



MINISTRY OF AGRICULTURE,
LANDS AND FORESTRY



INTER-AMERICAN INSTITUTE FOR
COOPERATION ON AGRICULTURE (IICA)



**REPORT
ON
SELECTIVE SURVEY OF SMALL RUMINANTS
(GRENADA & CARRIACOU)**

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MINISTRY OF AGRICULTURE (MOA)
AND
INTER-AMERICAN INSTITUTE FOR COOPERATION
ON AGRICULTURE (IICA)

REPORT
ON
SELECTIVE SURVEY OF SMALL RUMINANTS
(GRENADA & CARRIACOU)

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June 1990

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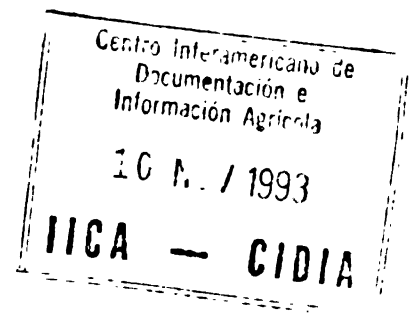
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"The views expressed, in signed articles are those of the authors and do not necessarily reflect those of the Inter-American Institute for Cooperation on Agriculture."



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1. BACKGROUND AND INTRODUCTION

According to the 1982 Agricultural Survey report, approximately 3,000 of Grenada's 8,202 farmers rear livestock. Results of this survey, compared with a previous (1961) survey and a Ministry of Agriculture (MOA) estimate in 1971 (Table 1), indicate that during the period 1971 to 1982 the sheep and goat population decreased by approximately 40 per cent and 65 per cent, respectively.

TABLE 1: Grenada's Livestock Population
(1961, 1971 and 1982)

| LIVESTOCK TYPE | N U M B E R S | | |
|----------------|---------------|--------|-------|
| | 1961 | 1971 | 1982 |
| Cattle | 7,999 | 6,600 | 4,168 |
| Sheep | 6,248 | 9,000 | 5,442 |
| Goats | 5,673 | 7,500 | 2,625 |
| Pigs | 8,301 | 15,000 | 2,747 |

Source: Central Statistics Department, Ministry of Finance, Trade and Planning.

Also worthy of note is that, based on data from the Central Statistics Department, Grenada's mutton imports rose from 6,694 kg in 1980 to 10,005 kg in 1983 (a 49% increase). During that period (1980-1983), live sheep and goat exports showed only a 10 per cent increase: from 4,205 heads in 1980 to 4,618 heads in 1983. In 1986, the number of live sheep and goats exported fell drastically to 1,783 heads. The present picture is probably no less unfavourable with respect to sheep and goat population, mutton imports and live sheep and goat exports.

In 1981, a five year Carriacou Sheep Development Project was initiated. Apart from providing a limited number of breeding stock at subsidised prices to farmers, the project achieved little. It was terminated in 1986 without having achieved its stated objectives in terms of increasing the sheep population as well as mutton availability in Carriacou.

In February, 1989, the MOA held a three day workshop to develop a strategy for implementation of a Crop and Livestock Development Programme. The Small Ruminant Development Project (SRDP) is one of the priority projects within MOA's Livestock Development Programme. Its selection for priority implementation is based mainly on its relatively high potential impact and need for technological inputs.

Action on the SRDP was initiated in May, 1989 when the first Project Management Meeting was held. That meeting was based on the project's Logical Framework (Annex 1), developed by MOA livestock personnel with technical support from IICA.

Since the agricultural survey in 1982, the sheep and goat population on the island has not been assessed. Moreover, no attempt has ever been made to develop a register of bona fide sheep and goat farmers in Grenada. MOA's annual sheep and goat vaccination and deworming programmes could have formed the basis for developing a farmers register. However, information from these programmes is not easily retrievable.

"Registration of sheep and goat farmers" is one of the five component activities of the SRDP. This activity was executed in September, 1989. It took the form of a "Selective Survey" the sole intention of which was the identification and registration of a nucleus of bona fide sheep and goat farmers islandwide. The purpose of this report is therefore to present the survey results, based on the stated intent.

In the report, a brief description of the survey precedes a tabular presentation of a summarised version of the survey results. However, immediately following the table is a discussion of the detailed survey results, on a parish basis, which are presented as an annex to the report. Conclusions and recommendations appear towards the end of the report which carries seven annexes.

2. DESCRIPTION OF THE SURVEY

2.1 General

The survey was conducted islandwide, including Carriacou, by a single individual over a period of four weeks (September 4-29, 1989). The intention was to reach as many sheep and goat farmers as possible, given the limitation of personnel and time. Although the survey person interviewed all sheep and goat farmers encountered, information was documented only on the bona fide farmers.

2.2 Method Used to Conduct the Survey

The survey, conducted on a parish basis, was the responsibility of MOA's Livestock Extension Officer who was provided with a 4-Wheel Drive vehicle to facilitate travel through farm roads. Information was collected through a questionnaire (Annex 2) prepared by the Officer in collaboration with SRDP Leader.

The survey began in the parish of St. George (September 4 & 5), then moved to the parishes of St. David (September 6-8), St.

Andrew (September 11-13), St. Patrick (September 14, 15, and 18), St. Mark (September 19-21), St. John (September 22-26), and finally to Carriacou (September 27-29). In order to locate sheep and goat farmers in each parish, the survey person collaborated with either the Agricultural Extension Supervisor or the Animal Health Assistant responsible for the various parishes/agricultural districts. Subsequently, identified farmers were visited and interviewed. Such farmers, in many instances, were able to direct the survey person to other relevant farmers not previously identified. Some sheep and goat farmers were also located through information received from MOA's Veterinary Officer. In many cases, an interview was followed by an inspection visit of the farmer's flock and facilities. Questionnaires were completed only for farmers who reared a minimum of four sheep/goats; had access to land; and had plans to expand their flock.

Part-time sheep and goat farmers were contacted on late afternoons and evenings after they had returned home from their regular (off-farm) jobs.

3. SURVEY RESULTS

3.1 Summary

The survey results are summarised in Table 1.

TABLE 1: Summarised Results of Selective Survey of Sheep/Goat Farmers in Grenada (September, 1989).

| LOCATION | REGISTERED SHEEP/GOAT FARMERS | | | | | | | TOTAL No. OF SHEEP AND GOATS OF REGISTERED FARMERS | |
|-----------------|-------------------------------|----------|-----|-----------|------------------|-------------------|-------------------|--|-------|
| | No. | AGE(YRS) | | FULL-TIME | WITH OWNED LANDS | WITH RENTED LANDS | WITH FAMILY LANDS | SHEEP | GOATS |
| | | <25 | >50 | | | | | | |
| St. George's | 4 | 0 | 3 | 1 | 4 | 0 | 0 | 59 | 15 |
| St. David's | 4 | 1 | 2 | 1 | 3 | 0 | 1 | 40 | 16 |
| St. Andrew's | 10 | 0 | 3 | 2 | 9 | 0 | 1 | 174 | 70 |
| St. Patrick's | 11 | 2 | 1 | 4 | 4 | 2 | 5 | 152* | 12* |
| St. Mark's | 3 | 0 | 0 | 2 | 2 | 0 | 0 | 63+ | 0+ |
| St. John's | 2 | 0 | 1 | 1 | 0 | 1 | 0 | 0+ | 12+ |
| Carriacou | 22 | 2 | 7 | 10 | 9 | 7 | 6 | 1,770++ | 161++ |
| TOTAL | 56 | 5 | 17 | 21 | 31 | 10 | 13 | 2,258** | 286** |
| % REG'D FARMERS | 100 | 9 | 30 | 38 | 55 | 18 | 23 | | |

* Excludes animals reared by 5 of the farmers registered in the parish

+ Excludes animals reared by 1 of the farmers registered in the parish

++ Excludes animals reared by 2 of the registered farmers

** Excludes animals reared by 8 of the farmers registered islandwide

3.2 Commentary

The survey results are detailed in Annex 3. What follows is a commentary on relevant information collected during the survey, on a parish basis.

3.2.1 St. George's Parish

In St. George's, eight (8) farmers were interviewed. However, only four were registered (Annex 3a); the others reared animals mainly as a hobby and as a means of ensuring ready availability of meat source for family festive occasions. What follows is a brief description of the operations of the four registered farmers.

Wilson Neckles, better known as "Number 9", recently purchased ten goats - eight does and two bucks. The eight does, at the time Mr Neckles was interviewed, were in young. On his 20-acre crop/livestock farm, obtained through a lease-purchase agreement with Grenada Model Farms Corporation, Mr Neckles has already earmarked specific areas for livestock housing and grazing. He has adequate land space, and forage is plentiful but of poor quality. Housing construction has already begun, using locally obtained round wood. Land for pasture establishment is already ploughed and is soon to be fenced and planted with improved grass species. Mr Neckles plans to increase his goat population to two hundred before commencing any sales operations.

In addition to rearing sheep, Edmund Joseph also rears pigs and chicken. He is a prominent livestock farmer who plans to cultivate African Star grass on which his animals will be fed - within two fenced paddocks and can seek shade, whenever necessary, under the extended roof of the chicken house. Pasture grazing is supplemented with feed concentrates, and chicken litter is occasionally fed to the sheep. Seven ewes were in young at the time of the survey.

Keith Banfield rears sheep, pigs and chicken. He has a well designed sheep house, a well organized pasture, sub-divided into paddocks, and an adequate source of forage. At the time of the interview, Mr Banfield owned eight ewes all of which were in young. He plans to increase his stock to one hundred ewes within the next three years.

Terry Clarkson also rears pigs and chicken in addition to sheep. He has adequate land space, a fenced area and adequate housing for the number of sheep reared. He specializes in Black Belly sheep which are sold to the village butchers. Mr Clarkson claims dissatisfaction over the income derived from his sheep farming operation which he therefore views with some degree of

skepticism regarding future expansion plans. However, he plans to increase his stock and improve the existing sheep housing facilities.

3.2.2 St. David's Parish

Only four of the twelve (12) St. David's sheep/goat farmers interviewed were registered. The remaining farmers are landless, rear very few (less than five) animals, and have no intention of intensifying their operations.

Of the four farmers registered, one has his operations well organized, with necessary infrastructure in place. Another has already begun to purchase pedigree sheep to establish a farm of 100 sheep initially. The other two (younger) farmers are interested in goat production but are without the necessary finances to establish adequate goat rearing facilities.

3.2.3 St. Andrew's Parish

Of the ten farmers registered in St. Andrew's (Annex.3c), the following five are considered most commercially oriented:

- 1) Ken Lycorish
- 2) Alleyne Walker
- 3) Ulysis Gibbs
- 4) Wilfred Campbell
- 5) Joseph Granger

Ken Lycorish owns a well diversified farm, and operates with a practical farm plan. In addition to sheep and goats, he also rears cattle, pigs and poultry. He plans to improve and increase existing stock and pasture facilities.

At the time of the interview, Alleyne Walker was in the process of expanding the housing facilities for his sheep and goats. He plans to develop an intensive system of sheep rearing, using bagasse mixed with molasses as feed. He also plans to operate a meat (including mutton) shop at Grenville, Grenada's second largest town.

Ulysis Gibbs is the farmer with the largest number of sheep (70) and goats (30) on the main island (Grenada) of the three-island state of Grenada, Carriacou and Petit Martinique. He plans to expand his flock as well as his animal housing and grazing facilities.

Wilfred Campbell, with 21 sheep and 13 goats, appears eager to increase his stock and establish improved pastures. He already has eight (8) fenced paddocks and is collaborating with CARDI towards the establishment of a "protein energy bank" for his livestock.

Living in the town of Grenville has not prevented Joseph Granger from being a very ardent part-time sheep farmer. To provide for the proposed expansion of his modest flock of 24 sheep, Mr Granger plans to establish a "forage bank" and to construct proper and adequate housing for his flock.

3.2.4 St. Patrick's Parish

In St. Patrick's, seven of the eleven sheep/goat farmers registered (Annex 3d) belong to the St. Patrick's Young Farmers Livestock Association. (A brief history and a copy of the constitution of the Association are attached as Annexes 4 and 5, respectively.) Half of the Association's present membership of twenty are landless and therefore lack the physical capacity to expand their sheep/goat rearing operations.

Most of the Association's members registered plan to establish fenced pastures and construct additional livestock housing facilities necessary to accommodate anticipated flock increases. One registered member rears forty-seven (47) sheep on Isle de Rhonde, an islet off St. Patrick's parish. According to the farmer, there are seven other full time sheep farmers on Isle de Rhonde which carries a livestock population comprising seventy-five (75) goats, four hundred (400) sheep and twenty-two (22) cattle. All animals are reared on a free range system. The Isle de Rhonde farmers, except for one living in St. Patrick's, were not registered.

Three of the four non-Association registered farmers rear 45, 50 and 4 sheep, respectively; the fourth rears eight goats. They all express the desire to expand their flock and improve their housing and pasture facilities.

3.2.5 St. Mark's Parish

Sheep/goat rearing activities in St. Mark's are very limited. This is probably due to the rugged terrain, high rainfall, highly uneven land distribution pattern and lack of pastures.

Only three farmers were registered in St. Mark's (Annex 3e). One was a "landless" squatter who accessed estate lands because of his privileged managerial position on the estate. The others were land owners with a very progressive outlook with respect to sheep/goat farming.

3.2.6 St. John's Parish

Livestock rearing in St. John's seems an unpopular activity. The sheep/goat population is very small. Only two farmers qualified for registration (Annex 3f); one of the two registered was a "landless" squatter using abandoned estate lands for tethering his twelve (12) goats. Both farmers plan to increase the

number of animals reared.

3.2.7 Carriacou

Twenty-six (26) sheep/goat farmers were interviewed in Carriacou. However, four of these farmers claimed to have lost interest in sheep/goat rearing mainly because of labour shortage caused by the migration of their children to North America. At the time of the interview, one of the four farmers still owned a flock of 30 sheep and ten goats but said he was in the process of phasing out his sheep/goats production enterprise. He is aged and slightly physically handicapped.

Most of the twenty-two registered farmers expressed their intention to

- 1) establish or extend fenced areas for grazing,
- 2) construct/upgrade sheep/goat housing facilities,
- 3) increase flock size,
- 4) improve stock quality through controlled breeding, and
- 5) cultivate high quality forage.

However, it is interesting to note the following:

- One farmer (with 20 sheep), located in Limlair, considered animal housing a low priority.
- Two farmers, one with 81 sheep and the other with 50 sheep and 18 goats, expressedly gave their commitment towards ensuring the effectiveness of the newly formed Carriacou Livestock Association.
- Two farmers requested technical assistance for forage conservation to ensure its availability during the usually very severe dry season.
- Dog predation and inadequate feed and water supply during the dry season (January to May) were considered major pressing problems.

Farmers interviewed were convinced that livestock (particularly sheep and goat) rearing is the major and most profitable agricultural activity in Carriacou. Many of them allow their animals to graze in open uncultivated areas, mainly government-owned lands. Dog predation was cited as a major problem resulting in significant livestock losses. Marketing is also causing much concern mainly because of the devaluation of the dollar in Trinidad which is the major purchaser of live sheep and goats from Carriacou. Great concern was also expressed over the low (controlled) price of sheep and goat meats locally. Two other major problems specified were "land tenureship" and the lack of accessible credit for establishing necessary infrastructure for

sheep/goat production.

In an attempt to address some of the problems confronting sheep/goat farmers in Carriacou, a few of the more influential farmers summoned a meeting of all interested farmers. The survey person was also invited to that meeting at which the Carriacou Livestock Association was formed. Seventeen livestock farmers were present. An ad hoc committee was elected to promote the Association's cause. This comprised a President (David Dick), a Vice President (Victor Quashie), a Secretary/Treasurer (Godfrey Simon) and an Assistant Secretary/Treasurer (Lawrence Joseph). They were particularly charged with the responsibility of charting the Association's course and mobilizing other livestock farmers into joining the Association.

Attached (Annex 6) to this report is a copy of the document indicating the major production/marketing constraints which the Association feels should be addressed urgently. The document was prepared by the Association's members who are listed in Annex 7.

4. CONCLUSIONS AND RECOMMENDATIONS

- 4.1 This survey has no statistical basis. Consequently, the results must not be used to draw inferences regarding either the sheep/goat farmers or the sheep/goat population of Grenada. However, the survey has served its intended purpose and has provided useful baseline information to guide the implementation of other activities of the Small Ruminant Development Project (SRDP) of the Ministry of Agriculture (MOA). Nevertheless, for planning purposes, it may be useful if the sheep/goat population could be determined through a livestock census which will benefit the entire livestock sector.
- 4.2 The survey has targeted most of the major sheep/goat farmers throughout Grenada's six parishes and dependency (Carriacou). The MOA, through the SRDP, should build on the results of the survey by ensuring that bona fide sheep/goat farmers not included in the survey are identified and registered during the 3-year life of the project.
- 4.3 Of the fifty-six (56) sheep/goat farmers registered through the survey, twenty-two (22) - that is, almost 40 per cent - belong to Carriacou. Two of the six parishes (St. Andrew's and St. Patrick's) together account for twenty-one (that is, about 38 per cent) of the total registered farmers. Based on such information, the MOA may consider it wise to concentrate the SRDP activities in Carriacou, St. Patrick's and St. Andrew's.
- 4.4 Seventeen (approximately 30 per cent) of farmers registered

by the survey are more than fifty years old; twenty-two (approximately 39 per cent) are between the ages of 31 and 40. It is therefore obvious that younger farmers are not attracted to sheep/goat production in sufficient numbers. Probably there is need to provide better incentives to those farmers, especially in terms of marketing (better prices), credit facilities and livestock extension service.

- 4.5 Twenty-five (approximately 45 per cent) of registered farmers rear sheep only while three (a mere 5 per cent) rear goats only. Nineteen registered farmers (that is, 34 per cent) rear both sheep and goats. Reasons for the wide disparity in population of "sheep only" and "goat only" farmers need to be investigated. The relatively high proportion of farmers rearing both sheep and goats is also interesting.
- 4.6 The majority (approximately 64 per cent) of the forty-four sheep rearing farmers registered rear between 10 and 50 sheep each. On the other hand, 59 per cent of the twenty-two goat rearing farmers each rear less than ten goats. Factors adversely affecting large scale rearing of goats in Grenada should be investigated and, if necessary, appropriate measures should be taken to facilitate increased number of goats reared by individual farmers.
- 4.7 According to the survey results, land tenureship appears to be a problem among sheep/goat farmers in St. Patrick's and Carriacou, the two most prominent sheep/goat rearing regions. Only 36 per cent and 40 per cent of the sheep/goat farmers in St. Patrick's and Carriacou, respectively, own their lands. This matter needs to be addressed if farmers in those regions are to invest in infrastructural facilities required for higher levels of sheep/goat production and productivity. More farmers may also find it economically prudent to devote full time to their farming. At the time of the survey, only 45 per cent of registered farmers in St. Patrick's and Carriacou were characterised as "full-time".
- 4.8 Sheep/goat farmers islandwide have volunteered much information through this survey. They are obviously expecting something in return. MOA's Livestock Officer should therefore be urged to pay follow-up visits to those farmers, providing them with technical support and updating them on progress made relative to implementation of the Ministry's Small Ruminant Development Project (SRDP). Provision of stud service and assistance to establish improved pastures and appropriate animal housing are probably two of the most crucial areas in which MOA, through the SRDP, could provide some relief to sheep/goat farmers islandwide.

ANNEX 1: LOGICAL FRAMEWORK - Small Ruminant Development Project

PROJECT LIFE: 3 years
 TOTAL FUNDING:
 DATE PREPARED: May 9, 1989

| NARRATIVE SUMMARY | OBJECTIVELY VERIFIABLE INDICATORS | MEANS OF VERIFICATION | ASSUMPTION |
|---|--|---|--|
| General Objective | | | |
| <ul style="list-style-type: none"> - To support small ruminant production for satisfying local demand of mutton and chevon (goat meat). | <ul style="list-style-type: none"> - Increased supply of high quality mutton and chevon. | <ul style="list-style-type: none"> - Sales record | <ul style="list-style-type: none"> - National demand for sheep and goat meat is maintained. - Firm Government policy in support of local sheep and goat. |
| Specific Objectives | | | |
| <ul style="list-style-type: none"> - To improve pastures - To validate and transfer improved feeding systems. - To promote and establish forage as a crop for small ruminant production. | <ul style="list-style-type: none"> - Better pastures established, and improved feeding systems utilized by sheep and goat producers. | <ul style="list-style-type: none"> - Field visits - Extension reports - Project coordinator's reports. | <ul style="list-style-type: none"> - Land is available - Financial resources from external agencies are available to import breeds. |
| <ul style="list-style-type: none"> - To introduce improved breeds for the upgrading of local stock. | <ul style="list-style-type: none"> - Improved breeds distributed and available to sheep and goat producers in Grenada and Carriacou. | <ul style="list-style-type: none"> - Farm records | <ul style="list-style-type: none"> - Farmers are interested in sheep and goat production. |
| <ul style="list-style-type: none"> - To increase the capability of extension agents and farmers in small ruminant production and herd maintenance. | <ul style="list-style-type: none"> - Training programmes developed and implemented. | <ul style="list-style-type: none"> - Reports and proceedings of training events. | <ul style="list-style-type: none"> - Entrepreneurs are interested. |
| <ul style="list-style-type: none"> - To assist in improving the processing and marketing of local sheep and goat by-products. | <ul style="list-style-type: none"> - A technical assistance programme developed and implemented. | <ul style="list-style-type: none"> - Programme documents and reports. | |
| <ul style="list-style-type: none"> - To encourage the utilization of small ruminant by-products. | <ul style="list-style-type: none"> - Educational, advisory and training programme formulated and carried out. | | |
| Outputs | | | |
| <ul style="list-style-type: none"> - Communal pastures established in Carriacou. | <ul style="list-style-type: none"> - At least 3 pastures in Carriacou. - 2 feeding systems validated on at least 5 sheep and 5 goat farms. | <ul style="list-style-type: none"> - Field visits - Farm visits | <ul style="list-style-type: none"> - Sufficient land is allocated to project by Government. |
| <ul style="list-style-type: none"> - Improved feeding system developed and transferred to farmers. | | | |
| <ul style="list-style-type: none"> - Forage plots established and maintained. | | | <ul style="list-style-type: none"> - Extension personnel specifically assigned to training programmes. |
| <ul style="list-style-type: none"> - Progeny of the local stock upgraded. | | | |

| NARRATIVE SUMMARY | OBJECTIVELY VERIFIABLE INDICATORS | MEANS OF VERIFICATION | ASSUMPTION |
|--|---|--------------------------------------|--|
| - Technical and managerial capabilities of extension agents and livestock producers increased. | | | |
| - Sheep and goat farmers registered. | - At least 80% of sheep and goat farmers registered. | | |
| - Increased grades and cuts available and marketed. | - 20 acres of improved forage established - 10 each in Grenada and Carriacou. | - Field visits | - Slaughter facilities are upgraded. Butchers and meat handlers are willing to cooperate with the project. |
| - A developed integrated by-product utilization system established. | - Improved breeds imported as follows: 1. Sheep: 2 breeds (5 rams and 10 ewes). 2. Goat: 2 breeds (10 bucks and 10 does). | | - Credit incentives are available. |
| | - 10 farmers and 5 extension agents trained, through 5 field demonstrations, 10 seminar/workshops, and 3 short courses. | - Training, proceedings and reports. | |
| | - 80% of demand met by increased purchase of mutton and chevon produced, cut and packed locally. | - Sales records | |
| | - 2 small enterprises established dealing with production/marketing of sheep and goat by-products. | - Visits and sales records. | |
| Inputs | | | |
| - Registration of sheep and goat farmers. | - A programme for registration of sheep and goat farmers developed and implemented. | - Records | |
| - Identification and procurement of lands for communal pastures. | - Survey and selection of suitable lands carried out by the Ministry of Agriculture. | - Maps and reports | |
| - Development of feeding system tech-pack. | - Data recompilation, organisation and publication by the Ministry of Agriculture assisted by CARDI. | - Documents | |
| - Production and distribution of desirable planting material of improved forage. | - Cooperation and agreements between the Ministry of Agriculture and CARDI to establish forage plots. | - Reports | |
| - Procurement of improved breeds and establishment of stud service. | - Derive programmes to obtain financial support from external agencies. | - Documents and reports | |

| NARRATIVE SUMMARY | OBJECTIVELY VERIFIABLE INDICATORS | MEANS OF VERIFICATION | ASSUMPTION |
|--|--|---|------------|
| <ul style="list-style-type: none"> - Training of selected farmers in sheep and goat production/management techniques. | <ul style="list-style-type: none"> - Selection process and training materials developed between Ministry of Agriculture and other agencies. | <ul style="list-style-type: none"> - Documents and reports | |
| <ul style="list-style-type: none"> - Training of butchers and meat handlers in grading, cutting and packing. | | | |
| <ul style="list-style-type: none"> - Training of small business personnel in the utilization of small ruminant by-products. | | | |

IMPLEMENTATION PROGRAMME

| ACTIVITY | YEAR 1 | YEAR 2 | YEAR 3 |
|---|--------|--------|--------|
| 1. Registration of sheep and goat farmers. | _____ | | |
| 2. Development of tech-packs. | _____ | _____ | _____ |
| 3. Assistance to establish improved forage plots on public and private farms. | _____ | _____ | _____ |
| 4. Introduction of breeds and establishment of stud service. | | _____ | _____ |
| 5. Training of extension agents, farmers and processors. | _____ | _____ | _____ |

ANNEX 2: SURVEY QUESTIONNAIRE

LIVESTOCK SURVEY

PARISH:.....

NAME OF FARMER:.....

ADDRESS:.....

AGE:.....

TYPE OF STOCK

| | SHEEP | GOAT | CATTLE | OTHERS |
|--------|-------|------|--------|--------|
| MALE | | | | |
| FEMALE | | | | |
| TOTAL | | | | |

FULL TIME

PART TIME

INTEGRATED

LAND AVAILABILITY OWNED RENTED OTHERS

FUTURE PROJECTIONS:.....

ANNEX 3: SURVEY RESULTS

ANNEX 3a: Information on Selected Sheep/Goat Farmers in St. George's

| FARMER'S NAME | ADDRESS | AGE (yrs) | FARMER STATUS | LAND TENURE | NO. OF SHEEP/GOATS |
|----------------------|----------------|------------------|----------------------|--------------------|---------------------------|
| 1) Wilson Neckles | Perseverance | 36 | Full-time | own: 20ac | 17 sheep 10 goats |
| 2) Edmund Joseph | Calivigny | 53 | Part-time | own: 3ac | 18 sheep 5 goats |
| 3) Keith Banfield | Calivigny | >50 | Part-time | own: 3ac | 8 sheep |
| 4) Terry Clarkson | Morne Jaloux | >50 | Part-time | own: 5ac | 16 sheep |

ANNEX 3b: Information on Selected Sheep/Goat Farmers in St. David's

| FARMER'S NAME | ADDRESS | AGE (yrs) | FARMER STATUS | LAND TENURE | NO. OF SHEEP/GOATS |
|----------------------|----------------|------------------|----------------------|----------------------|---------------------------|
| 1) Peter Redhead | Westerhall | 76 | Full-time | own: 3ac | 18 sheep 5 goats |
| 2) Rupert Duncan | Westerhall | 66 | Part-time | own: 1.5ac | 10 sheep |
| 3) John McDonald | Syracuse | 21 | Part-time | Family owned N.S. | 5 goats |
| 4) E. Jones | Corinth | <50 | Part-time | own: 1ac | 12 sheep 6 goats |

N.S. means "Not Stated".

ANNEX 3c: Information on Selected Sheep/Goat Farmers in St. Andrew's

| FARMER'S NAME | ADDRESS | AGE (yrs) | FARMER STATUS | LAND TENURE | NO. OF SHEEP/GOATS |
|--------------------------|-----------------|------------------|----------------------|----------------------|---------------------------|
| 1) Ken Lycorish | La Fillette | 36 | Full-time | own: 16ac | 16 sheep 9 goats |
| 2) Erna & Wilton Rougier | Crochu | >50 | Part-time | own: 3ac | 7 sheep |
| 3) Francis Ruffin | Hope | 31 | Part-time | own: 1ac | 4 sheep 5 goats |
| 4) Alleyne Walker | La Fillette | 36 | Part-time | own: 12ac | 12 sheep 12 goats |
| 5) Wilfred Campbell | Conference | 47 | Part-time | own: 1ac | 21 sheep 13 goats |
| 6) Ulysis Gibbs | Marquis | <50 | Full-time | own: 3ac | 70 sheep 30 goats |
| 7) Joseph Granger | Chapel Road | <50 | Part-time | own: 5ac | 24 sheep |
| 8) Neville Rennie | Harford Village | 57 | Part-time | own: N.S. | 6 sheep 1 goat |
| 9) O'Brien Nyack | Telescope | 39 | Part-time | Family owned N.S. | 7 sheep |
| 10) Evelyn Dublin | Conference | >50 | Part-time | own: 1ac | 7 sheep |

N.S. means "Not Stated".

ANNEX 3d: Information on Sheep/Goat Farmers in St. Patrick's

| FARMER'S NAME | ADDRESS | AGE (yrs) | FARMER STATUS | LAND TENURE | NO. OF SHEEP/GOATS |
|---------------------------|---------------------------------|-----------|---------------|--------------------------------------|--------------------|
| 1) Stephen Paul* | Chantimelle | 36 | Part-time | own: 7ac | 6 sheep 4 goats |
| 2) David Merryman | Levera | 30 | Full-time | Family owned: 1ac; Rented: 7ac | 45 sheep |
| 3) George O'Neale* | Marli | <50 | Part-time | Family owned: N.S. | N.S. |
| 4) Martin Barriteau* | Sauteurs | <50 | Full-time | own: 30ac | 47 sheep |
| 5) Odrick Mitchell* | Levera | <50 | Full-time | own: N.S. | N.S. |
| 6) Emmanuel Joseph* | Rose Hill | <50 | Part-time | Family owned: N.S. | N.S. |
| 7) Harold Merryman* | Levera | 16 | Part-time | Family owned: N.S. | N.S. |
| 8) M. English* | Sauteurs | 34 | Part-time | Family owned: N.S. | N.S. |
| 9) Madeys Farm Enterprise | Madeys c/o E & F Supplies | >50 | Full-time | own: 47ac | 50 sheep |
| 10) Phillip Lewis | Chantimelle | <50 | Part-time | own: 1ac rented: 4ac | 4 sheep |
| 11) Leon Salia | Poyntzfield | 16 | Part-time | Family owned: N.S. | 8 goats |

*Members of St. Patrick's Livestock Association
N.S. means "Not Stated".

ANNEX 3e: Information on Sheep/Goat Farmers in St. Mark's

| FARMER'S NAME | ADDRESS | AGE (yrs) | FARMER STATUS | LAND TENURE | NO. OF SHEEP/GOATS |
|---------------------|--------------------|-----------|---------------|---------------------|--------------------|
| 1) Stephen Williams | Victoria | 36 | Full-time | own/rent: N.S. | 18 sheep |
| 2) Byron Roberts | Victoria | 46 | Full-time | own: 6ac | 45 sheep |
| 3) George Alexander | Tufton Hall Estate | 42 | Part-time | Landless (squatter) | N.S. |

N.S. means "Not Stated".

ANNEX 3f: Information on Sheep/Goat Farmers in St. John's

| FARMER'S NAME | ADDRESS | AGE (yrs) | FARMER STATUS | LAND TENURE | NO. OF SHEEP/GOATS |
|----------------------|-----------------|------------------|----------------------|---------------------|---------------------------|
| 1) Reynold Henry | Woodford | 32 | Part-time | Lease: 5ac | N.S. |
| 2) Mitchell | Pleasant Estate | 54 | Full-time | Landless (squatter) | 12 goats |

N.S. means "Not Stated".

ANNEX 3g: Information on Sheep/Goat Farmers in Carriacou

| FARMER'S NAME | ADDRESS | AGE (yrs) | FARMER STATUS | LAND TENURE | NO. OF SHEEP/GOATS |
|-----------------------|--------------|-----------|---------------|-----------------------|-----------------------|
| 1) Victor Quashie | Grand Bay | 58 | Full-time | Rent: 10ac | 35 sheep |
| 2) Godstand Lawrence | Mt. Royal | 16 | Part-time | Family owned: N.S. | 200 sheep |
| 3) Godfrey Simon | Grand Bay | 50 | Part-time | own: 6ac | 35 sheep 65 goats |
| 4) David Dick | Mt. Royal | 56 | Full-time | Rent: 10ac | 50 sheep 18 goats |
| 5) Oscar Phillip | Six Roads | 37 | Part-time | own: 1.75ac | 24 sheep 7 goats |
| 6) Brattette Wilson | Top Hill | <50 | Part-time | Rent: 4ac | 50 sheep |
| 7) Uthan Samuel | Grand Bay | 57 | Part-time | Rent: 12ac | 40 sheep |
| 8) Lawrence Joseph | Limlair | 19 | Full-time | Family owned: 4ac | 50 sheep |
| 9) Monica Joseph | Dover | <50 | Part-time | Family owned: 3ac | 25 sheep 9 goats |
| 10) Ivan Bartholomew | Limlair | 43 | Part-time | own: 7ac | 20 sheep |
| 11) Rasta Engyne | Dumphries | <50 | Full-time | Lease: 20ac | 400 sheep |
| 12) Dudley Cayenne | Grand Bay | <50 | Part-time | Family owned: N.S. | 250 sheep 30 goats |
| 13) Emmanuel Williams | Hillsborough | <50 | Part-time | Rent: 6ac | 78 sheep |
| 14) Roland Joseph | La Resource | <50 | Part-time | Family owned: N.S. | 52 sheep 16 goats |
| 15) Christopher Jones | Mt. Royal | 36 | Full-time | Lease: 20ac | 340 sheep |
| 16) Joseph Isaac | Mt. Pleasant | <50 | Part-time | Family owned: N.S. | 40 sheep |
| 17) Edward Kent | Creighton | >50 | Full-time | own: N.S. | 81 sheep |
| 18) Bob Adams | Brunswick | 54 | Full-time | own: 10ac | N.S. |
| 19) Rufus Shade | Brunswick | >50 | Full-time | own: N.S. | N.S. |
| 20) Kenton Joseph | Dover | <50 | Part-time | own: 6ac | 16 sheep 8 goats |
| 21) John Gabriel | Harvey-Vale | >50 | Full-time | own: 20ac | 28 sheep |
| 22) Pamela Patrice | Dover | 38 | Full-time | own: 3ac | 12 sheep 8 goats |

N.S. means "Not Stated".

ANNEX 4: History of the St. Patrick's Young Farmers Livestock Association

The St. Patrick's Young Farmers Livestock Association was started in August of 1986. The idea of sheep for youths came from the Parliamentary Representative in the area, Honourable Tillman Thomas.

The group was founded by Mr James Roberts, an Extension Officer of the Northern Agricultural District, and the Veterinary Assistant in the District, Augustine David.

The group started with five (5) members and was promised a few Black Belly sheep from government's Livestock Improvement Centre at Mt. Hartman. However, for reasons considered political, that promise never materialised. Consequently, three of the members became disillusioned and left the group. The remaining two members were however successful in recruiting new members.

In December, 1986, a project proposal was formulated and submitted to the Agency for Rural Transformation (ART) for funding. The project was subsequently funded in April, 1987, by ART and the United Church of Canada. Through the project, the Association purchased 12 Black Belly Sheep from the Mt. Hartman Livestock Improvement Centre.

The group was constituted and Registered as a non-profit Farmers Association and has since purchased 12 Ewes from Carriacou and 23 from Barbados. The Group's membership and stock of sheep stood at 20 and 75, respectively, during the time of the Survey - i.e. September, 1989. The project was of a "revolving" nature. Initially, many implementation problems were experienced. The project currently operates very smoothly.

The Association made application to Grenada Model Farms Corporation for the lease, rent or purchase of 10 acres of lands at Levera in 1987 and was called in for an interview by the then Chairman of the Corporation. Since then, a decision on the Association's application has not been communicated.

ANNEX 5: Constitution of the St. Patrick's Young Farmers Association

Article No.1

Name : The name of the group shall be "ST. PATRICK'S YOUNG FARMERS LIVESTOCK ASSOCIATION (Y.F.L.A.)".

Address: Sauteurs, St. Patrick's

Article No.2

Area of Operation: The area of operation shall be St. Patrick's and any other area that the members may deem fit from time to time.

Article No.3

General Objective: To obtain and maintain top quality stock to foster the social, educational and economic well being of the members.

Specific Objectives:

1. To support all measures designed to improve and maintain top quality pure bred livestock belonging to the group.
2. To represent the interest of the group at all times and places.
3. To acquire and hold by purchase, lease or donation any property movable or immovable.
4. To carry out such other functions from time to time in the interest of the group.

Article No.4

Liability: The Group as an entity is solely responsible for its liabilities and assets. However, each shall be liable to his/her share capital.

Membership: Members of the group are limited to young rural farmers in the parish. Any additional member must meet the approval of two-thirds of the voting members at a meeting.

Article No.5

Officers:

President
The role of the president is to chair meetings.

Secretary
The role of the secretary is to keep minutes of meetings.

Treasurer
The role of the treasurer is to keep record of the financial accounts and present a financial statement at each meeting or when requested by the members.

Article No.6

Finance:

1. All members must pay five dollars (\$5.00) to attain membership and one dollar (\$1.00) monthly.
2. Control of Funds - the control of funds is the responsibility of the treasurer.
3. Spending of Funds - All expenditure exceeding twenty-five dollars (\$25.00) must receive prior approval of the members.
4. Safe Keeping - All money received by the group must be deposited in the designated financial institution the first day of business of the institution following the collection of the funds.
5. Withdrawal - Any funds to be withdrawn shall require two signatures of which one must be the treasurer's.

Article No.7

Meetings: Meetings should be held at least once a month. Two thirds of the membership will form a quorum and each member has a vote.

Article No.8

Disciplinary Measures:

Any member who fails to comply with the provisions of the rules and regulations will be disciplined as seen fit by the members.

Article No.9

Any member may withdraw from the Association provided that all obligations are cleared and one month's notice is given in writing.

Article No.10

Amendment: The constitution may be amended by two-thirds majority voting at a general meeting.

Approved on the _____ of _____ 1988.

Signed: President

Secretary.....

RULES AND REGULATION

1. Any member who is absent from three (3) consecutive meetings without a valid excuse must pay a fine of twenty dollars (\$20.00).
2. Failure to pay such a fine within fourteen (14) days, member would be expelled from the Association. And all animals belonging to the Association, taken back by the Association.
3. All members would receive five (5) female animals instead of two (2) from the Association as was originally stated in the Constitution.
4. All female animals (lamb) must be given to the Association within a time frame that is deemed fit by the Association.
5. Members must report all sickness or injury to the Association expeditiously.
6. In case of death, members are forbidden to dispose of the carcass of the animal before it is inspected by the Veterinary Officer.
7. If death of animals is due to negligence on the part of members, the Association must be compensated by the defaulting member in cash or kind.

ANNEX 6: Matters of Concern to the Carriacou Livestock Association

Control of Dog Population on Carriacou

Whereas there exists a severe problem of livestock killing by dogs, and whereas there exists a severe over population of dogs that roam freely, we the members of the livestock association would like the following policies implemented:

- 1) All dogs on Carriacou must be licensed and made to wear a license tag. There will be no fee for spayed or neutered dogs but there will be a five dollars (\$5.00) per year fee for dogs not sterilized.
- 2) Anyone may bring his/her dog for spaying and neutering during a one week period in January, 1990, for no fee, by two (2) volunteer veterinarians from the U.S.A.
- 3) After February 1, 1990 any dog not wearing a tag is to be caught by law enforcement officials with assistance of citizens and immediately euthanized by the veterinary department.
- 4) After February 1, 1990 any dog not wearing a tag that is not confined to the owners property or on a leash is subject to being caught by a private citizen or a law enforcement officer and held for forty-eight hours (48 hrs.). If the owner claims the dog he must pay a ten dollars (\$10.00) fine, half ($\frac{1}{2}$) goes to the law enforcement officer to defray administrative costs and buy euthanasia solution.
- 5) Any dog sprayed or neutered after February 1, 1990, must be done at the veterinary department at the owner's expense.

Marketing

Whereas the current price ceiling of four dollars (\$4.00) per pound on meat discourages local production by putting a price-cost squeeze on producers; whereas this discouragement retards improvement in livestock management and health practices; whereas this price control forces local livestock producers to export their livestock and forces local market to import meat products causing a major balance of payment problem for our country along with a loss of jobs and opportunity for our youths; we the livestock association members appeal to the Government of Grenada for the following policies to be implemented.

- 1) Removal of price controls on meat and meat products or at the very least-raising the ceiling to seven dollars (\$7.00) per pound.
(Note: Price Control on meats and meat products was removed in early 1991)
- 2) We appeal to the government to do everything in its power to encourage the establishment of a meat processing plant in Grenada or on Carriacou with the capability of slaughtering one hundred (100) sheep and goats and fifteen (15) cattle per week and producing a frozen, packaged product for the local market. We would implore the government to even go to the expense of building the facility and giving very favourable lease terms to a qualified investor-operator.

Control of Free Roaming Livestock on Carriacou

The practice of allowing livestock to roam freely is causing serious social and economic problems, namely:

- 1) Livestock producers who own or lease land are penalized because their neighbours' livestock consume forage that is rightfully theirs.
- 2) This has lead to the inhumane and economically disastrous practice of injuring by cutting with a cutlass or killing by hanging of livestock by frustrated landowners.
- 3) This, in turn, leads to disputes among neighbours that sometimes last years and undermine the social fabric of this small island community.
- 4) Other agricultural enterprises such as crops and forestry are stymied because they cannot be economically protected from free roaming livestock.
- 5) Parasite control programs are extremely expensive and inadequate because of this problem.
- 6) Controlled breeding to upgrade livestock is very difficult because of this problem.
- 7) Soil erosion is worsened by this problem.
- 8) Overgrazing caused by this problem decreases the number of desirable plant species and increase the number of undesirable plant species on the island.
- 9) Disease control among livestock is made difficult by this problem.

Therefore, we the members of the livestock association would like to see the following policies implemented:

- 1) One hundred per cent (100%) duty free concession on importation of fencing material to all livestock producers of Carriacou to encourage fencing.
- 2) The establishment of at least five (5) communal pastures on Carriacou. Livestock producers would be allowed to bid on the communal pastures with the agricultural ministry setting the stocking rates, rotation schedules, worming practices, etc. that must be adhered to. To keep down the up front costs to the government, public lands, suitable for pasture but not cleared could be leased to an individual farmer or a cooperative of farmers who would clear and fence and seed the area to specifications set by the agricultural ministry in exchange for an agreed number of years of lease free roam grazing, again at stocking rates set by the agricultural ministry.
- 3) Permits to tie animals on roadsides and other government lands that are not fenced should be applied for and an appropriate fee paid.
- 4) All livestock owners may be required to show proof of adequate arrangement for grazing the livestock that they own. Proof of ownership of land or lease arrangements may also be made a requirement.
- 5) We respectfully ask that the laws currently in force regarding stray livestock be strictly enforced.
- 6) The problem of land in absentee ownership that has been allowed to grow up in unproductive bush should have a property tax of double the normal rate until that land is improved to conform to land use standards. This would bring more pasture into production and help stop soil erosion on the abandoned property which also hurts the neighbours property.
- 7) We would like a credit account set up that farmers could borrow money at a low interest rate for fencing and livestock watering improvements.

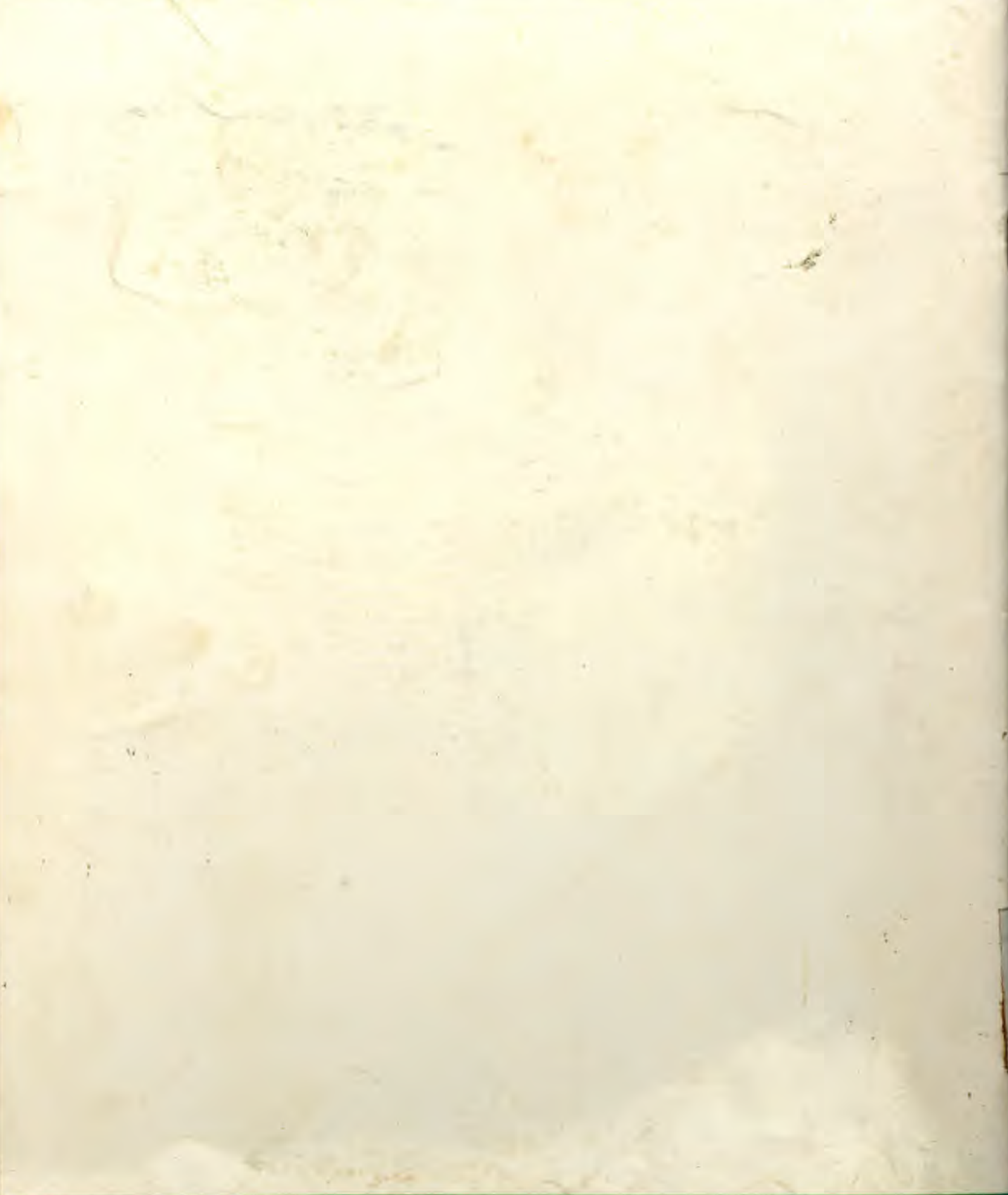
ANNEX 7: Carriacou Livestock Association

Foundation Members of the Association

| <u>Names</u> | <u>Address</u> | <u>Telephone No.</u> |
|--------------------|----------------------|----------------------|
| David Dick | Mt. Royal | 443-7254 |
| Lawrence Joseph | Limlair | - |
| Pamela Patrice | Dover | - |
| Gabriella De Roche | Windward | 443-7125 |
| Ivan Bartholomew | Limlair | 443-7124 |
| John C Gabriell | Harvey Vale | 443-7252 |
| Victor W Quashie | Grand Bay | - |
| John H McLeod | Tocken Town Bayaleau | - |
| Carl Alexander | Limlair | - |
| Kenton Joseph | Dover | 443-7320 |
| Rasta Engyne | Dumfries | - |
| Rufas Shade | Brunswick | - |
| Bobb Adams | Brunswick | - |
| Edward Kent | Creighton | - |
| Roland Joseph | La Resource | - |
| Utan Samuel | Grand Bay | - |
| Joseph Isaac | Mt. Pleasant | - |
| Dudley Cayenne | Grand Bay | - |

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