just 1.2 per cent for 1993–2003 (World Bank 2004). Even manufacturing, the hallmark of Lewis' model, has suffered as its percentage of GDP has fallen from 9.5 per cent in 1983 to 5 per cent in 2003 (GSL, 2004).

The only sector of the St Lucian economy that has shown positive growth is tourism, which has emerged as the fastest growing economic sector in St Lucia and the Caribbean region as a whole (CCA/IRF, 1991; McElroy and de Albuquerque, 1991). The total visitor expenditure in St Lucia averaged more than half of GDP between 1985 and 2004 and is the island's top 'export' (GSL, 2005). However, over-reliance on one economic sector can be troublesome and has been a legacy of the plantation economies of the region (Beckford, 1972), be it sugar, bananas or tourism (Lorah, 1995).

Research methodology

Fieldwork in St Lucia was conducted in 1999. The 40 hotels listed as having restaurants by the St Lucia Hotel and Tourism Association in 1998 were categorised by size: small hotels with less than 35 rooms; medium hotels with between 35 and 75 rooms; and large hotels with in excess of 75 rooms. All 40 hotels were contacted by mail, resulting in 14 hotel interviews with general managers, food and beverage managers and chefs, broken down as follows: four of the 15 small hotels; five of the 13 medium hotels; and five of the 12 large hotels. While 26 hotels were not interviewed, the decision to exclude was based on time constraints and scheduling conflicts as opposed to non-response, reducing the likelihood of bias in the sample. Further interviews were conducted with managers of two agricultural cooperatives, 15 farmers, a faculty member working with agricultural cooperatives at Sir Arthur Lewis Community College, the manager of the St Lucia Marketing Board, and the Deputy Permanent Secretary in the Ministry of Agriculture.

The open-ended interviews delved into issues concerning food supply and linkages between hotels, suppliers and producers. In the process, questions pertaining to type of food supplier, the advantages and disadvantages of local foods and imported foods, and how these issues have changed over time were addressed. Additional statistical data was provided by the St Lucian Government Statistics Department, the St Lucia Marketing Board, the two agricultural cooperatives, the faculty member at the Sir Arthur Lewis Community College, and three of the large hotels.

The data collected found evidence supportive of trends identified by past studies in the Caribbean, such as an inverse relationship between size of hotel and propensity to use locally produced foodstuffs and a tendency for older establishments to use local producers to a higher degree than hotels of recent origin. However, it readily became apparent that hotel–agriculture linkages were more complex than previous Caribbean tourism research had noted. The main thrust of the field inquiry (and subsequent analysis), therefore, became a qualitative assessment of the characterisation of the different forms of linkages and their potential effects on local agricultural production for hotel and domestic consumption.

Results

Momsen (1972) identified seven different types of suppliers of agricultural produce used by hotels in St Lucia; contract, itinerant hawker, market, marketing board, agent, supermarket and own estate. In this study, nine forms of linkages utilised in St Lucia were uncovered. Listed in descending order of the author's ranking of potential stimulation and transformative effects on the local agricultural sector in terms of ability to coordinate supply and demand and provide access to capital and investment, they are:

Table 2 Domestic agriculture–hotel linkage counts

	Large hotel	Medium hotel	Small hotel	Total
Formal contract with individual producer	2			2
Cooperative	1			1
Informal with individual producer	1	1		2
Wholesaler	5	5		10
Agent/Hawker		2		2
Informal with vendor	4	3		7
Local market		2	3	5
Supermarket		1	4	5
Self-supply			3	3
Total	13	14	10	

- formal contract with individual producers
- cooperatives
- informal with individual producers
- wholesalers
- agents/hawkers
- informal with vendors
- local markets
- supermarkets
- self-supply

Formal contract with individual producers

Used by two large hotels and involving three farmers, the formal contract between hotels and farmers can best be exemplified by the Adopt-A-Farmer programme used by two large all-inclusive hotels. Contractual agreements were arranged between individual farmers and the hotel to allow for a direct relationship between market and supply, bypassing facilitating agents. Through use of long-term production planning, the needs of the hotel can be coordinated with the production of food by the farmers. In effect, the long-term planning addresses the problem of time-dependent available supply and eases the problem of seasonality, two noted hindrances in other linkage relationships.

The benefits for the farmers include securing a guaranteed market and source of income. In turn, the contract can be used as collateral for access to credit and the transfer of appropriate technology to modernise production. For the hotel, production can be controlled to meet its demands by dealing directly with the producer rather than through intervening agents, streamlining the demand/supply relation-

ship and ensuring available supply. Additionally, low prices can be insured by setting guaranteed prices slightly lower than other suppliers.

In terms of impacts on agriculture, the formal contract linkage modernises production through technology transfer and advanced production planning. The use of technology, such as greenhouses and irrigation systems, can ease the problem of seasonality and raise production levels. Additionally, effective production planning can correct the problem of available supply. Excess production and diffusion of technology can spread out to the residential market and agricultural sector, respectively. Further, the farmers involved in the programme had on average 2.2 ha of land, which falls in the small farmer category in St Lucia which had an average farm size of 1.8 ha in 1996 (GSL, 1996). In short, linkages through formal contract can transform the domestic agricultural sector by providing access to resources denied to the average small farmer in St Lucia by the historical concentration on export agriculture: namely access to capital, technical knowledge and markets.

However, empirical examples of the formal contract linkage exhibit problems that tend to overshadow the theoretical benefits. Telfer and Wall (1996) describe a formal contract between a hotel and a vegetable and herb gardener in Indonesia that ended in failure due to the loss of the chef who initiated the project and the non-commercial 'traditional' status of the farmer, which demonstrates the need for long-term commitments and the problems of the socio-economic divisions between tourism entrepreneurs, both foreign and domestic, and local farmers (Renard, 2001). Torres' study in Quintana Roo, Mexico, also provides support for these findings: 'Many chefs recite horror stories of failed contract farming ventures with *ejidos* and small private growers' (Torres, 2003, 555).

The St Lucian cases were not considered by the participants to have been successful either. Interviews identified the need for long-term commitment and investment by the hotel as a requirement for the success of a formal contract, noting that past attempts had not lived up to expectations due to the simple problem of having no one to administer and coordinate the programme. The lack of commitment and investment by the hotels can be explained by the small scale of the programmes where a few individual farmers are 'adopted' by a large all-inclusive hotel in what could be considered a community outreach project.

For the formal contract linkage to be successful it would need to be expanded to include a larger number of small farmers capable of supplying a significant amount of the hotel's demand, or be focused on large farmers where economies of scale would dictate increased commitment and investment on all sides. However, with regard to the effects on the agricultural sector as a whole, contracting with individual large farmers concentrates the benefits to a select few, limiting the overall impact as 81.6 per cent of farmers in St Lucia can be classified as small, with less than 4 ha of land (GSL, 1996).

Cooperatives

Cooperatives entail groups of farmers who pool their productive, distributive and human resources. Examples of the benefits of such pooling include increased access to credit, education, training, agricultural inputs and collective marketing. Both cooperative managers interviewed reported targeting marketing at the supermarkets on the island and international markets for non-traditional agricultural exports. However, one area that appears to be largely untapped is the hotel market. The two agricultural cooperatives interviewed both expressed reservations about accessing the hotel market due to poor prices and lack of hotel interest in utilising cooperatives as suppliers. Only one large hotel mentioned having used an agricultural cooperative as a supplier, but the lack of institutional stability of the cooperative severed the linkage. What this suggests is an issue of control in terms of decision making towards production, marketing, price and lack of institutional strength of the cooperatives.

In addition, agricultural cooperatives in St Lucia have been rather ineffective in achieving their overall goals. As Theresa Mason of Sir Arthur Lewis College explained in a personal communiqué, '(w)ith agricultural cooperatives there seems to be a pattern of early success followed by failure. This is mostly due to lack of long-term leadership as the turnover of managers is frequent' (1999). The author's interviews support this view where both cooperatives mentioned past changes in management as thwarting progress toward an organised agricultural community.

Prospects exist for cooperatives to play a major role in developing domestic agricultural production and marketing. Long-term production planning to coordinate with markets can alleviate problems of inadequate supply levels. Transfer of appropriate technology can be facilitated through cooperatives in terms of greenhouses, cold storage, transportation of produce, seedlings and training in farming techniques. Additionally, organised cooperative marketing can alleviate uncertainties by securing marketing agreements. In this way cooperative marketing can be both a stimulant and a transformative agent for the agricultural sector in St Lucia.

Efforts to strengthen the institutional structure of cooperatives are being promoted through the Rural Economic Diversification Incentive Project (REDIP) and the St Lucia Rural Enterprise Project (SLREP). These projects train farmers and cooperatives in entrepreneurship, such as creating business plans which can be used to secure loans. In addition, the European Union has provided capital for institutions such as the Research and Development Bank to lend to cooperatives and farmers at concessionary rates. Both cooperatives interviewed by the author had used business plans to secure these concessionary loans, evidence that the projects are having some measure of success.

Further, positive developments have occurred since the fieldwork period in 1999. The St Lucia Heritage Tourism Programme, in conjunction with Oxfam GB, began a pilot project to investigate the opportunities for linking tourism and farmers' groups

in 2003 (Emmanuel, 2003). More concretely, the Sandals' Farmers Programme has recently been expanded to St Lucia to link hotel demand for produce with groups of farmers (Tapper and Font, 2004), and has included the hiring of an agricultural extension officer to coordinate supply and demand between the farmers' groups and hotels (Abdool and Carey, 2004). Begun in Jamaica in 1996, the project started with one group of ten farmers supplying two Sandals resorts in Jamaica with traditional vegetables and speciality foods such as sweet peppers, sweet corn, zucchini, snow peas, tomatoes, red cabbage, cantaloupe, watermelon and yellow squash (RADA, 2003). Today it has grown to six farmer groups with 80 farmers supplying eight Sandals properties in Jamaica, with training in group farming and marketing and a farmer extension officer funded by Sandals (RADA, 2003). Product purchases within the programme rose from US$60,000 in 1996 (RADA, 2003) to US$6.15 million in 2001 (Sandals/GTZ, 2004). It is too soon to tell whether such projects can overcome the institutional problems of cooperative farming in St Lucia, but they do exhibit positive and tangible efforts.

Informal with individual producers

Used by one small hotel, one medium-sized hotel and one large hotel, the informal linkage with individual producers is characterised by a long-lasting relationship between the hotel and a few individual farmers, yet without any formal contract. The development of this relationship clarifies many of the uncertainties of both the producer and purchaser, allowing more communication of hotel demand to farmers, leading to coordination in production on a longer-term basis. In one particular hotel interview it was noted that the linkages with the particular farmers took time to develop, which works to quell the social divisions between hotel entrepreneurs and farmers. This supports Lundgren's model, which states that as hotels become more established over time they tend to increase use of local products.

The problem noted is insufficient production to supply the hotel completely as the informal and non-binding nature of the linkage does not fully coordinate demand and supply. Additionally, without a formal contract the farmer is less able to gain access to credit for capital improvements in production, which could allow for investment in such technologies as greenhouses to address the problem of seasonality.

Wholesalers

The use of wholesalers was reported by all five medium-sized hotels and all five large hotels, by far the most common supplier of food to the hotels. In the use of wholesalers there is a separation of hotel demand and farmer production with the connection occurring through a formal facilitating agent. The farmer sells produce to the

wholesaler who in turn sells to hotels, among other markets, at a profit. This linkage facilitates indirect communication exchange between the hotel and farmer in terms of the wholesaler supplying hotels with information on available produce and conveying produce demand to farmers. These are the entrepreneurs described by Lundgren as the catalyst leading to complex supply and production networks that erode foreign supply, continuing to an advanced stage of hotel/agricultural integration and the stimulation of the agricultural sector.

The problems of the wholesaling sector lie in inefficiencies and the use of imports to augment lack of available supply and seasonality. Additionally, the communication of demand and supply on a weekly basis does little to stimulate the long-term coordination needed to solve the issue of seasonality and supply availability. The time frame is too short to make a significant impact on the production patterns of the agricultural sector. Many farmers bypass this linkage to form their own direct relationships with hotels due to inefficiencies and a lack of confidence in wholesalers.

The government entered the wholesaler market through the creation of the St Lucia Marketing Board (SLMB) in 1968, a quasi-governmental wholesaler which buys directly from farmers and cooperatives and finds markets for the produce, such as hotels, supermarkets, restaurants and its associated retail outlet. The SLMB provides information on needs to farmers and cooperatives and information on supply and prices to hotels on a weekly basis. In addition, the government's substitution policy of import restrictions grants import licenses through the SLMB to make up shortfalls in local supply. In June of 1996 these import restrictions were eased and currently private wholesalers are emerging to take market share, particularly that of the hotel market.

There has also been private-sector growth in food import and distribution wholesalers. In the interviews, eight of the large and medium-sized hotels reported using the St Lucia Marketing Board, Evans International, Bryden and Partners, and Trans-Caribbean Agencies as wholesale suppliers of food. There is great potential for local commercial merchants to make an important contribution in linking domestic agricultural producers and the hotel sector. At the same time, this may only increase imports to supplement seasonality and lack of available supply levels to satisfy hotel demand, especially in light of the easing of import restrictions implemented in 1996. In order to avoid increased imports there is a need for improved long-term planning for producers and transfer of appropriate technology, such as greenhouses and cold storage, to address the problem of seasonal fluctuations in supply.

Torres' study in Quintana Roo, Mexico, revealed a situation where, at an advanced stage of mass tourism, a small number of wholesalers come to dominate the supply of food products (Torres, 2003). In the process, smaller-scale suppliers and producers are effectively excluded with only niche market opportunities available. Additionally, much of the wholesaler's food supplies were purchased from outside the state of Quintana Roo, further limiting local agricultural possibilities. Hence, in an advanced

mass-tourism stage, domination of the linkage by an oligopoly of wholesalers might very well serve as a formidable obstacle to local agricultural development and expansion.

Agents/Hawkers

Two medium-sized hotels reported using an agent/hawker, an individual hired by the hotel to procure goods. The hotel communicates needs and determines price in advance to an individual, who then goes to rural areas and purchases produce for delivery the following day. The pre-determined pricing means the agent is responsible for meeting the price obligation and keeping any surplus as profit. Therefore the agent bargains for the lowest prices from agricultural producers, who reported the practice as unfavourable in interviews and past literature (Momsen, 1972; Barrow, 1993). The hotel, on the other hand, is able to acquire local produce at low prices.

The problems associated with the linkage through agents include the common issue of seasonality and lack of available supply. This can be attributed to short-term indirect communication of needs and supply between producer and hotel, making long-term planning difficult at best.

Informal with vendors

The second most common linkage reported in interviews was the use of vendors, reported by three medium-sized hotels and four of the large hotels. In this linkage, farmers take their produce directly to the hotel where it is selected for immediate needs. Communication of demand is through what sells and what does not, indirectly influencing production planning to meet short-term demands. The main drawback is that demand is neither constant nor guaranteed, and farmers may have to go to several hotels in this manner to sell as much produce as possible. Additionally, competition is often keen, which drives prices down. The short-term demands do not provide an incentive for long-term production planning, which is evident in the problems of seasonality and the variability of available quantities reported by hotels engaged in this form of linkage. This forces hotels frequently to supplement their purchases by using wholesalers and imported goods. The potential for vendors to stimulate overall production is therefore suspect, while communication and production planning remain undeveloped.

By analogy, the informal linkage with vendors serves as a microcosm of the neoliberal solution in which pure market forces ensure that competition will keep prices low. The result is uncertain markets, lack of long-term planning leading to seasonality and shortage of available supply, reliance on imports and little benefit to the producers.

Local markets

Local markets were used by three small hotels and two medium-sized hotels. The local markets sell local produce at a central location to almost exclusively local people for domestic uses. Agricultural produce for sale at the market has a long history of importance to St Lucia, as well as other islands in the Caribbean. The advent of the Castries Market in 1894 is credited with advancing the establishment of the small farming peasantry, geographically laying the groundwork for rural roads from the rugged interior to the coastal centres of economic activity (Jesse, 1994).

However, it appears that the historical strength of the local market is being threatened by the recent proliferation of supermarkets on the island. The interviewees reported using the local market for speciality items such as spices, while focusing more on supermarkets for more common items such as tomatoes and meats. While local markets will probably continue to provide small amounts of produce to hotels, the lack of direct communication on demand and the traditional problem of seasonality limit their impact on stimulating the domestic agricultural sector.

Supermarkets

Supermarkets were used by four small hotels and one medium-sized hotel. There has been a recent rise in the numbers and size of supermarkets on the island. The USDA reports that there are two major supermarket chains with 16 stores, 30 smaller supermarkets, and 20 gas marts in St Lucia (Davila, 2003), most of which import the vast majority of their food either directly or through wholesalers. Indeed, supermarkets can be viewed as an extension of the globalisation of the food system.

The interviews revealed that the main reasons for using supermarkets were price, selection and constant availability, noting that supermarkets are the most convenient way to acquire goods when you need supplies quickly. However, very little of the produce sold at supermarkets is of local origin. Unless local producers can gain access, supermarkets will actually contribute to the erosion of domestic agriculture as they facilitate cheap food importation into the island.

Self-supply

The self-supply linkage is the most complete integration of tourism demand and farmer production, due to the fact they are one and the same. The hotel grows its own food on its property or on land owned by the proprietor. There is no need for a facilitating agent to coordinate production and demand, while at the same time production is planned around the demand of the hotel. This linkage in St Lucia is in the exclusive domain of small hotels, which are typified by small demand capable of

Table 3: Domestic agriculture–hotel linkage forms and characteristics

Linkage Form	Characteristics
Formal contract with individual producers	– contractual agreement between hotel and farmer – long-term coordination of supply and demand – facilitates access to credit, technology and markets – transformative effect on agricultural sector
Cooperatives	– long-term coordination of supply and demand – facilitates access to credit, technology and markets – potentially transformative effect on agricultural sector
Informal with individual producers	– direct relationship between hotel and producer – medium-term communication of supply and demand – seasonality and inconsistent supply – stimulation of agricultural sector
Wholesalers	– medium-term communication of supply and demand – seasonality – supply supplemented by imports – potential for stimulation of agricultural sector
Agents/Hawkers	– short-term communication of supply and demand – extreme seasonality and inconsistent supply – minimal stimulation of agricultural sector
Informal with vendors	– short-term communication of supply and demand – extreme seasonality and inconsistent supply – minimal stimulation of agricultural sector
Local markets	– medium-term communication of supply and demand – seasonality – market share being eroded by supermarkets – minimal stimulation of agricultural sector
Supermarkets	– medium-term communication of supply and demand – supply made up of imports – minimal stimulation of agricultural sector
Self-supply	– small hotel subsistence production – demand and supply exclusively coordinated – lowered food procurement costs for hotel – no stimulation of agricultural sector

being predominantly supplied by individual production. Therefore, the impact on the agricultural sector is limited, or even non-existent, since it only ensures the production for subsistence of the hotel without affecting the domestic or export markets.

Discussion and conclusions

The main tenet of this study builds upon the economic theory of Sir Arthur Lewis, who stated, '(t)he farmers' position is much more hopeful if development begins outside agriculture … This, in turn, generates an increase in demand for agricultural products, and so development spreads from sector to sector' (Lewis, 1958, 28). However, for development to spread, multiplier-linkages must exist to facilitate the exchange, which have been largely non-existent in the Caribbean. In addition to the lack of linkages, domestic agricultural producers have consistently suffered from a lack of lack of land and capital, and from technical knowledge limited by institutional factors (Beckford, 1968). Together, a lack of linkages with other sectors and a neglect of access to inputs have led to an underutilised domestic agricultural sector, thereby perpetuating the leakage of foreign exchange earnings on imported food items for the tourist industry and the population as a whole.

So can the hotel sector serve as the engine to drive revitalisation of the domestic agricultural sector? Based on the research presented here it is argued that possibilities for such an outcome do exist, but not at the removed (functionalist) level of increased amounts of purchase. For a viable process to be productive and progressive, it needs to be at the micro-level of linkage transformation. The structural limitations of the plantation economy legacy, namely the lack of access to capital and appropriate technology transfer, are much more likely to be effectively transformed at the micro-level of linkage formation. An essential feature of the transformation must be the involvement of local men *and women* in the participatory matrix.

However, the end result cannot just be a stimulation of local agriculture. Rather, the sector requires transformation. This is evident in the formal contract linkage where imported farming technology, techniques and involvement are meant to tie production to the demands of the hotel. However, it must be cautioned that production for the tourist market must not completely replace production for the domestic market if there is to be any contribution to the reduction of the import dependency of Caribbean nations. If not, production may increase but the supply will be tailored to hotel demands and soaked up by their increased purchases, effectively robbing the local market of producers and possibly increasing the need to import foodstuffs for the majority of the populace (Bryden, 1973). Ashley et al. (2001), in promoting pro-poor tourism, provide support for this view: 'The only caveat here is that *dependence* on tourism exposes the poor to the volatility of this industry' (Ashley et al., 2001, 4).

Unless there is regulatory intervention and participatory planning involved in the linkage-developments, the possible transformative effect of tourism may only impact a few select groups of farmers, a view supported by the Telfer and Wall (1996) study in Lombok, Indonesia and evident in the Adopt-A-Farmer programme in St Lucia. The key is to be able to build upon the tourism–agriculture linkage effects to stimulate and

energise the entire domestic agricultural sector, particularly in the Caribbean small island context where short food-supply chains provide close face-to-face interaction and relations of proximity (Renting et al., 2003). The domestic (and regional) markets exist, but the major limiting factor evident in past studies and apparent here has been the lack and unreliability of supply. It would logically follow that improving domestic agricultural production as a whole will lead to more hotel purchases, since meeting the existing demand is already a problem of production, as supported by all of the studies cited. Given this state of affairs, it is more appropriate to promote agricultural cooperatives, as their reach extends to a larger community of farmers. Since they also promote production for the domestic and export market they diversify the supply, which limits the effect of the volatile nature of the tourism industry.

Support for this position can be seen in the pro-poor tourism literature with calls for strengthening community organisations, focusing on long-term investments in capacity building, and forming joint ventures between the private sector and farmers (Ashley et al., 2000; Torres and Momsen, 2004). Of particular importance is long-term institutional development to strengthen agricultural cooperatives, which has been lacking. Evidence of the implementation of these ideals can be seen in the Sandals' Farmers Programme working with farmers' groups over a long period of time with institutional training and the provision of an agricultural extension officer (RADA, 2003). As a 'home grown' enterprise (from Jamaica), Sandals has a large stake in promoting overall development in the islands. It is imperative that other foreign-owned large resorts be convinced to follow their lead, as such mass tourism enterprises have become the fastest growing, and often the largest, contributor to Caribbean economies, and hence have the greatest potential to stimulate growth in the agricultural sector (Torres and Momsen, 2004).

Further research is needed in the study and analysis of the linkage forms and their elasticity and potential. Additionally, it is important to note the absence of a gender component in the study of agriculture–tourism linkages, both here and in previous studies. With women comprising over one-third of small farmers in the Eastern Caribbean (Momsen, 1993), the focus of these farms on local produce as opposed to export crops, and the historical dominance by women of domestic marketing (Barrow, 1993), women's role in the linkage process cannot be overlooked. Whether or not there is a true absence of women within the realm of the linkage process, or whether they have been excluded by gender bias such as in the neglect of extension services, is an important avenue of future research. If there is to be a revitalisation of domestic agriculture then women must be explicitly included in the process.

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