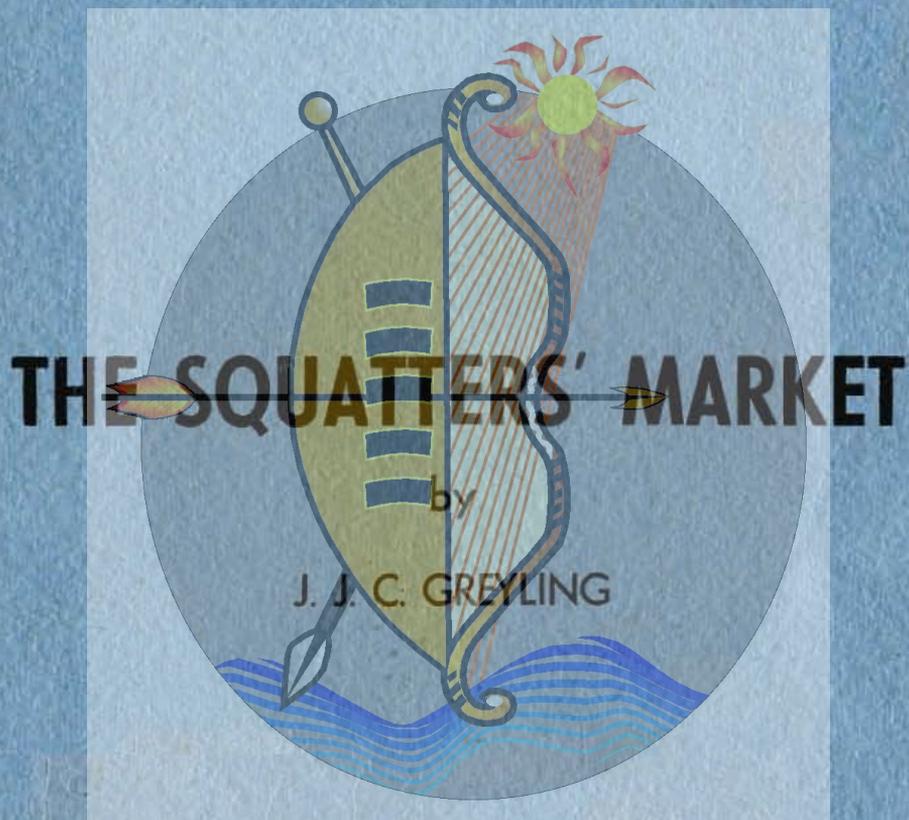
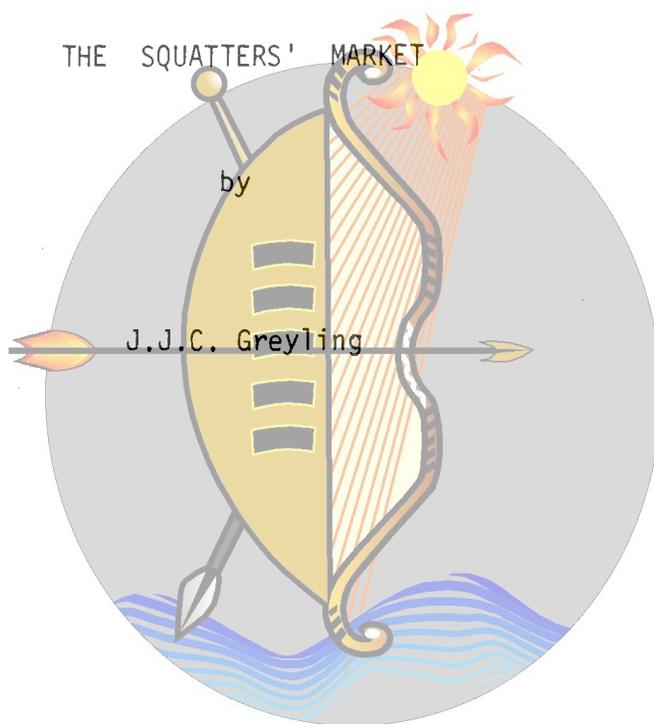




UNIVERSITY OF  
DURBAN-WESTVILLE



INSTITUTE FOR SOCIAL  
AND  
ECONOMIC RESEARCH



Institute for Social and  
Economic Research  
University of Durban-Westville  
Private Bag X54001  
Durban 4001.

Acknowledgements

Grateful acknowledgement must be made of the help and willing co-operation received from various people during the course of this study. In particular, I wish to express my appreciation to the following persons:

The University Council for its financial assistance to cover the expenses of the survey;

The market gardeners who supplied vital information on which the study is based;  
The Secretary of the Institute for her help in the tabulation of data and typing of the report.

Durban,  
1976

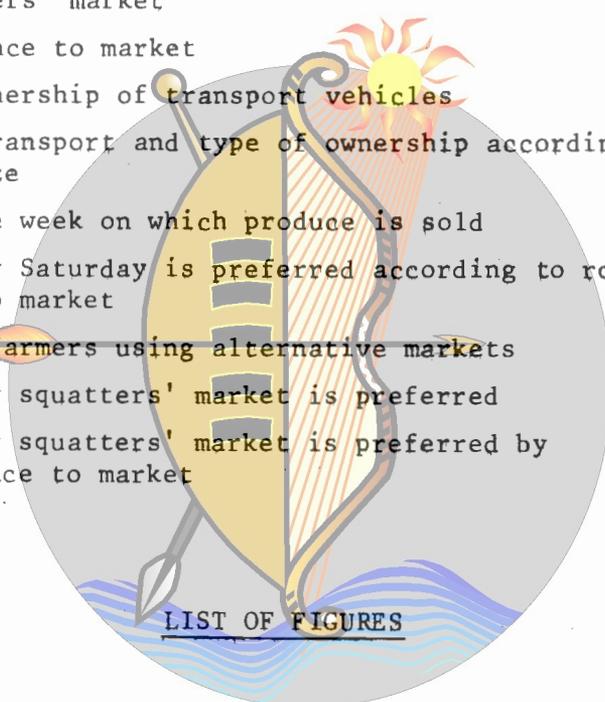
J.J.C. Greyling

CONTENTS

	PAGE
ACKNOWLEDGEMENTS	i
CONTENTS	ii
LIST OF TABLES	iii
LIST OF FIGURES	iii
1. INTRODUCTION	1
1.1 Objectives of the study	1
1.2 Method	2
1.3 Problems encountered	2
2. HISTORICAL BACKGROUND TO THE PROBLEM	3
3. ORGANISATION AND ADMINISTRATION OF THE MARKET	5
4. SPATIAL DISTRIBUTION OF MARKET GARDENERS	7
5. SIZE DISTRIBUTION OF PROPERTIES USED FOR MARKET GARDENING	7
6. TYPE AND QUANTITY OF PRODUCE OFFERED FOR SALE	7
6.1 Type of crops grown	7
6.2 Type and volume of produce offered for sale	9
6.3 Place of origin of crops offered for sale	11
7. TRANSPORT	13
7.1 Road Distance to market	13
7.2 Means of transport	13
8. MARKETING PATTERNS	14
8.1 Days of the week on which produce is marketed	14
8.2 Reasons why Saturday is preferred	16
8.3 Alternative markets	17
8.4 Reasons why the squatters' market is preferred	18
9. CONCLUSION	19
SELECTED BIBLIOGRAPHY	24
APPENDIX A: QUESTIONNAIRE	25

LIST OF TABLES

	PAGE
1. Spatial distribution of market gardeners	8
2. Size distribution of farms of vegetables and fruit producers	8
3. Type of vegetables, fruit, herbs and spices grown	9
4. Type and quantity of produce offered for sale	10
5. Place of origin of crops offered for sale at the squatters' market	12
6. Road distance to market	13
7. Type of ownership of transport vehicles	14
8. Means of transport and type of ownership according to farm size	15
9. Days of the week on which produce is sold	16
10. Reasons why Saturday is preferred according to road distance to market	17
11. Number of farmers using alternative markets	18
12. Reasons why squatters' market is preferred	18
13. Reasons why squatters' market is preferred by road distance to market	19



LIST OF FIGURES

1. Early Morning Market (reserved for market gardeners)	4
2. Card issued to successful applicants for market space	6

## 1. INTRODUCTION

### 1.1 Objectives of the Study

Market gardening has been a traditional way of life of the Indian community for many years. In the Report of the Coolie Commission (1872) for example, mention is made of small locations of Indians in the neighbourhood of Durban who carried on a thriving trade in the sale of vegetables. Furthermore, the available literature suggests that Indian growers played an important role in supplying the local urban population with fresh produce. The Report of the Protector of Indian Immigration (1882) states that "Those (Indians) settled in the vicinity of Durban and Pietermaritzburg have succeeded in winning for themselves almost entirely the supply of the local market with vegetables". (Quoted by Halliday, 1942, p.13)

More recent information on Indian agricultural development however, shows that market gardening gradually declined in significance to the advantage of sugar cane. Rix (1972) estimates that approximately 23 per cent of Indian farmers on the Natal North Coast still grow vegetables while the remaining 73 per cent concentrate on sugar cane growing. While there is a need for diversification out of sugar cane cultivation particularly on farms smaller than 10 acres the adoption of more productive farming systems such as fruit and vegetables however, is hindered by problems of transport and marketing and will require drastic improvements to create a more favourable situation for market gardeners. The findings of investigations by Greyling (1969), le Roux (1971) and Rix (1972) clearly illustrate the need for a comprehensive market survey including aspects such as means of transport, transport costs, demand and price trends for the full range of vegetables, fruit, herbs and spices grown, quantity and quality of produce grown and the organisation and administration of a marketing system best suited the needs of Indian growers.

Farmers are largely or exclusively concerned about conditions at the squatters' market. They complain about "inadequate space at the squatters' market, the inefficiency of the available facilities for present-day needs and the hardships and inconveniences they have to suffer". Some farmers find the existing marketing conditions so discouraging that they seriously consider discontinuing the production of vegetables and fruit and ask for assistance to improve the situation.

With these conditions in mind the present study is designed to:

- a. Investigate the nature of problems encountered by Indian farmers at the squatters' market and possible ways in which the situation may be improved;
- b. Test the response of farmers and more particularly their willingness and ability to provide information which will be required in a more comprehensive survey.

## 1.2 Method

Interviews were conducted on Saturdays when a maximum number of farmers required space, and problems of accommodation were claimed to be serious. It was necessary to provide for seasonal variation in the type and quantity of produce marketed without extending the survey over a very long period. To this end a number of Saturdays were drawn at random for the period October 1973 - April 1974. On each Saturday selected for interviewing between 30 and 40 tables were drawn at random from the 600 tables reserved for farmers. Precautionary steps were taken to ensure that no farmer would be interviewed more than once. Information was collected by means of an interview schedule (Appendix A). Two field workers were used to conduct the interviews and they completed 182 interviews representing a 1.3 per cent sample.

## 1.3 Problems encountered

No serious problems were encountered during the survey. The following minor problems are interesting to note.

- a. A small number of farmers refused information claiming that they were quite happy with the existing situation.
- b. While the questionnaire was designed to be completed in 10 minutes time, some interviews lasted more than 30 minutes because stall holders continuously interrupted interviews to draw customers or to serve them.
- c. A great majority of growers was unable to provide information on the value of fresh produce sales over any given period or on what proportion of the total income was derived from market gardening.
- d. A surprisingly large number of farmers were uncertain about the area devoted to individual crops, frequency with which market space was required and road distance to the market.

e. The fact that farmers did not use a standard measure for the quantity or volume of produce offered for sale presented problems in the tabulation of data. Quantities of any particular crop were stated in pounds, kilograms, baskets, pockets, crates, bunches or numbers while further variation occurred in the size of the baskets, pockets and crates and had to be converted to standard measures for tabulation.

## 2. HISTORICAL BACKGROUND TO THE PROBLEMS

Hindu and Islamic market gardeners and traders used to sell their produce in stalls on the pavements along Victoria Street. Continuous quarrels arising from strong religious and caste differences however, necessitated the separation of the two religious groups. The only suitable alternative site to accommodate a significant number of people was a swamp area along Warwick Avenue which had to be drained before building could commence. In 1934, the existing market buildings were offered to Hindu market gardeners who comprised the largest group while Islamic growers remained in Victoria Street. The traders (non-farmers) were subsequently moved to the building they still occupy and which was previously used as stables for the Corporation's horses.

As may be expected market facilities designed 40 years ago will no longer meet present-day needs. The Durban City Market eg. recently moved to its third site over the same period to provide improved facilities. Apart from a normal increase in the number of growers and the quantity of produce offered for sale since the squatters' market was built a number of additional changes took place that rendered the available facilities inadequate. For example, over time the attitude between Hindu and Islamic growers improved. As a result, the two groups agreed to share the available facilities. Furthermore, space was surrendered to traders who bought produce at the Durban City market and wished to sell it at the squatters' market. The growing demand for market space and competition among farmers for accommodation resulted in an increasing number of growers not being able to obtain market space.

The design and construction of the squatters' market did not provide for the accommodation of an increase in the number of growers. Furthermore, its design seriously restricted the number of vans and

~ EARLY MORNING MARKET ~  
[reserved for market gardeners]

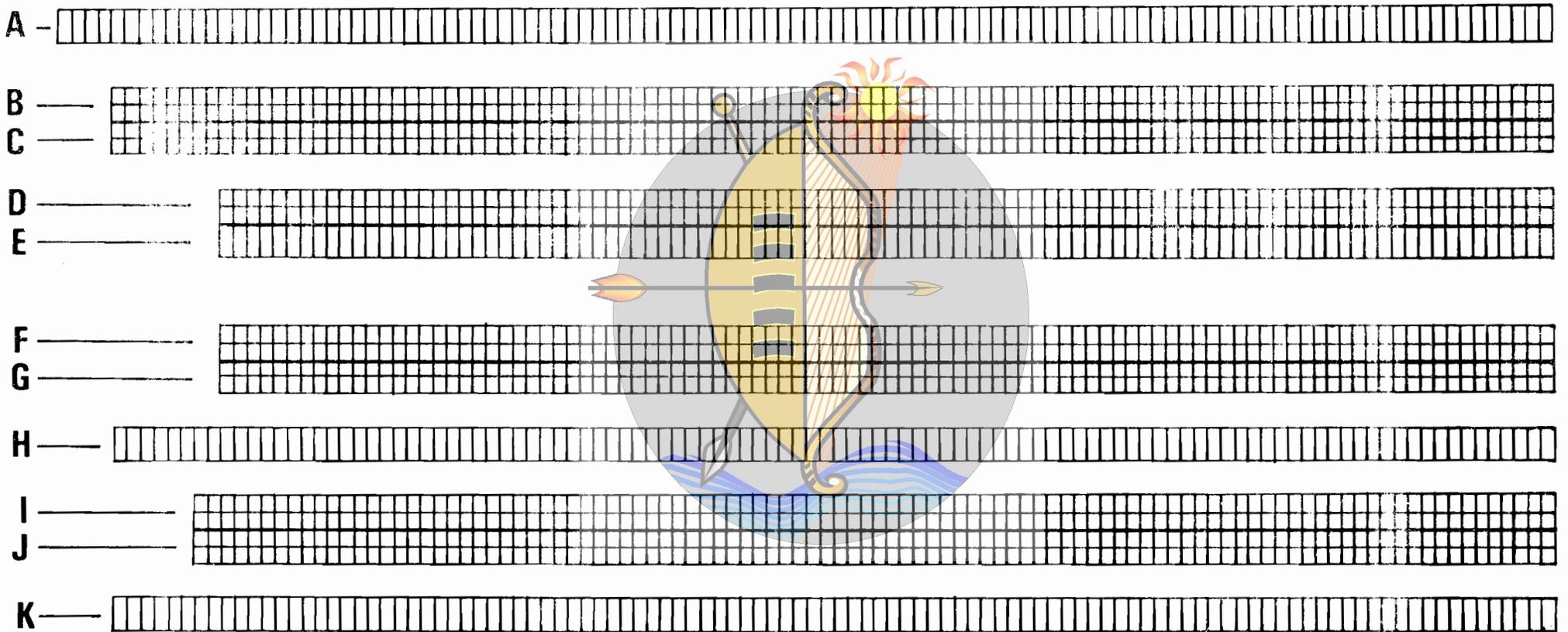


fig.(1)

trucks that could enter the market for delivery at any particular time. This gave rise to problems of double handling, damage to produce and increased labour costs.

In 1966, Indian vegetable growers established the Natal Indian Agricultural Union to further and protect their interests on the Durban Municipal market and to work towards obtaining proper amenities for members. The Union achieved some early success in persuading the market authorities to reserve 600 tables at the squatters' market for the use of bona fide Indian farmers. While these measures brought some relief they did not provide a solution to the problems encountered by farmers. Conditions gradually deteriorated until a stage was reached where farmers appealed for assistance.

### 3. ORGANISATION AND ADMINISTRATION OF THE MARKET

The squatters' market falls under the jurisdiction of the Director of Markets and operates under the Indian Market By-Law No. 42 of 1972. Members of the Director's staff are responsible for the allocation of space to farmers and traders and to collect rentals for tables. In the case of dissatisfaction, farmers may approach the market authorities through the market committee, which is comprised of farmers and traders, or through the Natal Indian Agricultural Union.

Hours of business differ according to season of the year. In summer, i.e. between 1 October and 30 March, market hours are between 5.15 a.m. and 10.30 a.m. on weekdays and between 5.15 a.m. and 12 noon on Saturdays. In winter, the market opens at 5.45 a.m. and closes at 10.30 a.m. on weekdays and at 5.45 a.m. and 12 noon respectively on Saturdays.

Since 1966 rows A to K with a total of 600 tables (Fig. 1) are reserved for bona fide farmers. In order to accommodate small and large growers, tables are divided into halves and quarters for letting. Rentals range from R0.80 to R1.50 per table depending upon its size and situation.

All farmers who wish to sell produce at the squatters' market have to apply annually for permits entitling them to market space. These are issued free of charge by the Director of Markets. Each permit carries a photograph of the holder and the title deed description of his land.



4. SPATIAL DISTRIBUTION OF MARKET GARDENERS

The 182 market gardeners interviewed during the survey are scattered over a vast area extending from Port Shepstone in the south to Stanger in the north and Ladysmith in the north-west. According to the information presented in Table 1 however, they are heavily concentrated along the coast. A majority of 51,5 per cent of the growers are from the Durban area. The North coast ranks second with 26,4 per cent while 11,5, 7,7 and 3,3 per cent are from the South coast, Cliffdale-Cato Ridge area and Natal interior respectively.

5. SIZE DISTRIBUTION OF PROPERTIES USED FOR MARKET GARDENING

The size of holding used for market gardening ranges from less than an acre in urban areas to portions of large farms of up to 1933 acres in size. According to Table 2 however, small holdings predominate. Of the 182 interviewees, 33 per cent cultivates holdings smaller than 4 acres, while 60 per cent of the total farms on properties less than 12 acres in size. The predominance of small enterprises does not necessarily imply that small farms are as a rule used for market gardening. A survey by Greyling (1969) shows that a large number of small farms are used for non-farming purposes, plantations or sugar cane. In the case of large farms, vegetables and fruit never occupy the entire area but only small portions while the remainder is devoted to sugar cane or other land use types. The only cases where fairly large acreages are used for the growing of vegetables and fruit are where they are grown as catch crops on sugar cane fields or as field crops.

6. TYPE AND QUANTITY OF PRODUCE OFFERED FOR SALE

6.1 Types of crops grown

Table 3 provides a list of the more important crops and the frequency with which they are grown by interviewees. However, as some are seasonal crops, they were not necessarily grown during the time the survey was conducted. Green beans, carrots, peas and cabbages, grown by 34,6, 22, 21,4 and 20,3 per cent respectively of the 182 interviewees are the most popular types of fruit and herbs. The significance of these crops may be attributed to a number of reasons including demand and the fact that they can be grown throughout the year and in large or small quantities depending upon the amount of land available.

**TABLE 1. SPATIAL DISTRIBUTION OF MARKET GARDENERS**

Place of Residence	Frequency
<u>North Coast</u>	
Stanger	6
Tongaat	6
Chakaskraal	3
Verulam - Mt. Edgecombe	<u>33</u>
Total for North Coast ...	48 (26,4%)
<u>Durban and Surrounding Area</u>	
Effingham - Springfield - Sea Cow Lake - Newlands	43
Westville - Clare Estate - Sydenham	9
Chatsworth - Shallcross - Pinetown	26
Isipingo - Reunion	6
Merebank	<u>9</u>
Total for Durban & Surrounding Area ...	93 (51,1%)
<u>Cliffdale - Cato Ridge</u>	14 (7,7%)
<u>Natal Interior</u>	
Pietermaritzburg - Mooiriver	6 (3,3%)
<u>South Coast</u>	
Umkomaas	16
Umzinto	4
Port Shepstone	<u>1</u>
Total for South Coast ...	21 (11,5%)
<b>TOTAL</b>	<b>182</b>

**TABLE 2. SIZE DISTRIBUTION OF FARMS OF VEGETABLE AND FRUIT PRODUCERS**

Farm Size (In Acres)	Frequency	Percentage of Total	Cumulative Percentage
0 - 3,9	59	33	33
4 - 7,9	29	16	49
8 - 11,9	21	11,5	60,5
12 - 19,9	15	8,2	68,7
20 - 27,9	15	8,2	76,9
28 - 43,9	16	8,8	85,7
44 - 59,9	10	5,5	91,2
60 - 99,9	2	1,1	92,3
100 +	15	7,7	100
<b>TOTAL</b>	<b>182</b>	<b>100</b>	

TABLE 3

TYPE OF VEGETABLES, FRUIT, HERBS AND SPICES GROWN

	Frequency
<u>Vegetables</u>	
Green Beans	63
Carrots	40
Peas	39
Cabbage	37
Tomatoes	31
Chilli	26
Lettuce	26
Beetroot	24
Brinjal	24
Cucumbers	18
Radish	18
Calabash	12
Bitter Gall	11
Lufers	9
Green Mealies	8
Shallot	7
Potatoes	7
Turnip	6
Other	15
<u>Flowers</u>	16
<u>Dried Beans</u>	26
<u>Fruit</u>	
Bananas	32
Mangoes	17
Pineapples	8
Pawpaws	8
Other	10
<u>Herbs and Spices</u>	
Red Herbs	33
Dhania	25
Currie Leaf	9
Ginger	7
Mint	8
Thyme	5
Betel Leaf	4
Other	6

6.2 Type and Volume of produce offered for sale

Table 4 shows the frequencies with which different crops are marketed and the quantities offered for sale. According to the table, the quantity of any particular crop marketed by an individual grower ranges from a few ounces to over 1000 kg., from a few to over 2000 in number or from a few bunches to more than 500 bunches.

TYPE AND QUANTITY OF PRODUCE OFFERED FOR SALE

TYPE OF PRODUCE	QUANTITY IN KILOGRAMS								
	Frequency	0 - 4,9	5-9,9	10-19,9	20-49,9	50-99,9	100-499,9	400-999,9	1000 +
<b>Vegetables</b>									
Beetroot	10	1	-	2	3	3	1	-	-
Bitter Gall	11	-	-	-	2	1	3	-	-
Brinjal	17	-	1	1	3	7	3	1	1
Cabbage	31	-	-	1	6	7	11	4	2
Carrots	28	-	3	4	10	4	6	1	-
Calabash	12	-	1	2	4	2	3	-	-
Chilli	16	-	2	1	7	4	2	-	-
Dried Beans	20	-	-	-	7	2	10	1	-
Green Beans	33	-	-	-	7	5	17	4	-
Green Mealies	2	-	-	-	-	-	1	1	-
Lufers	5	-	1	1	3	-	-	-	-
Peas	14	-	-	2	3	1	6	1	2
Potatoes	4	-	-	-	-	1	3	-	-
Raddish	14	4	1	2	5	1	1	-	-
Shallot	7	4	1	2	-	-	-	-	-
Tomatoes	21	-	-	-	-	4	6	7	4
Turnip	2	-	-	-	1	-	-	-	-
Other	3	1	-	-	-	-	2	-	-
<b>Herbs &amp; Spices</b>									
Betel Leaf	4	-	-	-	2	1	1	-	-
Dhania	21	21	-	-	-	-	-	-	-
Currie Leaf	5	1	1	-	3	-	-	-	-
Ginger	9	1	1	1	4	1	1	-	-
Mint	7	6	-	1	-	-	-	-	-
QUANTITY IN NUMBERS									
		0-49	50-99	100-199	200-499	500-999	1000-1999	2000+	
<b>Vegetables</b>									
Cucumbers	14	-	1	6	3	1	1	-	
Lettuce	18	2	7	4	4	-	-	1	
<b>Fruit</b>									
Bananas	18	-	-	2	2	2	-	-	
Mangoes	16	-	2	1	5	1	6	1	
Pawpaws	5	1	2	2	-	-	-	-	
Pineapple	4	1	-	2	1	-	-	-	
Other	5	-	-	-	1	4	-	-	
QUANTITY IN BUNCHES									
		0-14	15-29	30-59	60-99	100-199	200-499	500 +	
<b>Vegetables</b>									
Other	1	-	-	-	-	1	-	-	
Flowers	15	1	2	3	2	3	2	2	
<b>Herbs &amp; Spices</b>									
Red Herbs	-	-	-	-	-	-	-	-	
Thyme	6	1	3	1	-	1	-	-	
Other	36	5	8	3	5	8	3	4	
<b>TOTAL</b>	<b>50</b>	<b>37</b>	<b>45</b>	<b>44</b>	<b>92</b>	<b>65</b>	<b>95</b>	<b>36</b>	<b>9</b>

With the exception of herbs and spices, all crops are produced and marketed in large or small quantities. In the majority of cases (62,8 per cent) however, the quantity of any particular crop offered for sale rarely exceeds 100 kg. (Table 4(a)). The limited quantities of herbs and spices offered for sale are not unexpected as they are used for flavour and the demand is much smaller than for food crops.

Despite climatic conditions along the coast favouring the production of a wide range of sub-tropical fruit, only small quantities are grown. (Table 4(b)). With the exception of bananas few orchards are found. Odd fruit trees randomly planted are a feature on many Indian farms. The surplus to domestic needs is sold and accounts for a large proportion of the fruit marketed by Indian growers.

In the absence of sales records for the squatters' market, no estimates could be made on the contribution by Indian market gardeners in meeting the local demand. According to members of staff of the Director of Markets however, the bulk of fresh produce consumed in Durban comes from the Transvaal. Rix (1972) observes a decline in the significance of vegetables supplied by Indians in local consumption and attributes it to the low quality and inadequacy of the supply flowing from Indian farms, the expansion of urban areas over rural land particularly around Durban, and changes in farming systems (p.88).

### 6.3 Place of origin of crops offered for sale

Table 5 confirms the significance of the Durban area as a source of produce sold at the squatters' market but does not reveal any regional specialisation. The fact that sub-tropical fruit, herbs and spices are not grown outside the coastal region is not unexpected as climatic conditions are unfavourable elsewhere. Betel leaf is not grown outside Inanda Magisterial district while mint and thyme are restricted to the Durban area. As could be expected, distant farmers concentrate on seasonal crops produced in large quantities and not easily damaged when transported over long distances. The table shows that farmers from Natal interior mainly market cabbage, green beans and peas while a majority of market gardeners in the Cliffdale - Cato Ridge area concentrate on cabbage.

TABLE 5

PLACE OF ORIGIN OF CROPS OFFERED FOR SALE AT SQUATTERS' MARKET

CROP	FREQUENCY	PLACE OF ORIGIN					
		Lower Tugela	Inanda	Durban & Surrounding area	Cliffdale/Cato Ridge	Interior	South Coast
Beetroot	10	-	2	7	-	-	1
Bitter Gall	8	-	5	2	1	-	-
Brinjal	16	4	2	9	-	-	1
Chilli	16	-	4	7	-	-	5
Cabbage	29	2	1	10	7	3	6
Calabash	13	-	2	6	1	-	4
Carrots	28	1	1	23	1	-	2
Cucumbers	15	3	1	10	1	-	-
Dried Beans	18	2	6	6	-	-	4
Green Beans	35	6	6	12	2	1	8
Green Mealies	1	-	1	-	-	-	-
Lettuce	18	-	-	15	1	-	2
Lufers	6	-	3	3	-	-	-
Peas	14	-	3	8	-	1	2
Potatoes	4	-	-	1	2	-	1
Raddish	14	-	2	12	-	-	-
Shallot	8	-	1	6	-	-	1
Tomatoes	18	4	4	5	1	-	-
Turnip	2	-	-	2	-	-	-
Other	5	-	-	3	-	1	1
Sub-Total	278	22	44	147	17	6	42
Betel Leaf	4	-	4	-	-	-	-
Currie Leaf	5	-	4	1	-	-	-
Dhania	21	-	5	16	-	-	-
Ginger	9	2	1	5	-	-	1
Herbs	34	-	8	26	-	-	-
Mint	7	-	-	7	-	-	-
Thyme	6	-	-	6	-	-	-
Other	2	-	2	-	-	-	-
Sub-Total	88	2	24	61	-	-	1
Flowers	15	-	-	14	1	-	-
Bananas	19	3	2	10	-	-	4
Mangoes	16	-	4	10	-	-	2
Pawpaws	5	-	2	-	-	-	3
Pineapples	4	-	-	1	-	-	3
Other	6	-	1	3	-	-	2
Sub-Total	65	3	9	38	1	-	14
TOTAL	431	27	77	246	18	6	57

7. TRANSPORT

7.1 Road Distance to Market

The distance farmers have to travel to the market is of importance particularly in the case of small growers. Where small quantities of produce have to be transported over long distances transport costs may absorb a substantial proportion of their returns.

Survey results reveal that the distance interviewees have to travel to the market ranges from 3 - 241 km. Of the 182 interviewees, 20,4 per cent travel less than 15 km., 28,2 per cent between 15 km. and 30 km. and 24,9 per cent between 30 km. and 50 km. while the remainder travel longer distances. (Table 6).

TABLE 6 ROAD DISTANCE TO MARKET

Road Distance (Km.)	Frequency	Percentage
0 - 14,9	36	20,4
15 - 29,9	30	28,2
30 - 44,9	69	24,9
45 - 74,9	35	19,9
75 - 119,9	7	3,9
120 +	5	2,7
TOTAL	182	100,0

7.2 Means of Transport

Market gardeners bring produce by truck, van, car and bus to the market. Table 7 shows that vans form the most common means of transport. Of the 182 interviewees a majority of 60,4 per cent transport produce by van while 20,3 per cent depend upon buses and 17,6 per cent use trucks.

As a high percentage of farmers market small quantities of produce, it is reasonable to expect that sharing of vehicles will be common in order to reduce costs. According to Table 7 however, a minority of 2,2 per cent own trucks and 1,7 per cent own motor cars in shares. The small number of growers using hired transport suggests that contractors do not play a significant role in the transport of fresh produce.

The information presented in Table 8 reveals an association between means of transport and farm size. Analysis of the data shows that 78,4 per cent of the interviewees who transport produce by bus are on holdings smaller than 4 acres while the remaining 21,6 per cent occupy plots of

less than 8 acres in size. These market gardeners are mainly from Durban and surrounding areas and produce small quantities which may conveniently be transported by bus in cases where they do not own vehicles. The ownership of trucks increases with an increase in farm size from two market gardeners on holdings smaller than 4 acres to eight market gardeners on farms larger than 100 acres in size. The lack of any apparent relationship between the ownership of vans and farm size is not unexpected. Vans are multi-purpose vehicles used for carrying both people and produce and ownership is therefore less dependent upon farm size.

**TABLE 7**                      TYPE OF OWNERSHIP OF TRANSPORT VEHICLES

Transport Vehicle	Frequency	Type of Ownership				
		Owned Singly	Owned in Shares	Rented Singly	Rented in Shares	Owned by contractor
Car	2	2	-	-	-	-
Van	110	94	1	15	-	-
Truck	32	24	-	5	3	-
Bus	37	-	-	-	-	37
Train	1	-	-	-	-	1
<b>TOTAL</b>	<b>182</b>	<b>120</b>	<b>1</b>	<b>20</b>	<b>3</b>	<b>38</b>

**8. MARKETING PATTERNS**

**8.1 Days of the week on which produce is marketed**

All market gardeners prefer to sell produce on Saturdays while a small number requires market space on other days of the week. According to the data presented in Table 9, 88,5 per cent of the 182 interviewees sell produce every Saturday while the remaining 11,5 per cent require market space only on Saturdays but irregularly. Mondays and Wednesdays are quiet. Only 8 interviewees sell produce regularly and 12 irregularly on Mondays and 8 and 19 growers respectively on Wednesdays.

If it is considered that a total of 600 tables are reserved for growers all of whom prefer to sell produce on Saturdays it is not surprising that problems of accommodation are encountered. The limited demand for market space during the week gives rise to a number of questions such as:

TABLE 8

MEANS OF TRANSPORT AND TYPE OF OWNERSHIP ACCORDING TO FARM SIZE

Means of transport and type of ownership	Frequency	Farm Size (Acres)								
		3,9	4-7,9	8-11,9	12-19,9	20-27,9	28-43,9	44-59,9	60-99,9	100+
Car-owned	2	1					1			
Van-owned	95	17	17	17	10	11	11	6	1	5
Van-rented	15	9	3		1		1			1
Truck-owned	24	2		3	3	2	2	3	1	8
Truck-rented	8	2		1	1	2	1	1		
Bus	37	29	8							
Train	1		1							
	182	60	29	21	15	15	16	10	2	14

How do market gardeners preserve their produce during the week? Is there any justification for permanent accommodation to be provided and the cost of maintaining it if it is required on Saturdays only? The sections which follow will provide answers to these and related questions.

**TABLE 9**                      **DAYS OF THE WEEK ON WHICH PRODUCE IS MARKETED**

Day of Week		Frequency
Monday	Regularly	8
	Irregularly	12
Tuesday	Regularly	41
	Irregularly	36
Wednesday	Regularly	8
	Irregularly	19
Thursday	Regularly	31
	Irregularly	33
Friday	Regularly	40
	Irregularly	28
Saturday	Regularly	161
	Irregularly	21

**8.2** Reasons why Saturday is preferred

Table 10 shows the frequency with which reasons why Saturday is preferred are mentioned. Ninety eight farmers, representing 53,8 per cent of the total, claim that there are more customers at the market on Saturdays. Most people are tied up during the week but free on Saturdays to do their shopping. With the larger demand growers stand a better chance to sell their produce. Seventy eight farmers (42,8 per cent) prefer Saturdays because of "good prices". It does not imply that growers exploit the public when there is a bigger demand but that they do not have to drop prices towards closing time in an attempt to sell all the produce. The fact that another 23 interviewees (12,6 per cent) prefer Saturdays because "the market closes later" also confirms their desire to sell a maximum quantity of their produce.

There is no apparent relationship between the reasons why Saturday is preferred and road distance to the squatters' market. The three major reasons mentioned above dominate irrespective of road distance. (Table 10). The low frequencies with which the other reasons are mentioned do not permit meaningful conclusions to be drawn.

TABLE 10

REASONS WHY SATURDAY IS PREFERRED ACCORDING TO ROAD DISTANCE TO MARKET

Reasons	Frequency	Road Distance in Kilometers					
		0-14,9	15-29,9	30-44,9	45-74,9	75-119,9	120+
Good Prices	70	11	13	31	12	-	3
Market closes later	23	3	4	10	5	1	-
More customers	98	19	12	38	22	3	4
Workers paid on Fridays	2	-	-	1	1	-	-
Tied up during rest of week	-	-	-	-	-	-	-
Availability of transport	2	-	-	1	1	-	-
Labourers available	5	-	-	4	1	-	-
No particular reason	9	3	2	2	2	-	-
Other	11	2	-	5	1	3	-
TOTAL	220	38	31	92	45	7	7

8.3 Alternative markets

While market gardeners have a choice between 7 alternative outlets to market fresh produce, an overwhelming majority (81,3 per cent) sell at the squatters' market only. Of the remaining 37 growers who occasionally market produce through alternative outlets, 43,2 per cent sell to traders and hawkers and 27 per cent at Verulam's Municipal market while very few growers sell produce through the other markets listed in Table 11. A large number of interviewees claim to be unaware of alternative markets. Rix (1972) in an investigation into Indian market gardening also finds that "the greater proportion of Indian grown vegetables are sold through the squatters' market". (p.97).

TABLE 11

NUMBER OF FARMERS USING ALTERNATIVE MARKETS

Markets	Frequency
Durban City	3
Clairwood	2
Verulam	10
Tongaat	3
Pietermaritzburg	3
Traders/Hawkers	16
TOTAL*	37

\* 148 Farmers market produce only at the squatters' market

8.4 Reasons why the squatters' market is preferred

Interviewees were requested to give reasons why the squatters' market is preferred. The results are presented in Table 12. The fact that 58,8 per cent of the interviewees claim that "prices are better than elsewhere" has merit. Selling produce direct to consumers at current retail prices eliminates commission to middlemen or agents and ensures the maximum financial benefit to growers.

TABLE 12

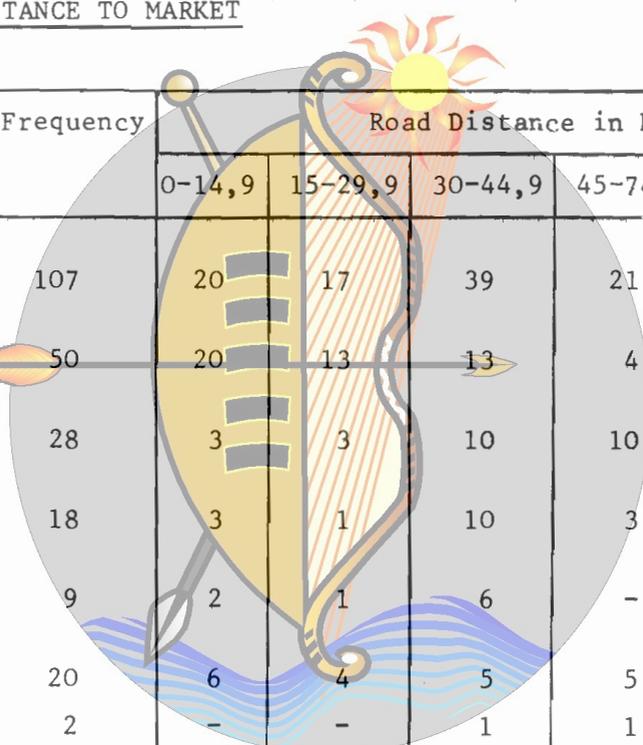
REASONS WHY SQUATTERS' MARKET IS PREFERRED

Reason	Frequency
Prices better than elsewhere	107
Conveniently situated	50
Large number of customers	28
Personal contact with customers	18
Tradition/personal sentiments	9
No alternative market	20
Other	2
TOTAL	234

The claim by 27,5 per cent of the interviewers that the squatters' market is conveniently situated is also justified. Being in close proximity to the bus terminal, it is conveniently situated for growers dependent upon bus transport. Commuters coming in to town for shopping pass the market en route from or to the terminal. It requires no special effort therefore, to go to the market.

Twenty interviewees claim to be unaware of any alternative market. Ten of these growers occupy farms ranging from 30 - 75 acres in area. (Table 13). However, the total area owned is not necessarily devoted to market gardening and it is therefore not a reliable measure of its significance. Due to problems explained previously, it is unfortunately not possible to tabulate the volume of production against other variables. Eighteen farmers prefer the squatters' market for personal contact with customers which enables them to build up a permanent clientele.

TABLE 13 REASONS WHY SQUATTERS' MARKET IS PREFERRED BY ROAD DISTANCE TO MARKET



Reasons	Frequency	Road Distance in Kilometers					
		0-14,9	15-29,9	30-44,9	45-74,9	75-119,9	120+
Prices better than elsewhere	107	20	17	39	21	6	4
Conveniently situated	50	20	13	13	4	-	-
Large no. of customers	28	3	3	10	10	2	-
Personal contact with customers	18	3	1	10	3	-	1
Tradition/personal sentiments	9	2	1	6	-	-	-
No alternative market	20	6	4	5	5	-	-
Other	2	-	-	1	1	-	-
TOTAL	234	54	39	84	44	8	5

9. CONCLUSION

As the future of the squatters' market appears to be threatened by road and railway expansion, it is of limited value to suggest ways in which the existing marketing conditions may be improved. That does not imply that the survey amounted to a waste of time since the results obtained provide valuable information on production, transport and marketing patterns encountered among market gardeners. Furthermore, the findings may serve as a guide in deciding on the nature of alternative facilities to be provided for Indian market gardeners.

The most striking features revealed by the survey are the limited scale on which market gardening is carried out, heavy dependence upon the squatters' market for the sale of fresh produce and the heavy demand for space on Saturdays.

It has been shown that a majority (60 per cent) of the 182 interviewees occupy holdings smaller than 12 acres in size. While 4 - 12 acres of land is sufficient to earn a satisfactory income if properly used, the entire area of small farms is rarely devoted to market gardening. Vegetables, herbs and spices as a rule occupy small areas in close proximity to dwellings or to surface water sources while fruit is picked from randomly planted trees. In a majority of cases only surpluses to domestic needs are sold.

Le Roux (1971) found that 40 per cent of Indian market gardeners obtain less than 10 per cent of their total income from vegetable production and in 71,7 per cent of the cases vegetables contribute less than one third of the farm income. While the income derived from the sale of the fresh produce is limited in absolute terms it is nevertheless of great value in the case of lower income groups to balance the household budget or to provide urgently needed cash to pay for the necessities of life.

Survey results show that market gardeners are completely dependent upon road transport, that they most frequently market small quantities of produce, that each grower provides his own transport and that market gardeners have to travel on the average a distance of 36 km. to the market. It is obvious therefore, that a need exists for alternative transport arrangements to maximise the use of vehicles by reducing the number of vehicles used which in turn will minimise transport costs.

While there are 7 alternative outlets through which market gardeners can sell fresh produce the squatters' market enjoys preference, often due to ignorance. The problem of congestion is further aggravated by the fact that almost all growers demand space on Saturdays while other days of the week are quiet. Furthermore, individual growers offering small quantities of produce for sale are reluctant to share tables which is essential to ensure optimum use of the available space.

These findings represent assessments of the situation of Indian market gardening based upon formal observational data. They do not tally with the subjective view which market gardeners hold of their own situation.

Growers complain about inadequate space to accommodate them and the hardships they have to suffer but conceal the fact that all of them demand space on Saturdays, that small growers refuse to share tables or portions of tables and that a large number of tables are not occupied during the week.

Thus far representations by growers and attempts by the authorities to effect change have been largely concerned with the provision of adequate space to farmers and procedures to be followed in the distribution of tables among growers while other handicaps retarding the progress of market gardening were ignored or not perceived. As long as the unsatisfactory production, transport and marketing conditions are allowed to continue, market gardening will be pitched at its present level or may even deteriorate. Innovative measures are urgently required to ensure: increased production, improved quality of produce and a regular supply throughout the year; optimum use of the available market facilities; and the provision of modern facilities such as cold storage and labour and time saving devices in the handling of produce.

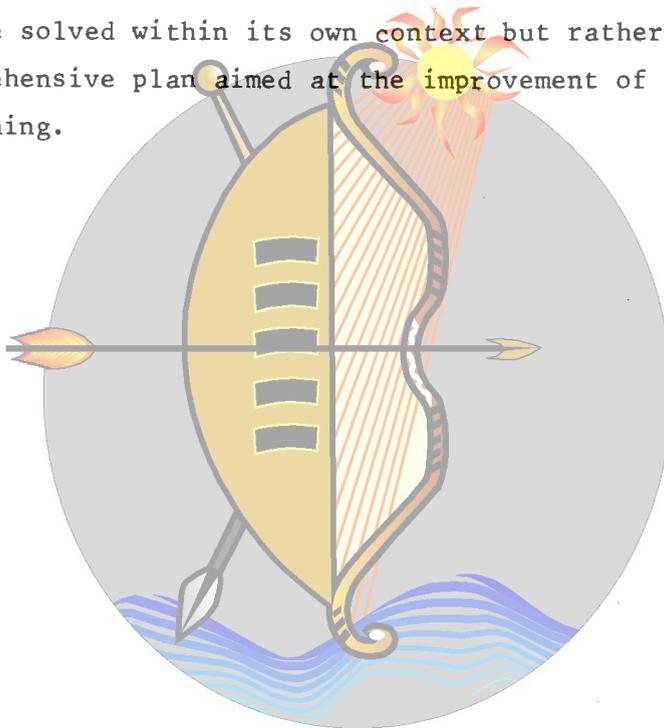
Indian farmers successfully launched the Natal Indian Agricultural Union to procure market space for growers and thus proved their ability to take group action when required. The farming community should be encouraged to establish a co-operative marketing agency to take full responsibility for the marketing of fresh produce. Functions of the co-operative may include the collection of produce at depots strategically distributed throughout the area of production, transport to the market, grading, price fixing and selling of produce and regulation of marketing to ensure a regular supply and optimum use of the available market space. Alternatively, the co-operative can take responsibility for bulk selling at the fresh produce market. The functions of the co-operative may be extended to include advice to farmers on market trends, planning of cropping systems and the improvement of the quality of produce. Obvious advantages of a co-operative will include the availability of transport to all growers at reduced costs, reduction in the number of persons involved in selling the produce, better utilization of space and the elimination of competition for accommodation between growers.

As long as the present market continues to exist nothing more than modifications to the marketing system can be introduced. In the event of the squatters' market being closed down however, a number of questions will arise such as whether alternative facilities should be provided, the most suitable site for a market, the expected effect of a change in the location upon the volume of trade and the required size, physical design, organisation and administration of the market. In the absence of such data it is not possible to prepare any detailed proposals. Only important issues that will have to be considered in the planning process are listed. The following considerations are of interest:-

- a. It will obviously be necessary to carry out a need and feasibility study to establish whether separate market facilities should be provided for Indian farmers and to determine the nature of market facilities best suited to the interests of Indian market gardeners. Observations suggest that the squatters' market plays a significant role in the economy of market gardeners in that they derive the maximum returns from the sale of produce while the market renders a valuable service to consumers and more particularly to Indians and Blacks who are not served by fruit and vegetable shops in their residential areas. The abolition of separate market facilities for Indian farmers or of the practice to sell fresh produce in small quantities at retail prices to consumers therefore, will have a radical impact on not only market gardeners but upon a large number of urban dwellers. On the other hand, it is a valid argument that the provision of separate market facilities similar to the squatters' market tends to encourage the production of small quantities of produce, often of poor quality. Furthermore, it is questionable whether the provision of permanent facilities is justified when it is largely required on Saturdays.
- b. The practice whereby each individual grower and in many cases his whole family is allowed to sell produce, irrespective of quantity, is undesirable as it encourages overcrowding and creates an unfavourable trader/volume-of-produce ratio. Means should be devised whereby the number of persons involved in trading could be limited.

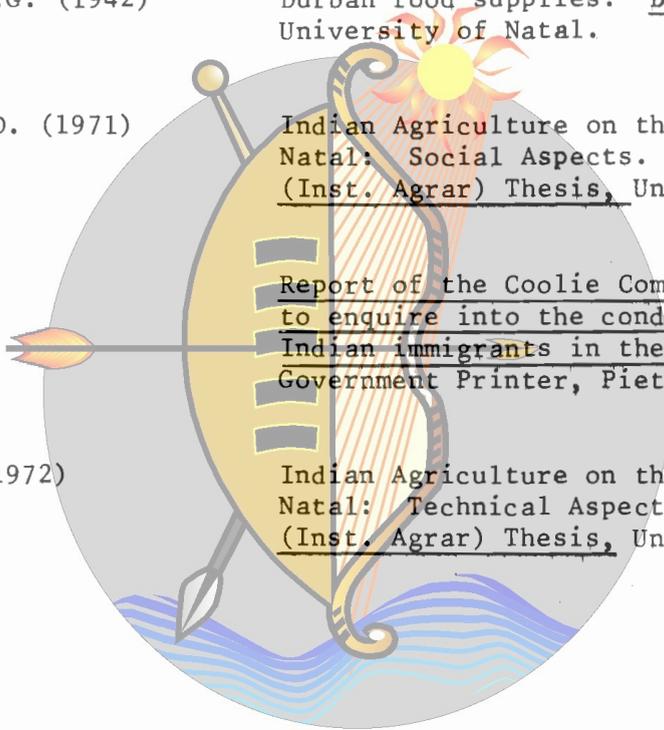
- c. Steps should be taken to ensure that proper use is being made throughout the week of the available market space. A farmers' society may accept responsibility for drawing up a "time table" according to which growers have to sell produce. Alternatively, a co-operative such as the one suggested above, will ensure a regular supply of fresh produce which in turn will draw customers on days that are at present regarded as unfavourable.

It should be stressed in conclusion that a plan limited to the provision and improvement of market facilities alone has little prospect of satisfactory success in improving the situation of market gardening. The provision of a market should be considered not as an isolated problem to be solved within its own context but rather as an element of a more comprehensive plan aimed at the improvement of all facets of market gardening.



SELECTED BIBLIOGRAPHY

1. GREYLING, J.J.C. (1969) Problems of Indian land-ownership and land-occupation on the Natal North coast: A Socio-geographic investigation. Ph.D. Thesis, University of Natal.
2. HALLIDAY, I.G. (1942) Durban food supplies. D.Phil Thesis, University of Natal.
3. LE ROUX, S.D. (1971) Indian Agriculture on the North coast of Natal: Social Aspects. M.Agric. (Inst. Agrar) Thesis, University of Pretoria.
4. (1872) Report of the Coolie Commission appointed to enquire into the condition of the Indian immigrants in the Colony of Natal. Government Printer, Pietermaritzburg.
5. RIX, M.D. (1972) Indian Agriculture on the North coast of Natal: Technical Aspects. M. Agric. (Inst. Agrar) Thesis, University of Pretoria.







14. Reason(s) why Saturday is preferred :

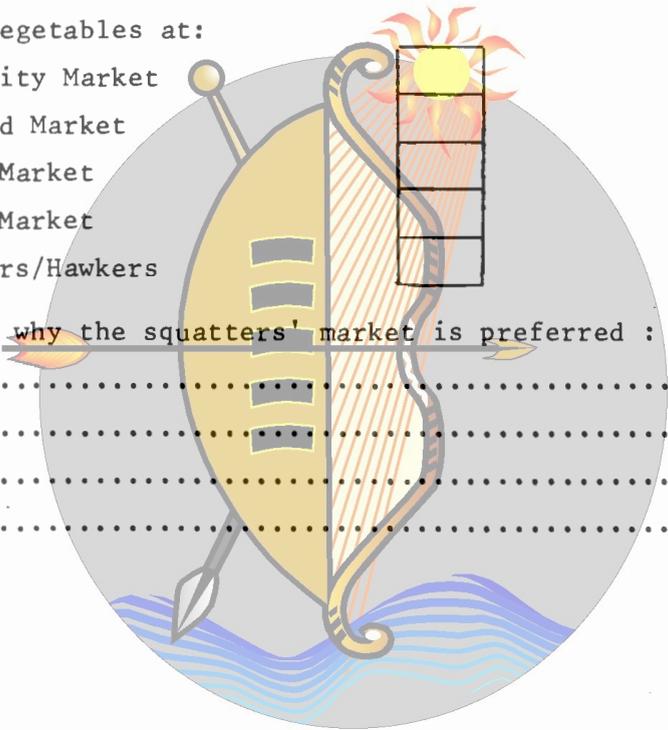
.....  
.....  
.....  
.....

15. Farmers who visit market once or twice per week, state what happens to produce ready for marketing during rest of the week :

.....  
.....  
.....

16. Do you sell vegetables at:

- a) Durban City Market
- b) Clairwood Market
- c) Verulam Market
- d) Tongaat Market
- e) To Traders/Hawkers



17. State reasons why the squatters' market is preferred :

.....  
.....  
.....  
.....