

## PROMOTION OF INDIGENOUS *GARUT* SHEEP PRODUCTION TO SMALL FARMERS IN THE DISTRICT OF MAJALENGKA, WEST JAVA

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### ABSTRACT

An on going study to promote indigenous *Garut* sheep production to small farmers residing in villages along the *Cimanuk* river is well underway through 1998. Base line study was done in late 1989, and follow up action programs were initiated in late 1992. The objective of the study, in general, was to disseminate research results on sheep raising to small farmers in four villages in the district of Majalengka, so as to help them solve their problems. In particular, the objective of this study was to enhance the capacity of sheep producers and consequently to improve their welfare. The methodologies employed included: (1) Specification of the target groups; (2) Assessment of constraints to sheep production, (3) Design of training curricula; (4) Production of communication materials to support the target group training; (5) Strengthening local sheep producer associations, and (6) Follow-up visits and technical backstopping. After five years working with the target groups, the study concluded that: (1) the target groups still confronted technical, social and economic constraints preventing them to further develop their resources, (2) the communication strategy employed was effective in motivating and empowering the target groups to overcome some constraints to better sheep production, (3) A significant amount of extension workers, farmer leaders and cooperating sheep producers in Majalengka had better knowledge and skills in sheep production, (4) the sheep population had increased more than 300 percents in about 30 months since the sheep provision, and (5) The target groups gained significant amount of income from raising sheep.

Key words: Promotion, Indigenous *Garut* sheep, Constraints, Communication, Extension, Income

### INTRODUCTION

Raising small ruminants was becoming a goal desired by many small farmers involved in grass cultivation along the *Cimanuk* riverbanks, in the District of Majalengka, West Java. The grass cultivation was initiated in early 1984 for riverbank conservation purpose. Mobilization of farmers in this activity was facilitated by the concerned agency's promise to distribute small ruminants.

According to the head of District of Majalengka Livestock Service (1988), there was a strong market demand for small ruminants in the area. Every year, around 70,000 heads of small ruminants were sold in the local markets. Of which, the local contribution was only 50 percents (Surawijaya, 1988). In the long run, it was

envisaged that a well developed small ruminant production in the area would be required to meet the local as well as the national demand for small ruminant meat and hides.

However, the production system expected to meet the above demand was still traditional. According to Carles (1983), the main purpose of this production system was to produce mature mutton. In fact, small ruminant raising was an effective means of generating supplementary income for the rural poor. Research confirmed the share of income from sheep and goat raising. In some instance, it ranged from 14 to 30 percents of the total rural household income (Knipscheer *et al.*, 1987; Prawiradiputra, 1988).

The overall objective of this study was to disseminate research results on small

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ruminant raising to small farmers in four villages in Majalengka. In particular, it was intended to enhance the production capacity of small ruminant producers and consequently to improve their welfare. In this conjunction, the specific objectives of the research program were as follows:

1. To identify specific constraints on small ruminant production.
2. To design and implement a communication strategy for assisting the small farmers to remove some of the above constraints.
3. To strengthen relationships amongst the local participants through community organization activities.
4. To train livestock extension workers, sheep producers, rural women and young farmers in several aspects of small ruminant production.
5. To assess the process and the impact of the action program on the small farmer development, including income generation.

## MATERIALS AND METHODS

### The Material

The Indigenous Garut Sheep. One hundred and eight yearling ewes and ten rams of Garut sheep were distributed to four groups of small farmers involved in the study. The groups were resided in the village of Balida, Kadipaten, Pakubeureum, and Sukasari Kidul in the district of Majalengka.

**Target groups.** The target groups of this program were as follows: 80 sheep producers with their wives and youths, 46 Extension workers and other officials of various agencies in the District of Majalengka.

### Design of Study to Identify Constraints to Small Ruminant Production

A descriptive survey research was designed to assess the small ruminant producers' perceived constraints to small ruminant production in their respective villages. Identification of these constraints was an essential prerequisite for the subsequent research activities, included communication message design, training of

the target groups, and program implementation.

### Design of Training Curricula

A set of curricula was developed for training the small ruminant producers, their wives, youths and livestock extension workers in the areas of small ruminant production, marketing, household income management and better family nutrition. Additionally, another set of curricula was also specifically formulated for developing the leadership capacity of the officers of local small ruminant producer associations.

### Design, Pretesting and Production of Communication Materials

Communication materials were produced for the following purposes: (1) to support training of the target groups, (2) to sensitize the local government officials on the importance of small ruminant to the rural economy and the local potentials for the animal production, (3) to update existing small ruminant producers on new techniques and to provide them with relevant information on a continuous basis, and (4) to promote activities of the local sheep producer associations.

Prototype of communication materials were pretested and improved prior to production and distribution.

### Strengthening Local Small Ruminant Producer Associations

The organizational structure, status and membership of the local small ruminant producer associations were enhanced during the program lifetime. The research team trained the officials of the associations in several aspects of leadership and group development, and assisted them to plan and implement the organizational programs and activities.

### Follow-up Visits and Technical Backstopping

Technical backstopping was mainly provided by research assistants resided in the village and extension workers involved. With collaboration of the local leaders, members of the research team also made

Table 1. The Sheep Producers' Perceived Constraints to Sheep Production

No	Constraint	Rank	Percent Mentioned (n=96)
1.	Lack of Extension Information and Guidance	1	99.58
2.	Limited economic resources	2	88.75
3.	Narrow sheep housing	3.5	79.69
4.	Inappropriate feeding practice	3.5	79.69
5.	Lack of production plan	5	79.17
6.	Poor breeding practice	6	74.31
7.	Poor health control	7	57.29
8.	Unskilled labor	8	53.82
9.	Poor marketing	9	41.82
10.	Poor resource base	10	30.56

periodic visits to each of the four research sites to observe the practice of small ruminant raising and to conduct dialogue sessions with small ruminant producers on location specific problems and issues that they had identified.

## RESULTS

### The Sheep Producer Perceived Constraints to Small Ruminant Production

Prior to the fieldwork, the research team attempted to identify constraints faced by the sheep producers and elucidated their causes. In this conjunction, a constraint was defined as a situation or a factor that prevented the farmers to attain their goals and targets (FAO, 1990, p. 15). In small ruminant production, constraints would intervene in the production process and prevented the farmers to obtain better yields from their sheep or goat farms. A survey conducted prior to the

implementation of the fieldwork yielded the following results as listed in Table 1.

### Communication Strategy for Empowering the Target Group to Deal with the Above Constraints

This communication strategy was designed to inform and to persuade the target groups in the efforts to alleviate some of the above constraints. It was based on the premise that provisions of appropriate information, persuasion and certain production inputs to the target groups would empower them to act on their problems.

This strategy incorporated audiovisual and printed media, such as sound-slide programs, posters, a manual and a calendar. So, 21 posters, 16 sound-slide programs on various topics relevant to the target groups, a manual on sheep production and an illustrated calendar were produced. These ranges of media were used to initiate

Table 2. Membership to the Sheep Producer Associations by Village and Year

Village	1993			1994			1995			1996*			
	Initial number	Turn over	New recruit	Final number	Turn over	New recruit	Final number	Turn over	New recruit	Final number	Turn over	New recruit	Final number
Balida	15	0	0	15	4	6	18	0	10	28	0	3	31
Kadipaten	25	0	1	26	7	4	23	2	2	23	0	0	23
Pakubeureum	25	1	0	24	7	15	32	8	3	27	0	0	27
Sukasari													
Kidul	16	1	0	15	5	6	16	3	4	17	0	0	17
Total	81	2	1	80	23	31	89	13	19	95	0	3	98

\*As per 5 May 1996

and to keep the change process going among the target groups.

In one way or the other, the effect of this strategy to the target groups' behavioral changes was reflected in the following findings.

#### **Building Up Local Community Organization Activities**

Local community activities were organized around the subjects of interest to the study. To promote these activities the research team and the District of Majalengka Livestock Service officials encouraged the cooperating farmer leaders in the four research sites to organize their fellow farmers and to formulate several program activities to achieve their objectives.

These activities included: (1) conducting monthly group meeting, (2) developing saving and loan activities, (3) training of members in the area of sheep production and marketing, and (4) sharing information about situation and problem of local sheep production. Evidences obtained from these activities were presented as follows.

**a. Sustaining the Sheep Producer Association in the Four Research Sites.** As was planned, the cooperating farmer leaders had created four sheep producer associations. Through these associations, the research subject could be extended to the intended target groups in the four research sites. After four years of fieldwork, Table 2 show the dynamic of the group membership development.

The above Table 2 shows that up to 5 May 1996, the groups had managed to involve 172 villagers in their program activities. This was more than double of the initial target group size. Evidently, this increase was made possible by the returned offspring of sheep loaned to the cooperating farmers. However, with the progress of time, the number of villagers remained in the groups was lesser than the above figure. Slightly more than a fifth of them were dropped out of the groups for various reasons.

**b. Members Participation in the Monthly Group Meeting.** Members' participation in the monthly group meetings could point out their acceptance and support to the groups. The more popular the group to their members, the more support the groups would receive from them and the more likely they would participate in the group events. Evidence obtained from the field indicated that farmers' participation in the group meetings varied from month to month and year to year. Records show that on average between two-fifths and three-fifths of all members in the four groups participated regularly in the groups' monthly meetings. This indicated that firstly, the four sheep producer groups received enough supports from their members, and secondly, the group leaders should put more efforts to reach their members that were still reluctant to participate in the group activities.

#### **The Group Fund Raising**

Fund raising was another activity that the researcher promoted among the group members in the past four years. The researcher considered the group ability to accumulate funds or capital was an important requirement for future group sustainability. The more funds accumulated and the wiser the groups in using their funds, the longer the group life would be.

Over the years, through this activity, the four groups were able to accumulate a significant amount of money. Records show that the four groups started very slow and with great difficulties in raising the group funds. Accordingly, in 1993 and 1994, except for the Balida group, the three other groups failed to accumulate enough money from their members.

In the following year, however, the three group members began to trust their leaders and were willing to put their money in the group save. Amazingly, the group funds increased slightly more than four times. As a matter of fact, this increase continued well into 1996. Up to 5 May 1996, the group funds had reached IDR 1,608,350.

So, this was a real significant performance of the poor farmers involved in the program. With the money at hand, the four groups were able to offer small loans to

Table 3. The Sheep Population in 1993, 1994, 1995 and 1996\*

Village	Number of Sheep (heads)				
	15/9/93	31/12/93	31/12/94	31/12/95	30/04/96
Balida	22	35	56	88	77
Kadipaten	31	55	81	84	77
Pakubeureum	38	60	122	136	123
Sukasari Kidul	27	38	61	53	48
Total	118	188	320	361	325

\*Up to 30 April 1996

their members every month. Record indicated that around 72 percents of these funds were loaned to members.

#### Training of the Target Groups

Training on small ruminant related subjects, rural home financial management, better family nutrition, raising native chicken, leadership and group development, and program planning and implementation were offered to sheep producers and their family members, and livestock extension workers. Additionally, enrichment training in the form of visit to small ruminant contests in adjacent district, and communication sessions were also held for the target groups through out the research program lifetime.

So far, there were 11 inservice training sessions had been offered to livestock extension workers, 36 sessions for cooperating sheep producers in the four research sites, two three day short courses on sheep production for group leaders, two visits to small ruminant contests, two farmer to

farmer communication sessions, and one review seminar for the four group leaders.

All in all, there were 46 livestock extension workers and other officials of the District of Majalengka Livestock Service, 37 group leaders from 11 villages in the district of Majalengka, 85 sheep producers, and a respectable number of rural women and youths that had been benefited from the training offered during the study.

#### The Action Program's Impact

All concerned parties, especially the funding agencies were eager to see the positive impacts of the program on the target groups. To the sheep producers that were mostly small farmers, the program intervention motivated them to learn and to practice the suggested information and technologies about sheep production and marketing.

The benefits obtained by the sheep producers through this program were

Table 4. Cooperating Farmers' Income from Selling Sheep up to 30 April 1996

Number of Farmers	Number of Sheep Sold	Total Sheep Sold	Average Sheep Price (Rp)	Total Income Received (Rp)
28	1	28	120,836	3,323,000
21	2	42	122,386	5,145,000
21	3-19	96	117,546	11,402,000
70		166	119,699	19,870,000

Average Income per person: Rp 283,857

Minimum: IDR 20,000. Maximum: IDR 1,725,000.

Table 5. Distribution of the Sheep Raised by Cooperating Farmers in Four Villages, in The District of Majalengka

Number of Sheep Raised (Heads)	Number of Farmer	Percent	Total Sheep Raised (Heads)
1	20	22.47	20
2	19	21.35	38
3	14	15.73	42
4	16	17.98	64
5-30	20	22.47	161
Total	89	100.00	325

receiving the Garut sheep itself and the opportunities to develop these bioeconomic resources for further advantage. As the Table 3 show, the yearly sheep population from 15 September 1993 to 31 March 1996 was increasing. If the sheep population on 15 September 1993 was considered as the base, then, at the end of 1993, the population increase was 159 percents. Next, at the end of 1994, the sheep population increase was 271 percent. Afterward, at the end of 1995, the sheep population increase was almost 306 percents. Lastly, at the end of March 1996, the sheep population increase was declined slightly below the previous year, i.e., 295 percents. Harvesting and selling the sheep was likely caused this population decline.

Correspondingly, the above population growth also pointed out the increase in value of the cooperating farmer assets. Initially the worth of 119 heads of sheep bought, was IDR 12,575,000. If at the end of 1993, the estimate price of a lamb was IDR 25,000, then the value of all sheep at that time was IDR 14,325,000. At the end of the following year, the value of all program sheep was IDR 30,116,343, if the estimate average price of a matured ewe or ram was IDR 150,000, a yearling ewe or ram was IDR 125,000, and a younger sheep or lamb was IDR 50,000. Then, at the end of 1995, the value of all program sheep was IDR 33,975,000. Finally, about a month prior to the fifth financial year, the value of all sheep was IDR 30,850,000.

These calculated figures pointed out that in less than three years, the value increase of the sheep was almost triple. In

this way, the research program had shown its significant contribution to the target groups' economy. Further impact of the program to the target groups' welfare was shown by the number of sheep sold and income obtained by most cooperating farmers involved in the last three years.

The above Table 4 pointed out that in about 30 months after the program implementation, 70 cooperating farmers had sold 166 heads of sheep and obtained a total additional gross income as much as IDR 19,870,000. In this relation, the individual income range was quite a part. The minimum was IDR 20,000, and the maximum was IDR 1,1725,000; whereas the average was IDR 283,857.

So, most of the cooperating farmers participating in the program had made additional income slightly more than one and a half times of the capital loaned to them. On average, after 30 months, each of the 70 cooperating farmers observed obtained IDR 283,857 additional income.

On that account, in a single year, an average cooperating farmer might have IDR 114,000 additional income from selling the program sheep alone. Other source of income such as selling manure was excluded in this analysis. If this was included, the cooperating farmer might make, on average, an extra IDR 500 per month, in addition to IDR 9,500 from selling sheep. Therefore, a cooperating farmer might make IDR 10,000 additional income per month from raising the program sheep. Though this amount was not much, it meant a lot to the poor farmers in rural areas.

In addition to this meager income, at the end of second phase, the program left the poor farmers with 325 heads of sheep of various ages to raise.

In this relation, the above Table 5 show that by April 1996, slightly more than two fifths of the cooperating farmers kept one or two heads of sheep, approximately another two fifths kept three or four heads, and the rest one fifth kept five to 30 heads of sheep. Needless to say, these resources would enable the poor farmers to make further supplementary income in the foreseeable future.

### CONCLUSIONS

This research program provided the researchers with ample of experiences, in working with people of various sorts, especially in carrying out the action programs, in the four research sites in the District of Majalengka, West Java. The field works required the researchers to work with the target groups thoroughly, to understand their situations, objectives and problems. Based upon this long interaction and observation, it may be concluded that:

1. The target groups still confronted technical, social and economic constraints that prevented them to further develop their potential in sheep production.
2. The communication strategy implemented was effective in motivating and empowering the target groups to overcome some of the constraints to better sheep production.
3. The cooperating farmer leaders had managed to establish four lively sheep producer associations.
4. A significant number of Livestock Extension Workers, farmer leaders and sheep producers in the District of Majalengka had been trained in various subjects related to sheep production.
5. The cooperating sheep producers in the four research sites had managed to increase the sheep population more than 300 percents in less than 3 years.
6. In economic term, the assets of the cooperating sheep producers, i.e., the financial value of the sheep population, had increased more than 300 percents in about 30 months, since the provision of sheep by the program.
7. The research program had contributed significantly to the cooperating farmers' economy in the four research sites.
8. The 325 sheep raised by the cooperating farmers in the four villages, the four lively sheep producer associations, the trained sheep producers and the good spirited trained livestock extension workers in the District of Majalengka were important assets for the program's future sustainability.

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