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LAND TENURE AS A BARRIER TO AGRICULTURAL INNOVATION

The Case of St. Lucia

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The land tenure system in St. Lucia has long been seen as a major obstacle to agricultural development.¹ However little work has been done on its specific relationship to the adoption of new crops or other agricultural innovations. In common with many Eastern Caribbean states St. Lucia is encouraging the expansion of commercial vegetable production, mainly for domestic consumption, in an attempt to reduce her food import bill. This paper looks at the relationship between land tenure and the pattern of adoption of vegetable growing for the local market.

Several types of tenurial arrangements are found on St. Lucian farms. The problems associated with tenure seem to be most severe in the case of the multiple ownership of land without title, known as the 'family land' system, and also where the farmer occupies the land as a squatter or sharecropper. The 'family land' system is a legacy of the French occupation of St. Lucia. Under this system land can be inherited by a wide range of family members, legitimate or illegitimate, as well as collateral relations. Each heir receives several pieces of land in order to provide equal distribution according to quality as well as quantity. After several generations of this process the land is excessively fragmented.² There is little encouragement to develop land held in this way since "Members of the family are more conscious of their rights to reap crops from the land than of their obligations to plant them and this is undoubtedly one of the main reasons for what may be described as completely inefficient land use."³ The Tripartite Report called this land tenure system "A major obstacle in the way of expanding agricultural production ..." and "... inconsistent with the stability and effort necessary to agriculture."⁴ It would seem that farmers with land held under this system would be unlikely to be leaders in adopting new methods and crops.

Both sharecroppers and squatters are limited in the agricultural opportunities open to them by the way in which they occupy their land. In sharecropping the landlord usually supplies the land and the tenant provides the working capital and labour, and the crops produced are divided equally between the landowner and the sharecropper. In St. Lucia this is a system characterized by "great insecurity and poverty"⁵ and thus is scarcely likely to encourage agricultural innovation. Squatters, whether on government or private land, have even less security and are perhaps the last people one would expect to adopt new ways readily.

The Farm Sample

A 35 per cent random sample, stratified by agricultural districts was drawn from a list of commercial vegetable farmers compiled by the Department of Agriculture. A sample of 68 farms comprising 56 small units and 12 estates was drawn from a frame of 195 farms. The distribution of the sample farms in relation

1 Mathurin, D.C.E. "An Unfavourable System of Land Tenure: The Case of St. Lucia." *Proceedings of the Second West Indian Agricultural Economics Conference*. Trinidad, 1967, pp.139-152.

2 Foreman, R.A. *Land Settlement Scheme for St. Lucia based on a survey of the agricultural and social conditions of the island*. Castries. 1958, p.13. Foreman reports examples of 24 persons owning 6½ acres between them and 80 people having shares in a 13 acre plot.

3 *The Agricultural Development of St. Lucia. Report of a Team of Experts on a Visit in March and April, 1951*. Castries. 1951, p.21.

4 *Report of the Tripartite Economic Survey of the Eastern Caribbean*. London. 1967, p.188-189.

5 Mathurin. *op. cit.* p.142.

to urban markets and hotels is shown on Map 1 (see Appendix). There was no apparent clustering of vegetable producers in the vicinity of either major settlements or tourist hotels.

The average size of the small farms surveyed was 7.5 acres. This is considerably greater than the mean for all small farms in St. Lucia of 2.5 acres obtained by the 1961 Agricultural Census.¹ This difference may be due in part to a tendency for under-reporting of the smallest farms and consequent omission from the official list but such a large differential would seem to indicate that it is the larger of the small farm class that are adopting commercial vegetable production most rapidly.

Land Tenure

The variety of tenure system under which land is held on small commercial vegetable farms is shown in Table 1. The number of holdings and the acreage held under the 'family land' system is second only to that for freehold land tenure and in the south and southwestern parts of the island the two types of tenure are almost equally represented. For the island as a whole only one-quarter of the land on small farms surveyed is 'family land' whereas almost two-thirds of this land is freehold. Of the 12 estates surveyed 94 per cent of the farmland is owned, 4 per cent rented out and a mere 2 per cent is 'family land'. In the mid-sixties it was estimated that 64 per cent of cultivable land in St. Lucia was affected by the system of multiple ownership.² The proportion of such land in our subset of St. Lucian farms is significantly less than this. Thus it would seem that the 'family land' system is a barrier to the adoption of agricultural innovation even where such a short-term crop as vegetables is concerned. The dominance of freehold land on farms surveyed when compared to its minority position for the island's total farmland indicates that possession of title to land is almost a *sine qua non* of early adoption.

Only 6 per cent of land on small vegetable farms was rented which is a similar proportion to that found by the 1961 Census for all the island's farmland.³ Two instances of sharecropping were found in the survey, involving very little land. In these cases perhaps vegetables were seen as a quick-growing answer to the problems of insecurity and lack of legal rights involved in this system of tenure. The category of other tenure included land squatted on the land operated whilst awaiting completion of purchase. None of these tenurial systems offer the security or the creditworthiness to encourage farmers to take the risks involved in change.

Fragmentation

One of the concomitant factors of the 'family land' tenure system is excessive fragmentation of agricultural land leading to inefficient farm operation. The average number of parcels per holding on the farms surveyed was 1.8. This compares with an average of 1.3 for all farms in St. Lucia a decade earlier⁴ and a mean of 1.5 for a sample of vegetable farms in Barbados.⁵ The 1961 Census showed that farms of 5 to 10 acres had the highest number of parcels per holding so that the relatively high level of parcelization on vegetable farms may merely be a reflection of the mean size of the farms surveyed. In the survey there

1 *West Indies Census of Agriculture, 1961, The Eastern Caribbean Territories*, Barbados, 1968, p.181.

2 Tripartite Survey. *op. cit.* p.189.

3 West Indies Agricultural Census. 1961. *op. cit.* p.191.

4 West Indies Census of Agriculture, 1961. *op. cit.* p.179.

5 Ingersent, K.A., Brathwaite, A.H. and Nurse, J.O.J. *Vegetable Production in Barbados. Barbados. 1969, p.50.*

were almost equal numbers of holdings with one as with two parcels whilst almost one-quarter of farms surveyed was made up of more than 2 parcels (Table 2). Fragmentation was most marked in the northern and central districts of the island perhaps because of population pressure on land in the areas surrounding Castries.

The efficiency of operation of a holding is affected by the location of the farmland in relation to the farm operator's house, paved roads, settlements and markets (Table 3). Operating costs rise as the distance travelled by inputs such as labour, fertilizer and pesticides increases. Produce spoils and becomes expensive if it has to travel over poor roads to a distant market. For the small vegetable farms surveyed the farm operator's dwelling was an average of 1.82 miles away from the furthest parcel although for 21 per cent of the farms the farmland was adjacent to the farmhouse. Seven farms actually held land within the bounds of a village but the average distance between farm and settlement was 1.25 miles. On average the largest parcel of land in a holding was located 0.74 miles from a paved road although 38 per cent of farms were located on a paved road. The average distance to market for these commercial vegetable farms was 13.51 miles.

These distances varied in different parts of the island tending to be below the mean in the north and above in the southwest. The low figures for distance to market in both northern and southern parts of the island emphasize the importance of the local urban centres, Castries and Vieux Fort respectively, in these areas. Elsewhere in the island most vegetable producers consider their major market to be Castries although a few farmers in the east sell in Micoud and some southwestern producers use Soufriere market. The distance between land and habitation is greatest in the eastern part of the island and least in the Vieux Fort area. Both these areas have better than average proximity to paved roads perhaps reflecting the less rugged nature of the south-eastern part of the island.

Intensive vegetable farming with its high and regular demands on a wide range of inputs seems a most unsuitable production system for holdings which are fragmented with considerable distances between the land and the farmstead. However, most of the farmers in the survey overcame this disadvantage by using the piece of land located closest to the farmhouse for vegetable growing. Despite the frequently described relationship between the 'family land' tenure system and fragmentation,¹ data gathered in the vegetable survey indicated no correlation between freehold or 'family land' tenure and the number of parcels per holding, and a correlation of only 0.39 for rented land.

Conclusion

Multivariate analysis of the data revealed that only a very small proportion of the total interfarm variation was accounted for by land tenure. This would suggest that adopters of commercial vegetable production occupy land which may technically be held under a variety of tenure systems but for all practical purposes can be operated as freehold land. Thus not only is the proportion of 'family land' in the survey below the norm for St. Lucia but the 'family land' that is included does not suffer from the worst problems generally associated with this tenure system. This conclusion is supported by the fact that only 3 farmers in the survey saw land tenure as inhibiting an expansion of vegetable acreage. The specific problems mentioned were as follows: the presence of squatters on the land; dispute over title to freehold land; and delays in completion of purchase of land.

Farmers with uncertainty in land tenure as above are unlikely to adopt commercial vegetable production. Thus uncertain land tenure systems are preventing the development of the most economically efficient pattern of vegetable production in St. Lucia.

¹ O'Loughlin, Carleen. *Economic and Political Change in the Leeward and Windward Islands*. Yale. 1968, p.42.

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TABLE 1. LAND TENURE ON SMALL VEGETABLE FARMS, 1971

Agricultural District	Freehold		Rented		Rented Out		Family		Sharecropped		Other		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
North	5	37.83	3	4.75	0	0	5	9.00	0	0	1	1.00	14	52.58
Central	13	94.50	7	9.13	2	1.13	1	3.00	1	5.00	1	3.00	25	115.76
East	8	76.40	3	5.50	0	0	4	40.00	0	0	1	4.00	16	125.90
Southeast	7	38.25	1	6.40	1	3.30	6	37.50	1	3.30	2	3.00	18	91.75
South	4	15.50	1	0.50	0	0	3	17.00	0	0	1	3.20	9	36.20
Island	37	262.48	15	26.28	3	4.43	19	106.50	2	8.30	6	14.20	82*	422.19

* This total exceeds the total number of holdings surveyed as some farmers held land in several types of tenure.

TABLE 2. FRAGMENTATION ON SMALL FARMS

Number of Parcels Per Farm	Agricultural District					Total
	North	Central	East	Southeast	South	
	(No. of farms)					
1	2	4	4	8	4	22
2	2	8	5	3	3	21
3	4	4	1	3	0	12
4	0	0	1	0	0	1
Total	8	16	11	14	7	56

TABLE 3. DISTANCE VARIABLES ON SMALL FARMS

Agricultural District	Mean distance between farmstead and furthest parcel	Mean distance between largest parcel and nearest settlement	Mean distance of largest parcel from paved road	Mean distance to market
(Miles)				
North	1.16	1.00	0.80	5.81
Central	1.71	1.11	0.98	11.16
East	3.25	2.88	0.51	18.68
Southeast	1.27	0.45	0.93	20.87
South	1.05	0.62	0.21	4.85
Island	1.82	1.25	0.74	13.51

