GOAT REVOLVING SCHEME PROJECT MODEL

RURAL WOMEN PROJECT

Ministry of Agriculture
&
IICA/Jamaica
Miscellaneous Publication #357
Series ISSN-0534-5391

GOAT REVOLVING SCHEME
PROJECT MODEL

****

RURAL WOMEN PROJECT

by

Norma Munguia *
Byron Lawrence **

June 1982
****

* Rural Women Project, IICA Specialist
** Livestock Development Division,
Ministry of Agriculture

INTRODUCTION

Among the main objectives listed by the Government of Jamaica for the development and improvement of its rural sector are increasing food production for local consumption, export and import substitution; increasing employment opportunities, and rural incomes; and developing agro-based industries.

A Goat Revolving Project has been formulated using the bases listed above. In addition, special consideration is given to redressing the high level of unemployment of women in the households of small hillside farmers.

The model used in formulating this project has been tested by IICA/Jamaica in association with the Ministry of Agriculture, in two areas namely Allsides where 50 participants have received goats and Olive River where the number of recipients is 15.

The Ministry of Agriculture has indicated its approval of this kind of project by its formulation of a dairy goat project developed along similar lines for rural women, at Mount Airy in the parish of Clarendon.

The GOJ/IICA project also serves as an integrative mechanism which facilitates the creation of small primary groups which have the potential for developing technological change in the rural sector specifically in the area of increasing goat production and initiating cheese industry based on goat's milk.

This presentation is the joint effort of the Ministry of Agriculture and Rural Women's Programme of the IICA/Jamaica Office papers.

Percy Aitken-Soux
Director

BACKGROUND

The Rural Farm Family Development Programme, the Livestock Development Division of the Ministry of Agriculture (MINAG) and the Rural Women's Programme of the Inter-American Institute for Co-operation on Agriculture (IICA) are implementing the Animal Rearing for Employment, Nutrition and Income in the Rural Household (ARENIRH)[1/] project in the Allsides area, where IICA has been assisting the Government of Jamaica in the implementation of the Allsides Hillside Agricultural Project.[2/]

The ARENIRH project aims at assisting the rural farm family in improving its knowledge and practices with respect to animal rearing. The objectives of the project revolve around increasing animal production in the area, improving the small farmers' income, improving the dietary habits of the families involved and improving the management practices relating to small livestock. The project includes the establishment of two revolving schemes, one with pigs and another with goats and the training of participants through one-day sessions, household visits, and later on through the Rural Women's Groups to be formed.

It is because of the experiences in the implementation of this project and of the interest and possibilities of duplicating some of those experiences why this project model has been developed. This paper presents a project idea which can be developed and implemented by the Rural Farm Family Development Officer with the collaboration of the Livestock Development Officer.

This dairy goat project is aimed at improving the livestock production and productivity of the small farmer, by promoting the production, consumption and use of goat's milk and its by-products. It is also expected to promote the active participation of women and children in the activities carried out.

1/ Lawrence, Byron and Munguia, Norma - Animal Rearing for Employment Nutrition and Income in the Rural Household (ARENIRH)

2/ Allsides Pilot Development Project Document - Simon Bolivar #8, Agreement #3/77 December 1976

INTRODUCTION

The rearing of small animals is a common and traditional activity for the production of food for the family and for the generation of additional income from the sale of the animal or its products. In many instances livestock reared in this manner serve as cash reserve or savings which can cover emergency or sporadic expenses that the family may face. Women and children participate and usually are largely responsible for the care of these animals.

Rearing of goats is popular and perhaps preferred over other small livestock, because of the value of goat's meat and the low production costs involved. Goats are able to consume a wide range of plants, weeds, shrubs, bushes or pasture and are able to withstand more difficult conditions than other types of livestock.

Depending on the size of the herd and the availability of land, the system of grazing may be any of the following:

(a) pasture grazing
(b) range feeding
(c) tethering

A pasture rotation system depends on the adequate supply of irrigation water or well distributed rainfall. In some areas where there are extensive marginal and semi-marginal lands, goats are allowed to browse freely and roam wide areas in search of food.

The traditional system used by the small farmer is that of tethering. Goats are tied near shrubs or weeds in an area close to the household or farm. They will be left there for the day. In the evening the goats will be brought back and tied near to the house or placed in a shed. Goat kids are somewhat of a problem as they are left untied until they begin wandering on their own and away from their mothers. Thieves are often a serious problem, especially during holiday seasons. Some problems are experienced with dogs also.

Diseases caused by parasites (internal and external) are the most common health problems affecting these goats. In the majority of cases, owners do not de-worm or disinfect their animals. When they do, it is done on an irregular basis, usually for curative and not preventative purposes.

Ineffective and/or hazardous products such as kerosene and weedicides are sometimes used often causing problems that result in the death of the animal.

Although goat's milk used to form part of the country folk's diet, it appears that presently only a few families take advantage of the potential of the goat as a milch animal.

THE PROJECT

The project aims at developing the unused milking potential of the goat as a means of improving the income and nutrition levels of rural farm families in Jamaica.

OBJECTIVES

The general objectives are to:

(1) Improve the livestock production and productivity of the small farmer

(2) Promote the participation of women in aided self help projects

The specific objectives are to:

(1) Establish a dairy goat revolving scheme

(2) Upgrade the skills of women in the rearing and breeding of goats

(3) Promote the consumption of goat's milk

(4) Improve the genetic potential of goats in the area

(5) Promote the formation of a Rural Women's Group and the carrying out of income generating or saving activities

(6) Familiarize rural women with credit and savings

Targets

The project is aimed at involving 14 families during the first, and increasing this by ten more each subsequent year.[1/]

Implementation

The project involves the following components or mini projects:

(1) Credit under a revolving scheme
(2) Training
(3) Promotion of goat's milk and other by-products

DAIRY GOAT REVOLVING SCHEME

The Dairy Goat revolving scheme operates as a form of credit operation through which participants receive a doe to rear and breed.[2/] By means of compensation the first female offspring of that animal is returned to the project. The revolving scheme has been established largely to assist those women who would not have the resources to purchase foundation animals. The scheme is also intended to provide an incentive for participants to be involved in the activities of the project, especially those aiming towards improving the management practices, the breed and use of goat's milk.

As this is a form of credit, participants will be carefully selected and are required to sign an agreement to the conditions that are established regarding the care of the animal, and to provide some form of security in case of loss or sickness of the animal.

1/ Depending on the resources available for the implementation of the project, the target groups may vary in size.

2/ Two of the participants will receive also a ram, and will be responsible for providing sire services for the does of the project. These rams will be of improved stock, (Anglo-Nubian) are provided by the project for the improvement of the genetic potential of the goats of the area.

Selection of participants

The selection of the participants is carried out by the Rural Farm Family Development (RFFD) Officer with the collaboration of the Livestock Officer. In some communities the RFFD Officer can choose to carry out this project with a Rural Women's group with which she has been working.

If a new community is chosen where there is no organized Rural Women's Group, the RFFD Officer should visit some of the community members, present the idea and begin obtaining some views and reactions. A meeting can be organized with the women to discuss it further and to bring in other women who might be interested. Word of mouth, notices through the school, health clinic communication and/or church are effective means of contracting them.

At the end of these discussions the RFFD Officer should obtain the names and addresses of the persons who are interested in the project. Thereafter she will visit and interview them with a view to gaining this participation.

The project should be addressed to the small farming families. In selecting participants, adult women married or single with young children as dependents should be favoured as this project aims at promoting the consumption of goat's milk, and children can acquire the taste for this milk and benefit from its high nutritional value.

In addition to this, the selected participants should have enough time at their disposal to care for the animal, attend group training and home economic activities. They must be able to provide an adequate area to keep the goat and must indicate their willingness to replace the animal in case it dies. Participants should also be willing to accept the conditions under which they are to maintain these animals, understanding and accepting that failure to do so will result in withdrawal from the programme.

Since many people will be interested in this type of project, it is important to avoid those who will participate only because they want to get a "free" goat with no responsibilities attached to it. The establishment of compulsory contributions to a group or community fund (described below) serves to provide participants with the feeling and knowledge that they are working or paying back for the credit that has been provided to them.

THE CREDIT

The project will provide 15 does and two graded Anglo-Nubian rams. The does will be between 16 - 20 weeks old. They will be native does purchased either in the same community or nearby area. The animals will need to be de-wormed and treated against external parasites by the Livestock or Veterinary Officer before they are distributed. The project will also assume responsibility for de-worming the animals three weeks later. After this, and with minimum training it will be the responsibility of the participants to apply the necessary treatments, as advised by the Livestock Officer.

Conditions for Credit

The project will provide 15 native does valued at approximately $80 each and two rams at $300 each. As this is a revolving scheme it is important to assure that these animals will be reared and maintained properly and that losses are kept to a minimum. It is wise for the RFFD Officer to discuss with the potential participants, their responsibility if the animal dies, especially if it is due to negligence (hanging for example). In this case the project cannot assume responsibility for replacement. Participants should also be aware that they will need to provide medications for the animal. (Acaricide and de-wormer for example). The participants should be able to provide some form of guarantee that they will be able to provide these medications and will be able to assume responsibility if the animal dies.

In regard to this, one suggestion is that participants form a Common Fund to which each person contributes initially an amount equivalent to 10% of the animal's value (in other words $8 for each doe and $30 for each ram) and a weekly contribution of $0.50¢ per animal. This fund would act as a guarantee for each and every participant. The money will be used to buy the medications and pay for other incidental expenses that might be incurred, and in case an animal dies, the resources of the participants that have been accumulated and a loan from this fund will be used to replace the animal. At the time that a participant returns a doe to the project, she is entitled to have her net contributions (minus the amount used for her animals medication) returned and the new participant who receives a goat in the revolving scheme will have to contribute 10% of the animals value and make weekly contributions also.

The establishment of this fund, "kitty" or security is the responsibility of the participants and is a requirement and necessary step previous to the implementation of the revolving scheme. Assistance will be provided by way of discussions and information so that participants decide and understand what the fund is for and how it will operate.

The decision taken on how the fund operates, its rules, regulations and conditions should be written down and co-signed by each number and a member of the RFFD.

A savings account will have to be opened at a nearby commercial bank, People's Cooperative, or other savings institution that exists in the area. The Rural Farm Family Development Officer should investigate the existence of such institutions in the area to be able to inform the participants.

The proposed savings account will require the signature of at least two members elected by the group, for the withdrawal of funds. These two representatives should regularly inform the group of the status of the fund, allowing them to see the savings account book. The RFFD Officer should assist the representatives in opening

the account and provide some guidance in ensuring that proper records are kept of deposits, withdrawals and use of funds. The status of the fund should be reported on a regular basis to the members of the group.

In view of the fact that this fund is the guarantee for the credit that has been provided, initial and weekly contributions by participants are compulsory.

Conditions also need to be established in relation to the care of the animal and the activities in which members will participate. Participants must provide a secure place and present proof of being able to provide adequate food, care, shelter and medications for the animal(s). Participants receiving a doe are required to have their animal mated to the project rams and pay the "owners" for the service. These matings should be carefully recorded so that the operators of the scheme and the farmers can have adequate information on the breeding of their animals.

The participants receiving a ram and a doe are required to return two female offsprings, keep the ram for a period of not less than two years and make the ram available for servicing of the does of persons involved in the project. The fee to be collected by the "ram master" will be established depending on the customary rates of the area. There is no restriction on the "ram master" in providing services to other does of the community.

At the time of receipt of the animal(s) the participant(s) will sign an agreement of the necessary conditions related to the receiving and maintenance of the animal(s). Two samples of the agreement to be used are presented as an Annex.

Training

Training is aimed at providing selectees with information and experiences that enable them to participate in the group activities that are developed (such as Common Fund, and income-generating projects from cheese, crafts, etc.) to assist them in

the improvement of livestock rearing practices in regard to goats and to enhance the income, savings and nutritional profile of the family.

Credit and Accounting

The women involved in this project will be participating in a Credit programme and most likely this will be a new experience for them. The same observation applies to the organisation of the Common Fund. Dialogue with a credit officer who has been informed on the project's objectives and activities, should be of great assistance in answering some questions and clearing the doubts that participants may have in regard to credit and how it operates. A talk with a representative from the People's Cooperative Bank can also be useful in explaining how the bank account operates.

These should take place early in the implementation of the project and prior to the provision of craft. After the group selects the representatives who will be in charge of the savings account, it will be necessary to provide them with some information on simple book-keeping and accounting. As the project moves along, other lectures, discussions and materials on this topic can be arranged or obtained.

GOAT REARING AND BREEDING

As this area seeks to improve the traditional animal rearing practices in regard to goats, it is important for the Livestock Officer and the RFFD Officer to visit farmers and assess the present situation, in terms of number of animals kept and the prevailing system(s) of management, identifying the areas or aspects that need to be improved. This would include such aspects as the nature and efficiency of medicines, pharmaceuticals and other treatments given to goats.

Prior to the distribution of the goats under the revolving scheme, it is necessary that the Livestock Officer meets with the participants to talk and discuss with them the more important factors associated with the rearing of goats, emphasising those aspects which he/she found to be a problem.

Once the revolving scheme is started, training in general and specific aspects of goat rearing should take place every two or three months. This training should be a one day lecture, discussion and/or demonstration by the livestock officer. A schedule for these training days should be planned and agreed with the Livestock Officer as well as with the participants. The following is a suggested training plan:

Month	Topic of Training
1	Types of goats and their economic potential
3	Feeding management, housing and nutrition
5	Milking and record keeping
6	Parasites and their control
7	Common diseases of goats in Jamaica
8	Management of the breeding stock
9	Importance of records

Reinforcement and further training are carried out on an individual and group basis through monthly visits made by the Livestock Officer and regular visits of the RFFD Officer to the participants' household and group meetings.

The scheduled training and visits of the Livestock Officer should be flexible enough to accommodate attention to specific circumstances or situations that may develop. It is important to have a line of communication established so that the Livestock Officer can be reached if it is necessary.

PRODUCTION OF GOAT'S MILK,CHEESE AND OTHER PRODUCTS

Milk

When the goats begin to kid, a demonstration on the proper procedures to follow in milking goats will be given to the participants on a group basis. During this time, the Rural Farm Family Development (RFFD) Officer should interview each participant to find out who will be the person milking the goat on a regular basis. In many cases, children of ten years of age or more might be given the responsibility for this task. Then arrangements should be made with each one so that the Rural Farm Family Development Officer, who has learned the art of milking the goat, can teach and/or assist the individual during the first trials.

During the individual training sessions, the RFFD Officer should demonstrate the method of hand-milking and give advice as to cleaning the goat's flank and udder, examining the milk for mastitis, and employing appropriate milking practices. Demonstration should also be made on how to keep milking records.

Needless to say, the RFFD Officer will have to read and become very familiar with the handling of dairy goats. A list of resource books is provided in the annex.

Cheese

Training in the production of cheese should be carried out after the training of milking the goat and as part of the regular activities that the RFFD Officer holds with the group. Again the officer will need to read and learn about making cheese, obtain training and develop expertise in this area before he/she will be in a favourable position to train women farmers.

Crafts

The RFFD Officer should request the collaboration of the Institute of Crafts or the Social Development Commission and set

up a training seminar to teach women how to cure and tan goat skins and how to manufacture some crafts out of it.

PROMOTION OF THE USE OF GOAT'S MILK

As one of the intentions of this project is to introduce and familiarize rural families with the use of goat's products, the promotion of goat's milk production on a structured basis starts right from the beginning, and should be seen as one of the major objectives of the project. In fact it is desirable that all participants should become skilled in milking a goat and that they should assist in milking the goats which they will receive. Once the goat has kidded the participating woman farmer should follow the recommendations given by the Livestock or RFFD officers on how to develop the milking potential of her goat(s).

The RFFD Officer and the Livestock Officer should visit a few families to find out what are the practices in regards to goat rearing and especially to the use of goat's milk. The Livestock Officer should clarify and explain any misconceptions that people can have in regards to milking the goat or using its milk. The Livestock Officer should use these factors for discussion and clarification during training sessions. In this way training sessions will cover not only techniques regarded as appropriate but more importantly they should serve as a means of assisting farmers to adjust and to solve problems.

It cannot be over-stressed that the Rural Farm Family Development Officer should become fully familiar with milking the goat, the advantages of goat's milk, its quality and properties and its uses. The Livestock Officer who is collaborating with the RFFD Officer should be well versed in the overall management of the goat as a dairy animal.

The promotion of goat's milk production for human use is an on-going activity that is carried out within the Home Economic activities performed within the group. The activities include the talks on nutrition, and the preparation of foods using goat's milk

etc. Additional promotional development may be generated through such methods as milking and recipe competitions.

Milking Competition

A competition can be established for the family's goat with the best milking record during a period of three months. For example, it can be used as an activity to promote involvement of youths in the milking of the goat. The rules of the competition would need to be worked out. As a prize, $25 or its equivalent for a quarterly competition should be adequate.

Recipes Competition

This activity can be carried out with home-makers. Here, each one would prepare a good item using goat's milk as an ingredient. Prizes would be granted for recipes that meet specific criteria such as palatability, innovation, ease in makings and cost.

Cheese

"Goat cheese" is well known food and considered as a delicacy in many countries which specialize in the production of goat's milk. In Jamaica the high demand for cheese is unsatisfied. Due to the relatively low production of cow's milk to supply the requirements for all uses, little if any is available for cheese-making. There is no tradition of using goat's milk for making cheese in the island, although there have been sporadic instances of using goat's milk for human consumption. This necessitated the importation of cheese or the ingredients for cheese-making. The making of cheese from goat's milk follows similar if not the same procedure as those used for making other types of cheese.

PARTICIPATION OF THE SCHOOL

Whenever it is possible, the schools involvement and direct participation in the project's activities should be sought. The Rural Farm Family Development Officer and the Livestock Development

Officer should visit the school and discuss the project with the Headmaster and the Agricultural Extension Officer. This discussion would largely be for information and for the purpose of determining whether the school is likely to have an interest in starting a project. Comments and ideas from the Headmaster should be sought in general terms and also in specific terms as to whether the school would be interested and able to keep a doe and a ram. A positive response would lead to the inclusion of a select group of students in the practical training programme for the rearing of dairy goats. This can have a significant impact, as children and youth are already partly responsible for the care of the small livestock at home. Additionally this could lead to the students developing a Dairy Goat Project for their 4H-Club movement.

The school can also play an active and important role in the promotion of goat's milk. If the school has a snack or meal programme consideration may be given to including goat's milk in the menu. A series of samples of various recipes including goat's milk, such as sweetened and/or flavoured, can be prepared and given to the students for their evaluation to determine acceptability.

In view of the low demand for goat's milk and its products and their undoubtedly high nutritional value it is suggested that a promotional area which is likely to have great response is that of including these products, especially goat's milk in the school snack programme. The financing would need to be worked out, but such a programme could prove beneficial to community members producing goat's milk (income-wise) and school children receiving subsidized snacks (nutrition-wise). Assistance in training to families rearing goats who are interested in providing milk to the school will also need to be established.

EVALUATION AND FOLLOW-UP

The implementation of this project is meant to be part of the activities carried out by the Rural Farm Family Development Programme within the community setting. In this way, contact is

made and kept with the participants through other activities.

1. The criteria to be used in evaluating the dairy goat revolving scheme include the following:

   - number of goats distributed
   - mortality and morbidity of the animals
   - number of losses other than sickness (due to dogs, thieves)
   - number of offspring returned to project
   - number of offspring of improved breed (including those farm animals outside of the project)
   - number of participants
   - number of drop-outs

2. <u>Accommodations</u>

   - housing
   - feed including grazing + provision of water

3. In regard to the improvement of the rearing practices:

   - ability of participants to detect diseased conditions and/or other forms of illness
   - preventive measures taken by participants
   - general conditions of animals reared by the family

4. In regard to the promotion of the production of goat's milk

   - number of individuals participating in the milking competition
   - number of individuals participating in the recipe competition
   - number of families milking goats on a regular basis
   - purposes for which milk is used, and distributed

5. In regard to the improvement of the genetic potential

- number of goats mated to improved rams
- number of offspring resulting from mating to improved rams
- change in demand for services from improved animals
- comparative performance of offspring sired by improved animals as against those of unimproved sires (on a very long term basis)

6. In regard to the Rural Women's Programme

- number of participants
- attendance at meetings and group training activities
- activities carried out
- level of transfer of project-demonstrated activities to farms of participants

7. In regard to the experiences of credit and savings

- number of women participating in credit scheme
- number of women attending and participating in the discussions with the bank's officers
- interest of women in these activities
- progress shown after follow-up studies
- knowledge as to how the Fund is working

8. Overall problems and corrective measures taken or proposed.

COST OF THE PROJECT

Included here are only the additional resources that the Rural Farm Family Development Programme would have to procure for the implementation of the project. The cost of personnel and their travel to the community is therefore not included here.

The costs are approximate and true for April 1982 only:

1. Revolving Scheme

(1)	15 does at $80 each	$1,200.00
(2)	2 Anglo-Nubian rams at $250	500.00
(3)	Medications (Asuntol powder and de-worming)	50.00
(4)	Transportation of animals 1/	60.00
(5)	Identification tags for ear marks	30.00
(6)	Replacement of does 2/	80.00
	TOTAL	$1,920.00

2. Training

(1)	Materials for demonstrations in livestock training	50.00
(2)	Materials for training in milking of goats	50.00
(3)	Materials for the production of cheese	100.00
(4)	Materials for the training in tanning of skins	100.00
		300.00

3. Promotion of Consumption of Goat's Milk and other Products

(1)	Demonstrations on the use of goat's milk	150.00	
(2)	Prizes for milking competitions	100.00	
(3)	Craft demonstrations	100.00	
	Sub-Total	350.00	
	GRAND TOTAL		$2,570.00

1/ The cost of transportation will vary depending on the distance that the animal will need to be transported.

2/ Based on a determined mortality rate for goats from weaning to maturity of 5% as determined by the Jamaica Development Bank in its Reference Book for Agricultural Credit Officers.

GOATS FOR MILK

The situation as regards to animal protein in Jamaica today is one whereby demand requirements exceed supply. However, this situation can be markedly improved if the productive potential of some of the local traditional sources of animal protein is more fully utilized. One such source is the dairy goat.

Although the goat has been used in Jamaica as a source of milk for human consumption throughout the years, it has not become as popular as the dairy cattle. This results from a number of reasons some of which are as follows:

(1) Ignorance of many of the important attributes associated with goats
(2) The myth that the goat is a destructive animal
(3) Losses associated with goat-rearing resulting from thieves and dogs

The goat is noted to be an efficient producer, especially of high quality milk. The milk has been commended for its beneficial properties viz:

(1) It is much easier to digest than cow's milk. This makes it especially recommended for feeding infants and the sick.
(2) Its milk laxative effect plus its high Vitamin B12 content makes it valuable in the treatment of constipation and indigestion
(3) It is high in phosphate and is therefore valuable in alleviating the phosphate deficiency normally associated with the diet of vegetarians.

There are four breeds of dairy goats in Jamaica, viz. Toggenburg, Saanen, Anglo-Nubian and the Alpine. It is not unusual for high yielding animals of these breeds to produce as much as 15 pounds weight of milk per day. However, the average goat

with reasonable management will produce about eight pounds a day at the peak of lactation, (six to eight weeks after kidding. Some of the characteristics of a good dairy goat can be seen below).

Once a goat has kidded it may be milked once or twice per day depending on the level of production. It is important to keep a regular routine. The goat should be milked as quickly, quietly, gently and thoroughly as possible.

METHOD OF HAND MILKING

Grasp a teat in each hand, gently but firmly, and as close to the top as possible in the crotch of the thumb and first finger, then squeeze the rest of the teat with the second, third and fourth fingers. The following conditions should be observed:

(1) regular milking hours
(2) the goat's flank and udder should be cleaned before milking
(3) use of an udder cream to lubricate teats and hands
(4) milk should be checked in a dark-coloured cup to determine presence of clots due to mastitis
(5) quiet, gentle and thorough milking operations
(6) gentle stripping of udder when completing milking operations
(7) ensuring that excreta does not get into the pail or bucket
(8) after milking, pamper or pet the animal to encourage calmness and relaxation

REFERENCES

1. Elizabeth Downing, Keeping Goats Garden Farming Series, Pelham Books 1976

2. Ministry of Agriculture, Goat Rearing in Jamaica

3. Jerome D. Belanger The Homesteaders Handbook to Raising Small Livestock Rodale Press Inc. Book Div. 1974

ANNEX

DAIRY GOAT REVOLVING SCHEME

RAM-MASTER RECORD SHEET

Date	Name of Owner of Animal Serviced	Animal Number	Identification (if any)	Date of Servicing	Result	
					Pregnancy Confirmed	Date of Servicing

ANNEX

DAIRY GOAT REVOLVING SCHEME

RECORD OF VISIT MADE

Community.....

Month of.....19.....

Names	Date of Visit	Condition of the Animal	Recommendations Given	Comments of the Participant

APPENDIX A

AGREEMENT FOR PARTICIPATING IN THE DAIRY GOAT REVOLVING SCHEME

I.....agree to participate in the Dairy Goat Revolving Scheme organized by the Rural Women's Programme of IICA and the Livestock Development Division of the Ministry of Agriculture and to receive a doe under the following conditions:

1. I will provide an amount equivalent to 10% of the animal's value ($.....) to act as a guarantee, and will also deposit $0.50¢ on a weekly basis to assist in covering costs of medications, matings and other normal or unexpected items for the adequate care of the animal I am receiving.

2. I will deposit these funds in the Common Fund organized and formed by the members of the community participating in this Scheme.

3. I will keep the animal at.....

4. I will be responsible for providing adequate food care and shelter for the animal, as approved by the Livestock Officer.

5. I will ensure that the animal is provided with the necessary vaccinations and medications as recommended by the Livestock Extension Officer.

6. I will participate in the training events held by the Project Officers.

7. I will make the animal available for inspection by the Livestock or RWP Officer, on reasonable request.

8. I will have the animal serviced by one of the improved rams that have been provided by the Project, for this reason I will pay "ram master" the customary fee of $....., in the following manner $.....

for service and $.....once there is evidence that the animal is in kid.

9. In payment for the animal, I will return the first healthy female offspring after weaning, i.e. at about 3 months old weighing about 30 lbs.

10. I understand that once the doe kid is returned, I would have met my compulsory financial obligations, (and I am free to withdraw my unused deposit and contributions from the Common Fund). However, I may continue on a voluntary basis in order to obtain these benefits.

11. I understand that I am responsible for providing a replacement for the animal in case of death, loss or theft.

12. I understand that I am responsible to inform..... ..... if and when the animal shows any sign of illness. Failure to do so will be considered negligence.

13. I understand and agree that in the event that the animal is not kept under satisfactory conditions and, having received a warning, without improving the situation, the animal will be withdrawn, the unused portion of my contribution returned and this Agreement cancelled.

14. I understand that failure to provide contributions for a period of more than four weeks for no understandable reason, automatically cancels my participation in the programme and that the animal will be taken back by the programme and any unused contribution returned to me, and the Agreement cancelled.

Signed.....

Witness.....

Rural Women's Programme Officer.....

Livestock Development Officer.....

Date.....

APPENDIX B

AGREEMENT FOR PARTICIPATING IN THE DAIRY GOAT REVOLVING SCHEME

I.....agree to participate in the Dairy Goat Revolving Scheme organized by the Rural Women's Programme of IICA and the Livestock Development Division of the Ministry of Agriculture and to receive a ram of Anglo-Nubian breed under the following conditions:

1. I will provide an amount equivalent to 10% of the value of the ram, $....., to act as a guarantee, and will also deposit $0.50¢ on a weekly basis to cover costs of medications, servicing, and other normal or unexpected items for the adequate care of the animals I am receiving.

2. I will deposit these funds in the Common Fund organized and formed by the member of the community participating in this Scheme.

3. I will keep the animals at.....

4. I will be responsible for providing adequate food, care and shelter for the animal, as provided by the Livestock Officer.

5. I will ensure that the animal is provided with the necessary vaccinations and medications as recommended by the Livestock Extension Officer.

6. I will participate in the training events held by the Project Officers.

7. I will make the animal available for inspection by the Livestock or RWP Officer, on reasonable request.

8. I will make the ram available for the servicing of the does within the scheme charging the customary fee of $.....in the following manner $..... ..... for service and $.....once there is evidence that the goat is in kid.

9. I will keep the ram for a period of not less than two and a half years.

10. I understand that once the female kid is returned, I would have met my compulsory financial obligations, (and I am free to withdraw my unused deposits and contributions from the Common Fund). However, I may continue to contribute on a voluntary basis in order to obtain these benefits.

11. I understand that I am responsible for providing adequate replacement for the animal in case of death, loss or theft.

12. I understand that I am responsible to inform..... ..... if and when the animal shows any sign of illness. Failure to do so will be considered negligence.

13. I understand and agree that in the event that the animal is not kept under satisfactory conditions, and having received a warning, without improving the situation, the animal will be withdrawn, the unused portion of my contribution returned and this Agreement cancelled.

14. I understand that failure to provide contributions for a period of more than four weeks, for no understandable reason, automatically cancels my participation in the programme, and that the animal will be withdrawn, the unused portion of my contribution returned to me and this Agreement cancelled.

Signed:.....

Witness.....

Rural Women's Programme.....

Livestock Development Officer.....

Date.....

APPENDIX C

AGREEMENT FOR PARTICIPATING IN THE DAIRY GOAT REVOLVING SCHEME

I..... agree to participate in the Dairy Goat Revolving Scheme organized by the Rural Women's Programme of IICA and the Livestock Development Division of the Ministry of Agriculture and to receive a doe and a ram of Anglo Nubian breed under the following conditions:

1. I will provide an amount equivalent to 10% of the value of the doe and the ram, $.....to act as a guarantee, and will also deposit $1.00 on a weekly basis to cover costs of medications, servicing, and other normal or unexpected items for the adequate care of the animals I am receiving.

2. I will deposit these funds in the Common Fund organized and formed by the members of the community participating in this Scheme.

3. I will keep the animals at.....

4. I will be responsible for providing adequate food, care and shelter for the animals as approved by the Livestock Officer.

5. I will ensure that the animals are provided with the necessary vaccinations and medications as recommended by the Livestock Extension Officer.

6. I will participate in the training events held by the Project Officer.

7. I will make the animals available for inspection by the Livestock or RWP Officer, on reasonable request.

8. I will make the ram available for the servicing of the does within the scheme charging the customary fee of $....., in the following manner $..... for service and $.....once there is evidence that the goat is in kid.

9. In payment for the animals, I will return the first two female kids sired by the ram received from the programme.

10. I will keep the ram for period of not less than two and a half years.

11. I understand that once the two doe kids are returned, I would have met my compulsory financial obligations, (and I am free to withdraw my unused deposits and contributions from the Common Fund). However, I may continue to contribute on a voluntary basis in order to obtain these benefits.

12. I understand that I am responsible for providing adequate replacement(s) for the animal(s) in case of death, loss or theft.

13. I understand that I am responsible to inform..... if and when the animal(s) shows any sign of illness. Failure to do so will be considered negligence.

14. I understand and agree that in the event that the animal(s) is/are not kept under satisfactory conditions, and having received a warning, without improving the situation, the animal(s) will be withdrawn, the unused portion of my contribution returned and this Agreement cancelled.

15. I understand that failure to provide contributions for a period of more than four weeks, for no understandable reason, automatically cancels my participation in the programme, and that the animal(s) will be withdrawn, the unused portion of my contribution returned to me, and this Agreement cancelled.

Signed.....

Witness.....

Rural Women's Programme Officer.....

Livestock Development Officer.....

Date.....

AGRICULTURE IN JAMAICA

Collection of papers of the Office of IICA in Jamaica

1977 - 1978

No. I - 1 Fritz Andrew Sibbles, "Basic Agricultural Information on Jamaica Internal Document of Work", January 1977

No. I - 2 Yvonne Lake, "Agricultural Planning in Jamaica", June 1977

No. I - 3 Aston S. Wood, Ph.D., "Agricultural Education in Jamaica", September - October 1977

No. I - 4 Uli Locher, "The Marketing of Agricultural Produce in Jamaica", November 1977

No. I - 5 G. Barker, A. Wahab, L. A. Bell, "Agricultural Research in Jamaica", November 1977

No. I - 6 Irving Johnson, Marie Strachan, Joseph Johnson, "Land Settlement in Jamaica", December 1977

No. I - 7 Government of Jamaica, "Agricultural Government Policy Papers", February 1978

No. I - 8 Jose Emilio Araujo, "The Communal Enterprise", February 1980

No. I - 9 IICA and MOAJ, "Hillside Farming Technology - Intensive Short Course", Vols. I and II, March 1978

No. I - 10 Jose Emilio Araujo, "The Theory Behind the Community Enterprise - Seminar in Jamaica", March 1978

No. I - 11 Marie Strachan, "A National Programme for the Development of Hillside Farming in Jamaica", April 1978

No. I - 12 D. D. Henry, "Brief Overall Diagnosis of Hillside Farming in Jamaica", April 1978

No. I - 13 Neville Farquharson, "Production and Marketing of Yams in Allsides and Christiana", May 1978

No. I - 14 R. C. E. McDonald, A. H. Wahab, "Fertility Assessment of Newly Terraced Hillside Soils Using the Microplot Technique - the Allsides Case Study", 1978

No. I - 15 IICA - IDB, "Course in Preparation and Evaluation of Agricultural Projects", Vols. I and II, November 1977

No. I - 16 Neville Farquaharson, "Production and Marketing of Dasheen in Allsides and Christiana", June 1978

1978 - 1979

No. II - 1 O. Arboleda-Sepulveda (IICA-CIDIA), "Agricultural Documentation and Information Network in Jamaica", September 1978

No. II - 2 Victor Quiroga, "National Agricultural Information System", (NAIS-Jamaica) Project Profile, September 1978

No. II - 3 Joseph Johnson, "A Review on Land Reform in Jamaica for the Period 1972 - 1978", September 1978

No. II - 4 Neville Farquharson, "ABC of Vegetable Farming", A Draft High School Textbook, Vols. I, II, III and IV, February 1979

No. II - 5 Jerry La Gra, "Elements of an Agricultural Marketing Strategy for Jamaica", March 1979

No. II - 6 D. D. Henry, I. E. Johnson, "Agricultural Extension Service in Jamaica", March 1979

1979 - 1980

No. III - 1 H. R. Stennett, "Watersheds of Jamaica and Considerations for an Ordinal Scale of their Development", July 1979

No. III - 2 IICA-MAJ, "Hillside Farming in Jamaica", A Training Seminar, December 1978

No. III - 3 A. L. Wright, A. H. Wahab, H. Murray, "Performance of Six Varieties of Red Peas (Phaseolus vulgaris L.) on a Newly Terraced Ultisol in Jamaica", September 1979

No. III - 4 IICA/Jamaica Staff, "Agro-Socio-Economic Sample Survey of Allsides - Trelawny, Jamaica", September 1979

No. III - 5 IICA-MOAJ, "An Approach to Agricultural Settlement of Hilly Lands", October 1979

No. III - 6 IICA-MOAJ, "Tree Crops of Economic Importance to Hillside Farms in Jamaica", October 1979

No. III - 7 Canute McLean, "Production and Marketing of Peanuts", November 1979

1980

No. IV - 1 Joseph Johnson, "Production and Marketing of Red Peas in the Hilly Areas of Jamaica", January 1980

No. IV - 2 Lyn Snuffer, "Rural Women: An Annotated Caribbean Bibliography with special reference to Jamaica", January 1980

No. IV - 3 Vincent Campbell, Abdul Wahab, Howard Murray, "Response of Peanut (Arachis hypogaea L.) on a Newly Terraced Ultisol in Jamaica", January 1980

No. IV - 4 P. Aitken, A. Wahab, I. Johnson, A. Sahni, "Agro-Socio-Economic Survey - Pilot Hillside Agricultural Project 'PHILAGRIP' Southern Trelawny", February 1980

No. IV - 5 Glenys H. Barker, "Bibliography of Literature relating to Research and Development in the Agricultural Sector of Jamaica 1959 - 1979", March 1980

No. IV - 6 Milton R. Wedderburn, "Allsides Farmers' Pre-Cooperative A Socio-Economic Assessment", March 1980

No. IV - 7 Adele J. Wint, "The Role of Women in the Development Process", April 1980

No. IV - 8 Milton R. Wedderburn, "The Co-operative Input in the Development of the Pilot Hillside Agricultural Project (PHILAGRIP)", April 1980

No. IV - 9 MOJ/IICA/CARDI, Fruit Trees Seminar - "Research & Development of Fruit Trees", June 1980

No. IV - 10 Henry Lancelot, "Traditional Systems in Hillside Farming, Upper Trelawny, Jamaica", June 1980

No. IV - 11 IICA/Jamaica, "Pilot Hillside Agricultural Project", (PHILAGRIP), Project Document. Vols. I, II and III, June 1980

No. IV - 12 A. Wahab, I. Johnson, P. Aitken, H. Murray and H. Stennett, "Highlights of the Pilot Hillside Agricultural Project at Allsides", July 1980

No. IV - 13 I. Johnson, A. Wahab, P. Aitken, H. Payne, "Benchmark for a Project Profile for Developing a Peanut Industry in Jamaica", July 1980

No. IV - 14 P. Aitken, A. Wahab, I. Johnson, "The Allsides Post Peasant", August 1980

No. IV - 15 Norma Munguia, Percy Aitken, Abdul Wahab, Irving Johnson, "Salt Extraction by Solar Energy", A Mini-project, September 1980

No. IV - 16 Abdul H. Wahab, Percy Aitken-Soux, Irving E. Johnson and Howard Murray, "The Allsides Project in Jamaica - Developmental Potentials of Hillside Agriculture", September 1980

No. IV - 17 P. Aitken, A. Wahab, I. Johnson, A. Sahney and N. Munguia, "Rural Women Survey", Vols. I, II and III, October 1980

No. IV - 18 P. Aitken, I. E. Johnson, A. Wahab, "Assessment of Employment Among Small Hillside Farmers of Jamaica", November 1980

No. IV - 19 IICA/Jamaica "Pilot Hillside Agricultural Project", (PHILAGRIP), Final Project Document. October 1980.

No. IV - 20 P. Aitken, A. Wahab, I. E. Johnson, Bo-Myeong Woo, "IICA Evaluation of the First Phase FSB Allsides Project", (Internal Document of Work), November 1980

No. IV - 21 MINAG/IICA/CARDI - "Seminar on Multiple Cropping", December 1980

1981

No. V - 1 N. Munguia, P. Aitken, A. Wahab, I. Johnson, "Smoke Curing of Fish (as a household industry in Rural Jamaica)", January 1981

No. V - 2 P. Aitken, A. Wahab, I. Johnson, "Under-employment - It's Relation to the Agricultural Sector and Considerations for its Management", January 1981

No. V - 3 D. D. Henry, J. R. Gayle, "The Culture of Grafted Pimento (as spice crop for Allsides, Jamaica)", January 1981

No. V - 4 Abdul H. Wahab, Noel Singh, "Agricultural Research in Jamaica", February 1981

No. V - 5 P. Aitken-Soux, A. H. Wahab, I. E. Johnson, "Country Level Action Plan (CLAP)", May 1981

No. V - 6 P. Aitken-Soux, A. H. Wahab, I. E. Johnson, "Overview of Agricultural Development in Jamaica", May 1981

No. V - 7 Samuel Thompson, I. E. Johnson, P. Aitken-Soux, Abdul Wahab, "The Land Development & Utilization Act 1966", July 1981

No. V - 8 Abdul Wahab, Percy Aitken-Soux, Irving Johnson, Bo-Myeong Woo, Howard Murray, Joseph Dehaney, "The Experiences of Jamaica in the Management of Agricultural Production on Hillsides", July 1981

No. V - 9 Dave Hutton, Abdul Wahab, Howard Murray, "Yield Response of Yellow Yam (Dioscorea Cayenensis) After Disinfesting Planting Material of Pratylenchus Coffeae", July 1981

No. V - 10 Elaine Montague-Gordon, Abdul H. Wahab, Joseph Dehaney and Audrey Wright, "Performance of Eleven Varieties of Dry Beans (Phaseolus vulgaris) Over Two Successive Seasons on the Hillsides of Jamaica", August 1981

No. V - 11 Dave G. Hutton, Abdul H. Wahab, "Position Paper on Root Crops in Jamaica", August 1981

No. V - 12 Percy Aitken-Soux, Abdul H. Wahab, Irving E. Johnson, "Technical Assistance for the English Speaking Caribbean (Considerations for an IICA Strategy)" (Internal Document of Work), September 1981

No. V - 13 Bo-Myeong Woo, Abdul H. Wahab, Joseph Dehaney, "Crop Production on Hillsides using non-Bench Terracing Alternative Measures for Soil Conservation (first year's results of the Olive River Soil Conservation studies)", September 1981

No. V - 14 Abdul H. Wahab, Percy Aitken-Soux, Irving E. Johnson, Bo-Myeong Woo, Howard Murray and Joseph Dehaney, "Agricultural Production on Hillsides - the Allsides Project Case Study", September 1981

No. V - 15 D. G. Hutton, A. H. Wahab and J. Dehaney, "Investigating Critical Levels of Dry Rotting of Yellow Yam (Dioscorea Cayenensis) Planting Material, the Benefits of Disinfesting the Heads of Pratylenchus Coffeae and of After-Planting Nematicide Treatments", September 1981

No. V - 16 D. G. Hutton, A. H. Wahab, H. Murray and J. Dehaney, "Critical Levels of Dry Rotting of Yellow Yam (Dioscorea Cayenensis) Planting Material and Yield Responses After Disinfesting Heads of Pratylenchus Coffeae and After Post-Plant Nematicide Applications", September 1981

No. V - 17 E. Ayer and J. Reyes, "Seminar on Mediterranean Fruit Fly", September 30, 1981

No. V - 18 Bo-Myeong Woo, "Erosion Control Works in Korea", October 1981

No. V - 19 Irving E. Johnson and Percy Aitken-Soux, "Country Level Action Plan (CLAP)" (Third Revision - Internal Document of Work), October 1981

No. V - 20 Humberto Pizarro, "Programme of Work to Establish Guidelines for the Effective Administration, Operation and Maintenance of the Irrigation and Drainage District in the BRUMDEC Project" November 1981

No. V - 21 Humberto Pizarro, "The Operation of the Drainage System in the Black River Upper Morass Project", November 1981

No. V - 22 Humberto Pizarro, "Recommendations for Land Use and Irrigation Needs in the BRUMDEC Project", November 1981

No. V - 23 Humberto Pizarro, "Organization, Operations and Maintenance of the Irrigation System in the BRUMDEC Project", November 1981

No. V - 24 Humberto Pizarro, "Basic Information for Planning Water Management in the BRUMDEC Project", November 1981

1982

No. VI - 1 Vivian Chin, "Rice Research and Production in the BRUMDEC Project State-of-the-Art Review, Identification of Constraints and Interim Recommendations and Budget for Establishing 405 Hectares (1,000 acres) of Rice on the Clay Soils at BRUMDEC", January 1982

No. VI - 2 Vivian Chin, "Programme of Work for the Short-Term Adaptive Production-Oriented Research on Rice in the BRUMDEC Project", January 1982

No. VI - 3 Claude Grand-Pierre, "Adaptive Research for Grain Production (BRUMDEC) - A Short-Term Programme", January 1982

No. VI - 4 Claude Grand-Pierre, "Experimental Procedures for Grain Crops Research in the BRUMDEC Project", January 1982

No. VI - 5 Charles Kennard, "Summary of the Proposed Programme of Work for Adaptive Production Oriented Research (Short-Term) in Vegetable Production in the BRUMDEC Project", January 1982

No. VI - 6 Charles Kennard, "Vegetable Production (BRUMDEC) - Review and Proposed Short-Term Adaptive Production Oriented Research Programme", January 1982

No. VI - 7 Bo-Myeong Woo, "Olive River Run-Off Plots - Description of the Experiment", January 1982

No. VI - 8 Vivian Chin, "Fertilizer Experiments in BRUMDEC (Second Quarterly Report)", January 1982

No. VI - 9 Claude Grand-Pierre, "Third Quarterly Report of the Short Term Production Oriented Sorghum Research Programme", January 1982

No. VI - 10 Bo-Myeong Woo, Ministry of Agriculture, "Crop Production on Hillsides Using Non-Bench Terracing Alternative Measures for Soil Conservation", February 1982

No. VI - 11 Philemon Hoilett, Ina Pyne, Calvin Gray, Renford Baker, and Michel Eldin, "Workshop on Agroclimatic Zoning - case study Kingston, Jamaica", April 1982

No. VI - 12 Charles Kennard, "Vegetable Production Programme - BRUMDEC Second Quarterly Report", Period December 19, 1981 - March 18, 1982, April 1982

No. VI - 13 Claude Grand-Pierre, "Final Report on Grain Experimental Work in BRUMDEC", (Contract I), May 1982

No. VI - 14 J. Y. Richmond, Ph.D., "Lab Safety Seminar - Animal Health - Conferences of Jonathan Richmond", June 1982

No. VI - 15 Michael Wiles, "Freshwater Prawn (Shrimp) Culture for Jamaica - An Exploratory Report", June 1982

No. VI - 16 Norma Munguia, Byron Lawrence, "Goat Revolving Scheme Project Model", Rural Women Project, July 1982