



Sheep fattening value chain development in Goma Pilot Learning *Woreda* (PLW): IPMS experiences

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Improving Productivity and Market Success of Ethiopian Stallholder Farmers

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Acronyms

CBLI	Community-Based Livestock Insurance
CIDA	Canadian International Development Agency
CSM	Cotton seed meal
DA	Development Agent
EAP	Ethiopian Agriculture Portal
ETB	Ethiopian birr
FTC	Farmer Training Centre
ILRI	International Livestock Research Institute
IPMS	Improving Productivity and Market Success
LPDA	Livestock Production and Development Agency
MoARD	Ministry of Agriculture and Rural Development
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
OMF	Omo Microfinance
OoARD	Office of Agriculture and Rural Development
OCSSCo	Oromia Credit and Saving Share Company
PA	Peasant Associations
PLW	Pilot Learning <i>Woreda</i>
PRA	Participatory Rural Appraisal
WKC	<i>Woreda</i> Knowledge Centre
WoARD	<i>Woreda</i> Office of Agriculture and Rural Development

Abstract

Traditionally, most smallholder farmers in Goma and elsewhere in Ethiopia engage in sheep and goat fattening to generate sufficient income to meet household requirements and other social obligations. A rapid assessment with IPMS project partners in Goma found that traditional sheep fattening is constrained by inadequate feed supply, low nutritive value of available feed resources, and lack of technical knowledge which resulted in prolonged fattening period and low economic return. Accidental death or loss of fattened animals for various reasons is another challenge for vulnerable smallholders, especially if sheep are purchased on credit. During discussion with various stakeholders, several potential interventions were identified to initiate a more commercially oriented small ruminant enterprise addressing some of the constraints with new interventions. These included i) reduced fattening periods through supplementary feed using locally available cotton seed meal (CSM), ii) piloting a community-based/managed livestock insurance scheme with 120 target farmers in Kilole PA, iii) introducing an innovative credit scheme through Oromia Credit and Saving Share Company (OCSSCo) for entrepreneurial fattening, and iv) introducing leguminous forage seed multiplication by model farmers.

Meetings were held by the district OoA staff in some Peasant Associations to discuss identified problems and potential interventions. Subsequently, one pilot Peasant Association that agreed to include women in the program was selected.

Other discussions/trainings were also held with farmers and project partners to develop community-based livestock insurance scheme and to increase knowledge and skills on supplementary feeding and forage (seed) production and selection of lambs for fattening. Following the value chain approach, linkages were created with the *woreda* veterinary services and an oil extraction factory in the District capital which produced cotton seed meal; this had never been used in the District before. We facilitated the linkage of target farmers with OCSSCo.

Data were collected from all 120 target farmers using a questionnaire and group discussion. The study showed that more than 74% of the farmers managed to shorten the fattening period by 50%, i.e. from six months to three months. In the course of first cycle, 510 sheep were fattened of which 15 died. Thirteen (13) were immediately refunded by the community-based livestock

insurance scheme and 2 claims were rejected by the livestock insurance capital managing committee based on conditions spelled out in the by-laws. Average return from five sheep in one cycle was about Ethiopian birr (ETB)¹ 450. Loan repayment by women participants was 100%, and some male farmers defaulted. Scaling out is taking place, which includes fattening more sheep per cycle by some entrepreneurial female farmers.

Key words: sheep, fattening, value chain, community-based livestock insurance

1. In February 2013, USD 1 = ETB 18.25.

Acknowledgements

This paper reviews interventions, results and lessons learned from small ruminants fattening commodity development in Goma District based on a participatory market-oriented value chain approach. The approach was introduced by the IPMS project/staff that played an important role as partner in the development of small ruminants fattening process. However, the credit for the results obtained go to all the partners involved in this endeavour especially farmers, staff of the Goma OoARD, OMF, Jimma University and private sector input suppliers and traders. Besides the authors, several people contributed to the realization of the report. Mustefa Moga, the development agent in Kilole PA, Tanashe Eyasu, area supervisor and Gonchew Sisay, Goma District Assistant Veterinarian also deserve credit for their valuable contributions in monitoring the intervention, data collection and veterinary services throughout the commodity development process of small ruminants.

1 Introduction

The IPMS project, funded by the Canadian International Development Agency (CIDA), was established to assist the Ministry of Agriculture and Rural Development in the transformation of smallholder farmers from a predominantly subsistence-oriented agriculture to a more market-oriented (commercial) agriculture.

The project adopted a ‘participatory market-oriented commodity value chain development’ approach which is based on the concepts of innovation systems and value chains. The approach put greater focus on all value chain components instead of only a production technology focus as well as the linking and capacitating of value chain partners and assessment, synthesis and sharing of knowledge among partners.

The project introduced this approach in 10 Pilot Learning *Woredas* (PLWs) in four Regional States in Ethiopia with the objective of testing/adopting the approach so that it can be promoted nationwide. An integral part of the approach is the identification of marketable commodities and value chain constraints and interventions. This was accomplished through a participatory process in all PLWs.

This case study focuses on the development of smallholder market-oriented small ruminants value chain in Goma *woreda* with the objective of i) documenting diagnostic results and value chain interventions, and ii) providing proof of results (proof of concept), challenges and lessons learned to be considered for scaling out.

Following the introductory part, Section 2 deals with methods and approaches used in the study, while Section 3 presents background information, including description of the PLW and the history and diagnosis of small ruminants development. Section 4 presents value chain interventions on extension, production, input supply, as well as marketing and credit issues. Section 5 presents and discusses results on production/income, input supply/marketing, gender/environment/labour use, organizational and institutional aspects, while Sections 6 and 7 deal with challenges and lessons learned, respectively.

2 Methods and approaches

To start the development of a commodity, IPMS used a *woreda* level participatory market-oriented value chain planning approach aimed at identifying i) main farming systems, ii) potential marketable crop and livestock commodities at farming system level, iii) constraints, potentials and interventions for each value chain component and iv) value chain actor assessment with potential (new) roles and linkages. Different value chain actors were involved and consulted in this planning exercise. Secondary biophysical and socio-economic data were collected, followed by open-ended interviews with focus groups and key stakeholders. The results were presented in a stakeholder workshop in which priority marketable commodities were determined together with key intervention areas and partners.

This initial rapid assessment was followed by some more detailed studies on selected commodities. Such studies were conducted by partner institutions and/or students and or IPMS staff using formal surveys, interviews and observations.

To implement the program at *woreda*, Peasant Association (PA) and community levels, the project facilitated different knowledge management and capacity development approaches and methods to stimulate the introduction of value chain interventions by the actors concerned. The various value chain interventions are documented by the project staff in the six monthly progress reports and the annual M&E reports.

The project established a baseline and measured/documentated changes in order to quantify the results from individual and/or combination of interventions,

3 Background to small ruminants value chain development in Goma

3.1 PLW description

Goma PLW is located about 389 km southwest of Addis Ababa in Oromia Regional State, Jima Zone (Figure 1). It has a total population of about 247,326 people distributed in 36 peasant associations (PAs) of which more than 49% are women. Farming households of Goma PLW are about 45,567 out of which 10,035 are female households (OoARD 2007). Goma PLW has a total area of 96.4 km² with mid altitude covering 96% of the total area. It also has small proportion of extreme lowland stretching along Didesa River Basin in its northeast border and extreme highlands in the west bordering with Gera *Woreda*. It has an altitude ranging between 1387 and 2870 meters above sea level (masl) and a hot and humid weather with minimum and maximum temperatures of 13°C and 29°C, respectively (IPMS 2007).

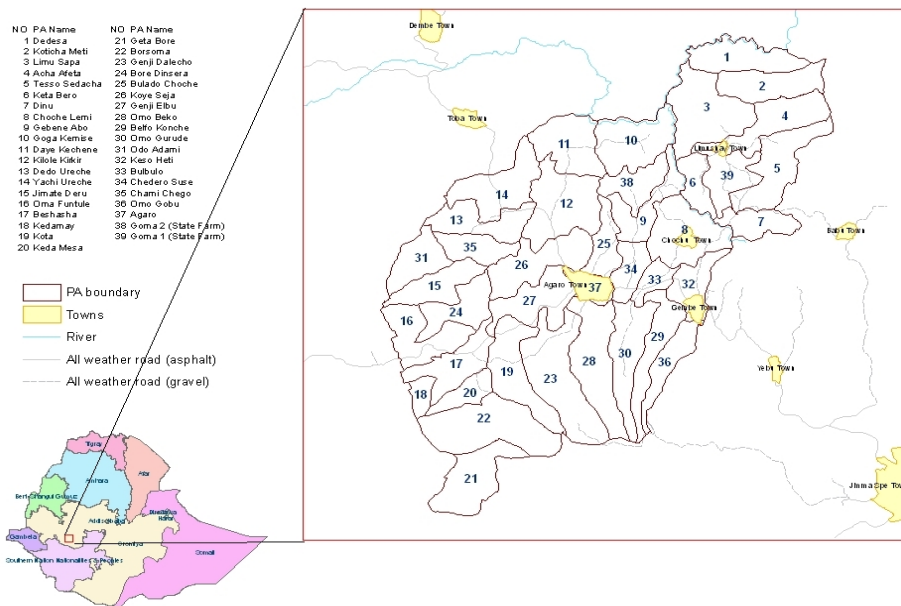


Figure 1. Location of Goma PLW

The PLW is one of those areas in the country which enjoys well distributed high annual rainfall. Weather data collected over 15 years (1992–2006) obtained from Goma *woreda* indicates that the average annual rainfall is 1524 mm which is quite substantial compared to other areas. Annual rainfall

variability is also very low and is bimodal in nature. Small rains occur from March to April and the main rainy season from June to October. Overall, there is about seven months of rainfall in the *woreda* with low seasonal and area wise variability that favours availability of pasture and forage for livestock population.

3.2 History and diagnosis of small ruminants value chain

3.2.1 History

Compared to cattle, sheep and goats have relatively lower feed requirements, due to their small body size. These unique characteristics allow easy integration of small ruminants into different farming systems. Sheep in particular are grazers and amenable to herding; hence a species of choice in mixed cropping areas where cereal production dominates (Adane and Girma 2010). Ethiopia has an estimated sheep population of 26.12 million, out of which about 74% are females. Among the sheep flock two years and older (53% of the total sheep), 49.5% are kept for breeding, about 3% for mutton and less than 1% is kept for wool production (CSA 2008). Sheep and goats are widely adapted to different climates and are found in all production systems.

The average annual mutton production of the country is estimated at 78 thousand tonnes. Sheep account for 15% of the domestic meat consumption, 50% of the domestic wool requirement, about 40% of the fresh skins, 82% of the value of semi-processed skins for export. In the crop–livestock farming systems, sheep provide 19–23% to the food subsistence value derived from livestock production (CSA 2008).

In Goma PLW, coffee is the main source of livelihood for the farm households. In addition, small ruminants are kept for cash generation, savings, as a security against risks related to fluctuating coffee production and prices, for their manure to maintain soil fertility, and for meat production (Bekele 2009). Involvement in small ruminants rearing or fattening by farm households has been increasing in the PLW due to high market demand and increasing prices. Despite the huge sheep population, suitability of the agro-ecology of the PLW and increasing demand for mutton, both the reproductive and productive performance of smallholder sheep production in Goma, as elsewhere in the country, is very low. In 2005, Goma WoARD started paying attention to this under exploited potential and distributed 717 sheep on credit to 239 households (225 male and 14

female) for fattening purpose. Farmers who participated in this program reported that they had benefited from the intervention and expressed their support for similar intervention.

3.2.2 Diagnosis

Market-oriented smallholder sheep fattening was identified as one of the priority commodities for IPMS in Goma on the basis of PRA and the participatory planning stakeholder workshop held in 2007. According to the farmers, the importance of small ruminants would increase with the fast diminishing farm sizes due to population pressure as small ruminant require relatively limited space and smaller feed than cattle. In particular, farmers in the higher altitude areas were highly interested in sheep fattening. As a result, it was found worthwhile trying to support this activity through some targeted interventions. The key constraints to improving productivity and income from small-scale sheep fattening in the PLW were identified with key stakeholders using the value chain approach.

Input and output markets

Sheep market prices fluctuation was very common and often farmers take their fattened sheep to the same local market more than once and/or to different markets to get reasonable prices. There was also a problem with regard to the supply of lambs for fattening in the local market because the lamb supply is limited.

Feed and feeding practices

The traditional sheep fattening cycle takes about 6 months, and a year or so is required in the case of cattle fattening. Farmers attributed the long fattening period to lack of adequate and quality feed, poor management arising from lack of skill and knowledge on improved fattening practices and supplementary feeding methods. Similarly, empirical studies indicate that feeding is a critical factor for ruminants for both body weight gain and diseases tolerance (Tolera et al. 2000).

Credit

Smallholder farmers usually lack cash to cover innovation costs because of inadequate capital from other sources. It is therefore assumed that the relationship between adoption of innovations by smallholder farmers and credit will be positive. The number of fattened animals per cycle is usually low and little or no economics of scale can be achieved in the use of their labour and other

inputs. For this reason, use of credit to purchase additional animals (and additional inputs) is expected to improve the economics of fattening, however little or no credit is available for this purpose.

Livestock mortality

The high prevalence of various animal diseases causes high animal mortality while lack of arrangements to manage such risks was discouraging to farmers. In the past, whenever an animal, particularly oxen obtained on credit died, indebted farmers sold asset, grain, or borrowed from local money lenders with high interest rates to settle the loan for lack of animal insurance to manage the risk of livestock deaths.

Breed

Low genetic potential of the local sheep breed was identified as a major problem. However, there are good sheep breeds such as the Bonga breed in the nearby Bonga district with bigger body frames, which are good for fattening and quite suitable for Goma agro-ecology.

Lack of knowledge and capacity for market-oriented small ruminants development

The extension service, farmers and credit institutions had inadequate knowledge and skills to support smallholders to develop market-oriented small ruminant production.

4 Value chain interventions

4.1 Agricultural extension

As diagnosed, market-based sheep productivity improvement was severely hampered by lack of knowledge/information and skills both at WoARD and field levels. The following innovative ways to build skills and to capture, store and share knowledge were needed and introduced.

4.1.1 Awareness creation

To improve the understanding of the staff at the WoARD on the approach, briefings and discussions were organized for the technical staff on the value chain approach and its major components (production, inputs supply, service delivery, credit, insurance, and market linkage/information). Discussions were also held to clarify the envisaged innovations such as availability of cotton seed meal (CSM) in Goma locality and its use, and on the rationale and purpose of community-based sheep insurance scheme and the provision of credit.

4.1.2 Target PAs and farmers selection

Selection of target PAs was conducted by *woreda* OARD experts based on suitable agro-ecology for sheep and experience of the farming community in small ruminants fattening. Two potential PAs, Kilole and Koye Seja, were initially selected as potential sites for intervention. Meetings were held with each of the target PA members on major issues such as the difference between improved and traditional small ruminants fattening, socio-economic importance of enrolling more women in the intervention, community-based livestock insurance implementation strategy etc. However, achieving consensus on increased women involvement was a challenge in Koye Seja and many male farmers were strongly against it and in the end did not want to participate. At last, farmers in Kilole PA appreciated the innovative concepts and were willing to try.

4.1.3 Skill development

The project conducted training for farmers and technical staff focussing on hands-on practical training in order to create awareness about market-oriented sheep fattening and to develop skills regarding the technical aspect of improved sheep fattening. These included lamb selection, health

care, housing and use of CSM concentrate as supplementary feed. The project also facilitated training for a local DA with livestock background in the provision of first aid.

4.1.4 Knowledge management

IT-based knowledge management

In partnership with the MoARD, the project also developed the Ethiopian Agricultural Portal (EAP)—www.eap.gov.et. Amongst others, this portal contains documents on production, marketing, business service development, and training manuals for small ruminants. The project facilitated access to the internet for the extension staff in *Woreda* Knowledge Centres (WKC) and in Farmer Training Centres (FTCs)—whenever telephone lines are available.

Non-IT-based knowledge management

To capture and scale out knowledge, the project also sponsored a student to do an MSc thesis research on production and marketing systems of small ruminants in Goma district.

Awareness creation and initiation of community-based insurance scheme

The idea of initiating community-based sheep insurance emerged as a result of considering external sources of information. Based on a review of the information, efforts were made to set up the necessary organizational and institutional arrangements after the community had agreed to the envisaged insurance scheme. The initiation was facilitated through a participatory process:

- Concept note was developed for discussion with relevant experts of WoARD and then with the target community.
- Target households thoroughly discussed the by-law and made suggestions for further improvements.

Involvement and linking value chain actors

A team of experts from the Goma WoARD and IPMS staff made a visit to a private edible oil processing plant in Agaro town to assess the type, cost and volume of concentrate that could be available for the purpose of the intervention. Goma *Woreda* Office of Agriculture staff and IPMS project staff in the districts also facilitated linkages with rural microfinance, input supply services, veterinary service and marketing actors as summarized in the following value chain interventions.

4.2 Marketing

To address market constraints, two options were tried: synchronizing fattening cycle with national and religious holidays where demand for fattened sheep is high, resulting in higher product price; and linking sheep fattening group to traders. Since the fattening group could have reasonable stock size, it would be advantageous for farmers to bargain on the price and to reduce marketing costs for both parties.

4.3 Credit and insurance

4.3.1 Credit service

Oromia Credit and Saving Share Company (OCSSCo) was brought on board by IPMS to facilitate access to credit to those farmers who are willing to engage in the business. A MoU was signed between IPMS and OCSSCo to establish a credit innovation fund (ETB 213,000.00) for sheep fattening (IPMS-OCSSCo 2008). Because of the experimental nature of the scheme, IPMS agreed to guarantee 80% of any loan default, whilst OCSSCo agreed to cover the remaining risk (20%) and to administer the loan disbursement and repayment collection. Each target farmer was offered a loan sum of ETB 1250.00 to cover costs to buy five sheep and other inputs such as cotton seed meal concentrate, drugs, salt etc.

Following the normal OCSSCo procedures, 4 main groups of about 30 members each were formed and each of these groups were subdivided into sub groups of 5 to 6 persons each—much of the group formation followed the already existing Savings and Credit Association. Group collateral principles were used to deal with defaulters.

4.3.2 Community-based livestock insurance

Ethiopian society traditionally has community-based group structures such as *Idir* in which the group helps individual group members in adversity. Community-based livestock insurance (CBLI) uses this principle by making contribution to a community pool fund and using their own management structure for using the fund. Livestock insurance has its own independent executive committee elected by members responsible for receiving and examining and approving/rejecting claims for compensation by members in the event of sheep mortality-based on by-laws (see

Annex 1). The executive committee was linked with grassroots level saving and credit group to monitor individual target farmers' sheep management and to receive and do first-hand verification on death of sheep. The premium was set at ETB 10.00 per sheep or ETB 50.00 for five sheep with the consensus of target farmers. A joint saving account whereby a cashier and chairman or secretary of the executive committee could sign alternatively was opened at OCSSCo and a total of ETB 6000.00 was deposited as an initial fund. This fund was raised through the contribution of 120 target farmers in Kilole PA.

4.4 Production intervention

The key ingredients of the interventions for improving productive performance of sheep in Goma are as outlined below.

4.4.1 Appropriate lamb selection

Use of traditional and expert knowledge was made for lamb selection. Traditionally, farmers use criteria such as age, posture, and physical appearance to select sheep for fattening purpose. Age is an important factor: farmers assume that older animals gain less weight during the fattening period. Age is usually measured by number of teeth broken and a sheep which has more than two teeth broken is considered as aged. Target farmers also reported that black coloured sheep are not accepted for fattening not because of their performance in fattening but because sheep buyers prefer non-black coloured sheep. Experts of WoARD recommended lambs with live weight of about 28 kg.

4.4.2 Supplementary feed/concentrate administration

Studies have shown that cotton seed meal (CSM) is sufficient as a sole source of protein for mature ruminants such as beef cattle and sheep. The amount of CSM to be fed to lambs for fattening was determined by WoARD/IPMS experts. The recommended amount of concentrate diet ranges from 25 to 50% of the total feed based on the recommended lamb body weight of 28 kg. Accordingly, 1 kg of feed per day per lamb, of which 30% or about 300 gm of concentrate (CSM), was recommended. The cost of CSM was ETB 1.6/kg. Other feed sources such as ground maize grain, roughage and salt were included in the diet.

4.4.3 Breed improvement initiative

Bonga sheep breed, known for its fast growth rate, was introduced for demonstration purpose. Two model farmers agreed to keep four males and one female each on their farms. Performance observation and record keeping was initiated.

4.5 Input supply and animal health service linkage

4.5.1 Input supply

The Agaro Edible Oil Factory produces 100 qt of CSM per day. Considering 300 gm per sheep per day or 27kg per sheep for 3 months fattening period, the factory can supply CSM that is adequate for fattening about 133,333 sheep per year. However, since the use of CSM for fattening as well as dairy cows had not been introduced prior to IPMS, none of the community members considered it as important and did not attempt to use it. Instead, the CSM was sold to other areas, as far as Jijiga and Metehara.

An arrangement was made between the CSM producer and sheep fattening group so that the feed could be available in a sustainable way. For the first cycle of fattening in Kilole PA, 1.62 t of CSM was purchased and transported to target farmers. Other inputs supply such as roughage, salt etc. was left to the farmers themselves.

4.5.2 Leguminous forage seed multiplication and distribution

Industrial products such as cotton seed meal supply as source of protein may not be sustainable in the long run for Goma farmers since cotton seeds have to be purchased from Arba Minch. To reduce dependency on this external source, project partners developed an alternative supply system for protein. To this end, eight model farmers (which included some fattening group members) were selected and engaged in forage seed multiplication (cowpea, lablab etc.) allocating about 1/4 of a hectare each.

4.5.3 Animal health service

Health service was primarily provided by public animal health assistants (one health assistant serving up to three *kebeles*). Some of the measures that were taken included de-worming of all

sheep immediately after purchase and advising target farmers to report to WoARD veterinarians or nearby DAs immediately after observing any symptom of illness with their sheep.

5 Results and discussion

5.1 Performance of improved fattening system

Survey data summarized in Table 1 indicate that all farmers purchased sheep for fattening, mostly from the local market. Good market linkage was created by the sheep fattening farmers' initiative with sheep traders and urban major customers and no marketing problems were observed.

Moreover, the effort to synchronize the supply of fattened sheep with holidays started bearing fruit in terms of improving producer prices. Sales of sheep took place at farm gate, local market and district market.

Table 1. *Fattening practices (N = 120)*

No.	Themes	%	Remark
1	Trained in improved feeding practice	100	
2	Aware of three months fattening period	88	
3	Used the recommended concentrate feed rate	70	30% of the farmers used less than the recommended amount of concentrate
4	Managed to fatten in three months' time	74	

Almost all farmers indicated that they had used cotton seed meal, maize, salt and leftover food stuff for sheep fattening. About 88% expressed that they were well informed that their sheep could attain market weight in just three months' time provided that the recommended feeding system and other conditions were maintained.

About 70% of the farmers used the recommended volume of concentrate per day per sheep, that is, 300 g. The remaining target farmers used lower amounts, which varied from 250 g to 50 g per sheep per day. And about 74% of the farmers indicated that they had managed to fatten some or all of their sheep within the recommended timeframe of three months.

Average sales price per sheep after 3 months was ETB380, while average purchase price was ETB228.92. A household who fattened 5 sheep per single cycle (Table2), managed to earn an average net return of about ETB 445.23 in one cycle.

Table 2. *Income and expenditures fattening 5 sheep in 3 month*

Description	ETB* per cycle
Income	
• From sale (5 × 380 ETB)	1900.00
Expenses	
• Sheep purchase	1144.6
• Interest	34.17
• Feed	216.00
• Insurance	50.00
• Veterinary drugs	10.00
Total	1454.77
Net profit per cycle	445.23

* ETB (Ethiopian birr). In February 2013, USD 1 = ETB 18.25.

Source: IPMS Goma survey (2008).

The profit margin varied among households due to the difference in management capability of individuals such as appropriate feeding practices as well as whether the farmers bought and used for fattening lambs with recommended weight, age, body structure etc. In general, sheep fattening is a gainful business for small farmers particularly women, who performed best in the first phase.

After realizing the initial success in the first cycle of fattening in Kilole PA, the Livestock Production and Development Agency (LPDA) of Goma *woreda* embarked on the scaling out of the fattening intervention in two new PAs. A total of 76 beneficiaries (59% female) participated in the scaling out program and bought 380 lambs for fattening. Due to loan repayments problems by a few members (see credit), subsequent fattening cycles in Kilole PA were delayed but resumed under the leadership of an energetic female farmer who is now fattening up to 15 sheep in one cycle.

5.2 Feed supply, forage seed production and health service delivery improvement

The oil factory supplied the required amount of CSM in bulk to the farmers in Kilole PA, from where it was distributed to individual farmers. Following the launch of the forage seed multiplication and distribution strategy, 8 entrepreneurial farmers produced 8 quintals of forage seed in the first year (cowpea, lablab etc.). At a seeding rate of 25 kg, the produced amount is sufficient to cover 33 ha of land. The seeds were sold to other farmers at ETB 16/kg, but the selling price was higher (ETB 20/kg) for traders who bought forage seed for retailing. In subsequent years, the *woreda* office of agriculture engaged 3 additional model farmers in forage seed multiplication and in total 11 forage seed producing farmers managed to produce 11.5 quintals of different forage seeds which is adequate to plant 44 ha.

Some improvements have been observed in terms of demand for veterinary service primarily due to awareness creation about the importance of health care in sheep fattening. Of the 36 farmers who reported problem of sheep health, 14 managed to get veterinary service. Drugs are available in veterinary drug venders' shops in Agaro town and many target farmers did not face any problem in getting drugs prescribed by veterinarians. However, significant number of target farmers reported that getting veterinarian service was very difficult mainly because of limited number of technical staff available and location of the staff which is far away from farmers.

5.3 Community-based livestock insurance

Community-based livestock insurance as a new innovative approach was accepted by all of the target farmers and effectively implemented. An assessment was made about the levels of awareness of members about the community-based insurance scheme and their perceptions with regard to the level of premium, management of the common pool fund, claim application and compensation process, and over all importance of such a scheme. The result (Table 3) shows overwhelming support for the scheme by the participants. Almost all of the scheme members expressed their satisfaction with the service.

Table 3. *Members' (120) awareness about and perceptions of the insurance scheme*

Item	Percentage
Aware of the community sheep insurance scheme by-law	100
Aware of how the common pool fund managed	92
Aware of the level of premium per sheep (head)	100
Trust that the committee managed the fund properly and abided by the by-law	78
Animal death verification process is effective	85
Would like to contribute more to the scheme	80
Overall the scheme is useful and would like to continue with it	97

Source: IPMS Goma survey (2008).

Since the launch of the scheme, out of 510 sheep purchased by farmers, 15 sheep (3%) were reported dead due to disease and wild animal attack (Table 4). Farmers reported the loss of their sheep through their Savings and Credit Group (4 farmers) and DAs (13 farmers). Of the 15 claims, 13 were approved and the claimants were compensated (80% of buying price) for the loss by CBLI, whilst two claims for compensation were rejected based on conditions laid out in the by-laws.

Table 4. *Total death record and major causes in the first cycle (N = 510)*

No	Causes	No. of dead animals	%
1	Disease	10	2
2	Wild life attack	5	1
3	Poisoning	0	0
3	Theft	0	0
4	Roadside car accident	0	0
	Total	15	3

Source: IPMS Goma survey (2008).

Although the process of verifying and approving claims and effecting the compensation on average took about a month, this was not perceived as a big problem by the claimants. Nonetheless, there is an outstanding issue awaiting resolution. The by-law demands that the death of sheep ought to be verified by a veterinarian or animal health assistant. Yet, of the reported 15

sheep deaths, only two were confirmed by a veterinarian, whilst the rest were verified by the credit and saving committee and approved by the community-based livestock insurance fund management committee.

5.4 Credit

The innovative credit service package helped farmers in acquiring basic inputs such as cotton seed meal, veterinary drugs, salt, and livestock insurance premium which were critical in the fattening practice. Part of the credit was provided in kind (feed). Records at the OCSSCo Office showed that all female group members repaid the loan. However, some male members in the sub groups did not. This default caused considerable problems for all other members since OCSSCo applied the collateral principles at the group (30 members) rather than the subgroup (5 to 6) level. At last, some members decided to pay for defaulting group members in order to revolve the credit fund for the next cycle.

5.5 Extensions services

DAs remain the main source of agricultural knowledge and information in the intervention area. During the first cycle fattening, 66% of the farmers were visited two to three times by local DAs and 18% reported that they were visited at least once. The visited farmers (84%) found the advice given by the DAs as useful. In addition, 64% of the fatteners reported receiving important advice directly from livestock experts. Interestingly however, 73% of target farmers reported accessing useful knowledge and information through farmer-to-farmer sharing in meeting (group discussion).

5.6 Organizational and institutional arrangements

Prior to intervention, the interaction and linkages among actors to support a given commodity was observed to be negligible. As a result of the value chain approach, a number of actors have directly or indirectly been involved in different stages in the sheep fattening chain development. The key actors included concentrate feed supplier, private edible oil processing plant, both private and public veterinary service providers, Oromia Savings and Credit Share Company, livestock production and development agency, animal health teams, urban agriculture, women affairs, DAs,

local saving and credit group, community-based livestock insurance committee, and *kebele* administration.

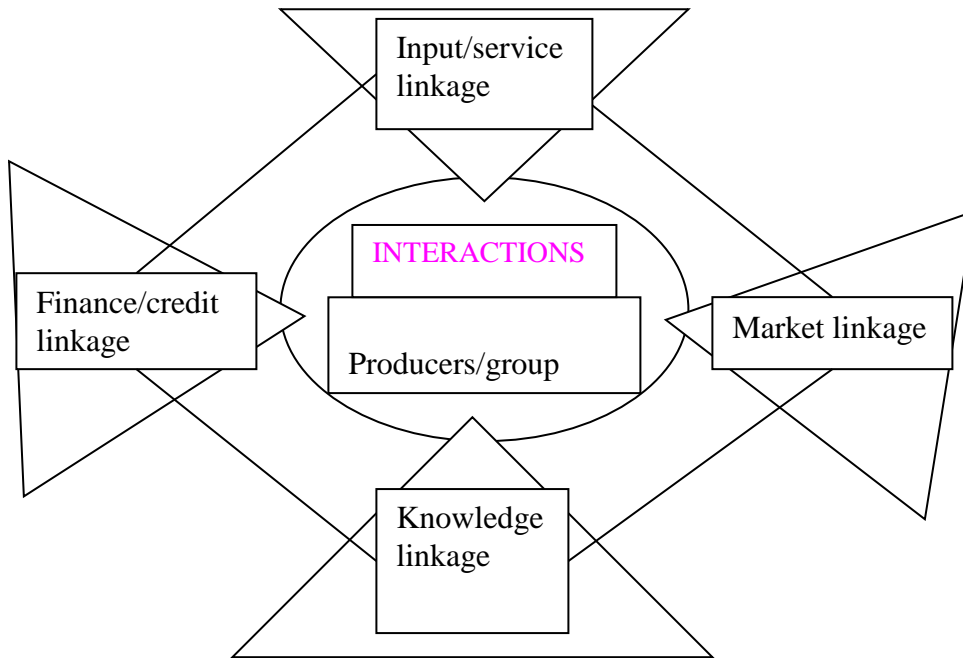


Figure 2. Sheep fattening farmers/group linkages and interactions.

5.7 Other indirect benefits

After learning about the initial success story, the Agaro Urban Agriculture Office took up the improved sheep fattening practice and promoted it as income generation activity among urban female youth group (8 persons) and male group (9 persons). Nonetheless, these groups opted for using grain mill leftover instead of CSM because of the availability and lower price of the former though its nutritive value is uncertain. Similarly, Goma Central Prison started cattle fattening with 69 oxen feeding on CSM introduced with technical support from LDPA. The initial result showed that oxen could take up significant weight gain in just a month, which has been perceived as unusual by Goma community. Further, as a result of the successful promotion by IPMS and

acceptance of CSM, increasing demand is being created for the by-product, and thereby benefiting the Agaro Edible Oil Factory. Women participation in small ruminants fattening in general increased because of the inclusion of female farmers in skill and knowledge development, access to credit and inputs and income generated. As a result of leading the group of fatteners in her PA, a lady has now been selected by the OoARD to chair PA level female farmers credit and saving group.

6 Key lessons

- Cotton seed meal as a supplementary concentrate feed contributes to fast weight gains in sheep with significant reduction in the duration of fattening.
- Community-based safety-net is effective in addressing risks of animal mortality and it can be socially and financially sustainable. It is simple, less bureaucratic and transparent participatory approach.
- Linkage facilitation and appropriate organizational and institutional arrangements are crucial in effective value chain approach to small-scale sheep fattening business development.
- Enhancing understanding among partners and target farmers of the new approaches, regular and participatory process and outcome monitoring and learning are critical to achieve incremental improvements.

7 Challenges and recommendation for scaling out/up

7.1 Credit service

Timely and swift disbursement of loan is essential as time matters in animal fattening. It has important implication for both input costs and market opportunity (e.g. making fattened animal ready for holidays). Peer group collateral system hampered revolving of credit funds as a result of delayed loan repayment. Reducing the size of collateral group, unnecessary meetings, and also looking at option and alternative to group lending such as encouraging private saving and arranging overdraft facility should be explored. Community-based livestock insurance scheme could be used as collateral for members to access credit. Target farmers and OoARD staff were not sufficiently aware of the working principles and procedures of OMF including different charge, interest rate, repayment schedules etc. and this has created some rift between OMF and other actors. To avoid such misperceptions, integrating saving and credit and financial management education into rural financial service provision is required.

7.2 Community-based insurance

The scheme should continue to mobilize fund through premium charges for every additional batch of sheep bought for fattening. There is imperative need to compensate the scheme management committee members for their time and to cover costs incurred to withdraw money for settling compensation claims from the scheme account held with banks at a distant place. To scale out this intervention, a public or private institution should be charged with developing, supporting and monitoring such schemes.

7.3 Veterinary service

It is necessary to consider options in addition to the conventional public veterinary service delivery, such as the possibility of training, equipping and deploying Community Animal Health Workers (CAHWs) preferably young women, in addition to strengthening private veterinary service provision.

7.4 Female participation

Make deliberate effort to enhance awareness about the necessity of ensuring equal female participation in such a scheme and create an innovative incentive for development agents to make extra effort towards its realization.

7.5 Lamb supply shortfall

Consider linking with farmers for the supply of lambs for fattening and encouraging private entrepreneurs to engage as middlemen. Develop private/group sheep breeding and lambs production and supply as a business locally, synchronizing it with the fattening schedule. Strengthen the initiative at experimental level to multiply the Bonga sheep breed on private (model farmers) farms.

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Annex 1 Community-based livestock insurance system by-laws for small ruminant animals fattening for Kilole PAs

Definitions

Kilole-Koye Seja small animals fattening group: A group of 120 men and women organized by OoARD/IPMS in Kilole to participate in improved fattening program

Community-based Livestock Insurance: It is a loss coverage (insurance) scheme for death and /or unrecoverable damage of small ruminant animals in the course of fattening program

Small ruminant animals: Registered small ruminants acquired by the fattening group members through credit.

Client: Member of the credit group

Claim approval subcommittee: A committee elected by the credit group members in each PA to give first stage investigation and recommendation for decision on the claim for coverage

Claim approval executive committee: A committee elected by the subcommittee members who gives final decision on the claim

Article I

General

1. A fattening group member (client) who has successfully completed obligation by credit managing institution and the credit group has the right to claim for any loss of his or her registered small ruminant animal.
2. Loss coverage for each registered small ruminant animal shall not exceed 80% of the initial cost and the remaining 20% shall be covered by the bearer.
3. Replacement animal shall not be below the set standard, which is 28 kg?
4. Replacement shall be effected within 10 days of release of coverage.

Article II

Fund source

The final ingredient in a formal insurance program is a dedicated fund of cash investment from which the claim and related costs are covered. In this particular case, the source of fund is the contribution from each member of the credit group. Each member of the credit group shall contribute ETB 10.00 for each sheep he/she owns through credit.

Article III

Fund management

Typically, third party trustee such as bank administers the fund, receives deposits, and make disbursements for covered events as per the bylaw. However, as Kilole-Kota credit group is at its infant stage to acquire such position, fund management shall be undertaken by its own elected executive committee. A subcommittee composed of three members will be established in each PA and an executive committee with three members shall be elected from these subcommittees and the executive committee shall give final decision on the claim.

Article IV

1. Roles and responsibilities of executive committee and subcommittee

1.1 Subcommittee

Subcommittee shall be accountable to and report to executive committee and shall have the following activities.

1. Receives claim from credit group member.
2. Verifies the claim through the credit subgroup as well as using its own mechanism
3. Collects a written justification from all sub credit group members either for or against the loss cover.
4. Reviews it fully and passes it to the executive committee with attached comments
5. Final report of the subcommittee assessment shall be completed and submitted to the executive committee only 10 days after the claim is reported.

1.2 Executive committee

The executive committee shall be accountable to the general assembly and will undertake the following activities.

1. Reviews the claim report submitted by each subcommittee and verify using its own mechanisms
2. If necessary, it shall recommend further investigations
3. Decides whether to cover or not to cover the loss
4. Draws the cash and effects payment to the claimer
5. Makes final decision within 5 days after the subcommittee reported to it.

Article V

1. Preconditions for claim

Each credit group member must strictly follow the extension agents or other livestock professionals' advice provided that it has been delivered in a proper channel. Among others, the client:

1. Shall follow feeding system as recommended
2. Shall inspect his/her livestock condition regularly
3. Shall consult the veterinarian whenever he/she finds it necessary
4. Shall not rear in areas where wild animals attack is common
5. Shall be responsible for taking feed home on time and keeping in a dependable barn

2. Death of animal due to various cases and claiming procedures

2.1 Sudden death due to poisonous plant or insect attack etc.

1. Client shall report immediately to the subcommittee and the veterinarian
2. Carcass of dead animal shall be inspected by the veterinarian
3. If necessary, sample shall be taken and sent for further laboratory test
4. Client shall submit claim letter with the report of the veterinarian to seek claim approval from subcommittee
5. Claim approval subcommittee shall review the case and pass to the claim approval executive committee with its comment within 5 days
6. Claim approval executive committee shall review the case and give final decision in 5 days' time

2.2 Death due to diseases

1. Client shall report to the veterinarian for early assistance and shall notify the small credit group members
2. Subsequent visits of the veterinarian, his prescriptions and findings shall be recorded.
3. Possible causes of animal death shall be stated by the veterinarian
4. Claim letter must include the veterinarian's complete report
5. Claim approval subcommittee shall review the issue, add its comment and pass it to the claim approval committee within 5 days. If the veterinarian report verifies that the cause is due to negligence of the client, the claim to cover loss could be denied

2.3 Wild life attack

Wild life attack is common in some places. However, any event related to wildlife attack shall be verified by the grassroots credit group where the client is a member. In this case:

1. Client shall report to smaller credit group in 12 hours' time after the attack; he shall also notify to the claim authorization subcommittee in his PA.
2. Credit group members shall assess the situation thoroughly and release a written verdict to claim authorization subcommittee within 5 days
3. Claim authorization subcommittee shall receive the report from smaller credit group review it and pass to credit approval executive committee with comments within 5 days
4. Claim approval executive committee shall review the claim and release the decision within 5 days.

2.4 Theft

Theft in the community has various forms requiring watchful eyes of neighbours and/or smaller credit group members for verification. Among others:

1. Client shall report to the smaller credit group members within 12 hours' time after the theft has taken place
2. Smaller credit group members shall review the case thoroughly and forward findings with comments to claim approval subcommittee within 10 days after they received the clients request
3. Claim approval subcommittee shall review the credit group report and also verify using its own technique and release its final decision to claim approval executive committee within 5 days.
4. Claim approval executive committee shall review the report of subcommittee and shall release its final decision to the client within 10 days' time.

Article VI

Other conditions, disease outbreak, war, robbery, car accident etc.

1. In the event that animal disease outbreak occurs in the locality or if the client's animal owned through credit dies, again this shall be verified by professionals and payment effected
2. If war or any other visible social disorder causes death of the clients' animal and when this is confirmed by group member, payment could be effected.
3. For death of animal due to car accident, or drowning, or falling into holes or ravines, compensation shall be effected only when the small credit group members confirms that that this is not due to negligence of the client.



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