

## Livestock improvement: a pathway for poverty reduction

*Livestock development offers a viable pathway out of poverty for rural upland farmers. A combination of better feeding and animal management, combined with the strategic use of veterinary medicines, can provide effective, achievable and sustainable solutions. The Upland Research and Capacity Development Programme (URDP) is testing out new approaches to livestock management. The objective of the activities is to increase livestock holdings by improving the management capacity and techniques of the local people.*

### The tale of two pathways: group and seed production

In Phonexay District, Luang Prabang Province, livestock has been identified as one of the priority areas of development. In 2004 there were about 5,000 cattle in the district. Today (2010), there are now more than 9,000 cattle. The district governor aims to increase this to 30,000 cattle by 2015.

#### *Livestock group development*

Phonethong Kumban has good land for breeding livestock but most farmers were, until recently, exclusively subsistence farmers and animals often roamed with little restriction on their movement.



*Communal grasslands are an integral part of the group management model both in terms of maintaining food and providing a new technical option that farmers can then do on their own*

In 2005, URDP and the farmers in Phonethong Village established an action research pilot to see how livestock (goats and cows) could be better managed as a group. Initially, the project provided grass seed to develop fodder and a grazing area and then the project handed 30 cows over to the community. There have now been three rounds of farmers participating in activity (see table). A total of 41 families participated in the activities over the last 5 years. There have been only 5 families (all Khamu) that have dropped out of the activities which is impressive and shows the interest of the farmers.

Generation	Members	Livestock provided	Total 2010
First generation	14	28	60
Second generation	13	26	34
Third Generation	14	-	-

By the end of 2008, there were 92 head of cattle, of which 26 were still on loan from the project with the second-generation group. Now (2010) the herd has reached 94 and all animals in the first and second generations have been returned. The group is preparing to give cattle to the third generation group.

Over the period of five years, 28 head of cattle have been sold. This means that the group has successfully produced 122 cattle for the members. Some members have gained income from the sale of cattle, but as the objective has been to increase herd size, this has not achieved significant levels. Development in the village, such as construction of new houses, is financed primarily through the sale of livestock, including buffalo and other cattle that are raised outside of the group.

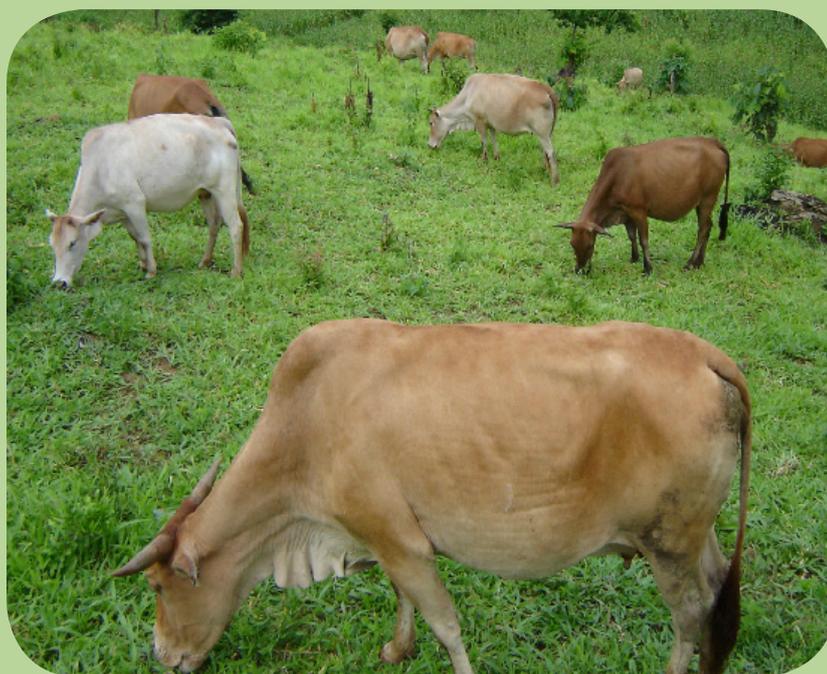
## *Seed grass development*

One innovation tested in Phonethong was the production of fodder grass seed both communally and by individuals. The original plan within the URDP model for support was to plant communal grasslands for locally consumed fodder. However, farmers raised two problems. First, there was an unequal labor burden in managing the grassland and second there was an inability to provide sufficient fodder in the communal grassland area alone.

After learning how to plant in the communal lands, many farmers start to plant forage grass on their own. This was spurred on by URDP purchasing the seed grass for use in other areas thus creating an initial market for grass seed.

In 2008, approximately 50 farmers gained income from the sale of grass seeds. A total of 7,800 kilograms of seed was sold, consisting of four varieties. The average level of cash income was 2.1 million kip per farmer, with a range of almost 8 million kip to just above 100,000 kip. This is a significant increase in annual cash income, although further analysis will have to be done to understand the impacts on household economies. In addition, a number of farmers from surrounding villages have also adopted the forage grass seed planting.

Planting grasslands is key to the sustainability of the group. It has provided forage for the cattle as well as a source of income from the sale of grass seed. It is now clear that the group has reached the limits of expansion of both grasslands and herd carrying capacity. The main challenge in the future is to ensure sustainable market opportunity for cattle and grass seed sale.



*The cattle herd has increased dramatically in five years due to new management and feeding techniques*

## **Impacts**

**Shifting cultivation stabilization:** The development of forage and seed production both communally and by individual farmers has contributed to a reduction in shifting cultivation area. With the introduction of new techniques farmers can also work on other activities such as collection of NTFPs, growing sesame, paper mulberry and other activities.

**Poverty reduction:** The livestock activities have contributed to poverty reduction efforts as many families now have more cattle and assets which they can use. However, it has been less effective in reaching the poorest of the poor as it can be seen with some members dropping out because of labour constraints. Special consideration should be given to the poorest families so they can participate in such activities once they have been shown to be appropriate in certain areas.

**Scaling out:** farmers in neighboring villages have seen the expansion and emulated both the group management activities as well as the individual planting of forage for seed production. Again, this shows the power of farmer-to-farmer scaling out.

**Inequities amongst ethnic groups:** it is recognized that certain ethnic groups have benefited more than others. In this case, the Khamu seem to be struggling to participate in the activities. The reasons for this need to be better understood the underlying reasons for this. Khamu generally have less secure access to land and face difficulties in making the necessary investments, which means that they are often marginalized from the group activities. The objectives and targets of the group have at times not been clear to the Khamu, who may have different priorities within their livelihood strategies.

## **Lessons for policy makers**

### *Markets are needed to ensure scaling efforts are viable*

The initial success of both group management of cattle and individual seed production are dependent on viable markets for the cattle and the seed. This is especially so in areas like Phonethong where – unlike places with good access to roads, transport and regional marketplaces – there are major constraints to farmers' using their own resources and networks to develop market linkages by themselves. For livestock



### ***Basic services need to be included such as vaccination and seed quality control***

As the herd grows, providing appropriate health services is essential to ensure that there are no outbreaks of disease that could decimate the herd. In addition, it was found that the quality of seed produced is low in terms of germination and moisture content. It is important that appropriate services are provided either by the technical service centre or by local providers (village veterinarians or seed producers). In this instance, the technical service center has played a key role to establish the groups. Further support is required to improve their ability to provide group-based management support to the groups as well as search for marketing opportunities.

raising, the herd is reaching its natural carrying capacity and there is a need to find suitable markets so the cattle can be sold regularly. In terms of seed markets, Farmers' expectations have been raised by the initial level of purchase by URDP and there is a need to support farmers to now find new markets. The project and district extension staff can play a key role in supporting farmers to find new market opportunities.

### ***Group versus individual management***

Group formation has not been without its challenges. Activities expanded on an individual basis very well but 'communal activities' were challenging because the equitable distribution of labour and benefits were not carefully considered. On the one hand, farmers recognize the critical importance of communal grasslands to feed the herd. On the other, most farmers prefer to work on their own rather than as a group as the cost-benefits are too high.

Farmers expressed a strong preference for planting fodder grass in individual fields, rather than the joint group fields. The incentive structure for participating in the group's communal planting activities are extremely low and take a lot of labour. The incentives for planting in individual fields, using technology introduced, seem to be much more interesting.

In addition, facilitating groups has proven difficult for district staff, who are more versed in technical matters. It was found that there is a need to develop better group leadership skills around facilitating between competing interests (i.e. the cattle and goat groups) and how to mobilise group resources to access critical veterinary services.

### ***Coordination amongst sectors is essential to support poverty reduction efforts***

Cross-sectoral support is essential if such activities are going to play a role in poverty reduction efforts. In this instance, three main areas of coordination are needed. First, better coordination with the private sector is needed for ensuring sustainable markets.

Second, there is a need to improve coordination with the banking sector. Last year, 19 households took loans, in two sub-groups, from the Nayobai Bank to buy cattle. The total loan amounted to 150 million kip. Na Ngoi and Na Ngiu villages have also taken approximately 100 million kip in loans to purchase livestock. Only after the loans were finalized did the farmers come to the project and ask for technical assistance. It is imperative that banks loans are coordinated with technical support and market feasibility so as not to put farmers further into debt.

Finally there is a need to coordinate with wider developed efforts. Phonethong village will become a district by 2015. New roads link the area with the outside, Xieng Khouang on one side, and Pak Saeng/Viengkham on the other. This is a major opportunity, in theory, but villagers are still very uncertain of the market.

One of the reasons that grassland area has decreased may be partially related to the loss of village land for the new school facilities that have been created. Another smaller, but still important factor is the loss of agricultural lands to road construction. Finally, approximately 15 new families will be joining the village. Eight or so Hmong households have already set up new houses, and the rest will be arriving within the year.

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