



Ministry of Agriculture and Forestry
National Agriculture and Forestry
Research Institute



Case Study on Production and Market Conditions for Corn in Namor District, Oudomxay Province

Progress Report



Khampou Phouyyavong and Daniel Talje

Socio-Economic Research Component



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Socio-Economic Research Component

**Lao-Swedish Upland Agriculture and Forestry Research
Programme**

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ABBREVIATIONS

APB	Agricultural Promotion Bank
DAFEO	District Agriculture and Forestry Extension Office
DCO	District Commerce Office
LSUAFRP	Lao-Swedish Upland Agriculture and Forestry Research Program
NAFReC	Northern Agriculture and Forestry Research and Extension Center
NAFRI	National Agriculture and Forestry Research Institute
PAFO	Provincial Agriculture and Forestry Office
PAFEC	Provincial Agriculture and Forestry Extension Center
PIHO	Provincial Industry and Handicraft Office
PCO	Provincial Commerce Office

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EXECUTIVE SUMMARY

This ongoing case study documents production and market trends for corn in Oudomxay Province with particular focus on the LSUAFRP project villages in Namor District (Kokfat, Phangthong, Pangdou, Phousang, Mixay, Namorneua and Namortai).

The case study surveyed performance of the market and the key issues that arose including: access to market information for farmers and traders, and domestic market policies and international trade policies. In addition, the quality of production was also reviewed. The effects of land characteristics, farmers' access to credit, ability to get feedback and proper monitoring of their cropping practices, provision of technical information and post harvest techniques were also reviewed.

The study shows that:

- While growing and trading corn have been profitable activities for farmers and traders in Namor District up to present, they might be less fortunate in the future. The main reason is that China, which receives about 90 percent of all corn produced in Oudomxay Province, currently stopped the import from Laos.
- In order to cope with the problematic situation, diversification in terms of selling to different markets is encouraged. Even though the import stop will be lifted in the future, it is recommended that traders from Oudomxay Province expand their export shares to Vietnam and Thailand to spread the risks from sudden changes in trade policy.
- Some farmers in LSUAFRP target villages experience problems with fungus and insect attacks on the corn while they are waiting for traders to come to the village. This is partly due to insufficient storage facilities. Indirectly, it is also a result of lack of access to basic market information. In the present situation, farmers do not know when the traders will come to the village and buy the produce. This tends to keep the storage time long and exposure to fungus and insect attacks high.
- If dialogue between traders and farmers could be established, traders could come to the villages immediately after harvest. If so, storage becomes less of an issue and fungus and insect attacks can be avoided. That will have positive effects on the quality of the produce and ultimately on the income generation for farmers.

ບົດສັງລວມຫຍໍ້

ບົດລາຍງານ ສະບັບນີ້ ໄດ້ສະເໜີຜົນຂອງກໍລະນີສຶກສາ ກ່ຽວກັບ ການຕະຫຼາດ ແລະ ແນວໂນ້ມ ດ້ານຕະຫຼາດ ສາລີ ໃນ ແຂວງອຸດົມໄຊ ເຊິ່ງໄດ້ດຳເນີນ ໃນບັນດາບ້ານເປົ້າໝາຍຂອງ ໂຄງການ ຄົ້ນຄວ້າ ກະສິກຳ ແລະ ປ່າໄມ້ ເຂດພູດອຍ ລາວ - ຊູແອດ ຄື: ບ້ານ ກິກຜາດ, ປາງທອງ, ປາງດູ່, ພູຊາງ, ມີໄຊ, ນາໜ້ເໜືອ ແລະ ນາໜ້ໃຕ້, ຂອງ ເມືອງນາໜ້ ແຂວງອຸດົມໄຊ.

ການສຶກສາຄັ້ງນີ້ ໄດ້ສຶກສາເຖິງຜົນກະທົບ ຂອງການເຂົ້າເຖິງຂໍ້ມູນຂ່າວສານການຕະຫຼາດ ຂອງ ຊາວກະສິກອນ ແລະ ຊາວຄ້າຂາຍ ພ້ອມ ນະໂຍບາຍ ການຕະຫຼາດພາຍໃນ ແລະ ການຄ້າຕ່າງປະເທດ ທີ່ມີ ຕໍ່ ການຕະຫຼາດສາລີ. ນອກຈາກນີ້, ກໍຍັງໄດ້ທົບທວນ ເຖິງຜົນກະທົບ ຂອງຄຸນລັກສະນະຂອງດິນ; ການເຂົ້າເຖິງແຫຼ່ງທຶນ; ສະພາບການໄດ້ຮັບ ຄຳແນະນຳ ສຳລັບ ການຕິດຕາມຄວບຄຸມ ວິທີການປູກ ທີ່ ເໝາະສົມ; ການສະໜັບ ສະໜູນ ຂໍ້ມູນດ້ານວິຊາການ; ແລະ ເຕັກນິກຫຼັງເກັບກ່ຽວ ທີ່ມີ ຕໍ່ ປະລິມານຜົນຕະຫຼາດ ແລະ ຄຸນນະພາບ ຂອງສາລີ.

ຈາກການສຶກສາໄດ້ພົບວ່າ:

- ປະຈຸບັນນີ້ ເຖິງວ່າ ການປູກສາລີເປັນສິນຄ້າ ຈະສາມາດສ້າງລາຍຮັບໃຫ້ແກ່ຄອບຄົວ ຊາວກະສິກອນ ແລະ ຊາວຄ້າຂາຍ ໃນເມືອງນາໜ້ເປັນຢ່າງດີກໍຕາມ, ແຕ່ໃນອານາຄົດ ອາດຈະມີບັນຫາ ຍ້ອນເຫດຜົນຫຼັກ ທີ່ວ່າ ສປ ຈີນ ທີ່ເປັນຜູ້ນຳເຂົ້າ ເຖິງ 90% ຂອງສາລີ ທີ່ຜະລິດໄດ້ ໃນແຂວງອຸດົມໄຊ ກຳລັງຫ້າມການນຳເຂົ້າສາລີຈາກ ສປປລາວ.
- ເພື່ອເປັນການແກ້ໄຂບັນຫາດັ່ງກ່າວມານັ້ນ, ຄວນຈະມີການສົ່ງເສີມໃຫ້ມີຫຼາຍຊ່ອງທາງການຈຳ ໜ່າຍ ເພື່ອໃຫ້ມີຕະຫຼາດຮອງຮັບຫຼາຍແຫ່ງ. ສະນັ້ນ, ຈຶ່ງແນະນຳໃຫ້ຜູ້ສົ່ງອອກ ໃນແຂວງອຸດົມໄຊ ໄດ້ຂະຫຍາຍຖານການສົ່ງອອກ ໄປຍັງ ສສ ຫວຽດນາມ ແລະ ໄທ. ໃນອານາຄົດ, ເຖິງວ່າ ສປ ຈີນ ຈະຍົກເລີກ ການສົ່ງທ້າມການນຳເຂົ້າສາລີ ຈາກ ສປປ ລາວ ກໍຕາມ, ຖ້າມີຖານການຕະຫຼາດ ຮອງຮັບ ຫຼາຍແຫ່ງ, ຄວາມສ່ຽງທີ່ອາດຈະເກີດ ຈາກການປ່ຽນແປງ ທາງດ້ານນະໂຍບາຍການຄ້າ ແບບກະທັນຫັນ ຈະມີໜ້ອຍ.
- ຊາວກະສິກອນບາງສ່ວນໃນໜູ່ບ້ານເປົ້າໝາຍ ຂອງໂຄງການ ຄົ້ນຄວ້າກະສິກຳ ແລະ ປ່າໄມ້ ເຂດພູດອຍ ລາວ-ຊູແອດ ເຄີຍພົບບັນຫາເລື່ອງ ເຊື້ອລາ ແລະ ແມງມອດ ທຳລາຍເມັດສາລີ ໃນຂະນະທີ່ລໍຖ້າພໍ້ຄ້າເຂົ້າມາຊື້ຢູ່ບ້ານ. ບັນຫານີ້, ສ່ວນໜຶ່ງ ກໍເນື່ອງມາຈາກ ການມີສິ່ງອຳນວຍ ຄວາມສະດວກ ໃນການເກັບຮັກສາ ບໍ່ພຽງພໍ. ອີກດ້ານໜຶ່ງ, ຊຶ່ງເປັນສາເຫດທາງອ້ອມ, ກໍແມ່ນ ເນື່ອງມາຈາກ ການຂາດຂໍ້ມູນຂ່າວສານການຕະຫຼາດ. ໃນສະພາບປະຈຸບັນນີ້ ຊາວກະສິກອນ ແມ່ນບໍ່ຮູ້ເລີຍ ວ່າເມື່ອໃດພໍ້ຄ້າຈະມາຊື້ສາລີ. ສະນັ້ນ, ຈຶ່ງມີແນວໂນ້ມທີ່ຈະ ເຮັດໃຫ້ເວລາ ຂອງ ການເກັບຮັກສາສາລີ ແກ່ຍາວ ຊຶ່ງຈະເປັນຜົນກະທົບຕໍ່ເນື່ອງໄປຍັງ ການເຮັດໃຫ້ສາລີ ມີຄວາມສ່ຽງ ຕໍ່ການຖືກທຳລາຍ ດ້ວຍເຊື້ອລາ ແລະ ມອດ ສູງ.
- ຖ້າຫາກມີການປຶກສາຫາລື ແລະ ສ້າງຂໍ້ຕົກລົງໄດ້ ລະຫວ່າງຊາວກະສິກອນ ກໍຈະສາມາດ ເຮັດໃຫ້ພໍ້ຄ້າ ເຂົ້າມາຊື້ຜົນຕະຫຼາດໄດ້ທັນທີ ພາຍຫຼັງທີ່ປະຊາຊົນສຳເລັດການເກັບກ່ຽວ. ຖ້າເຮັດໄດ້ ແນວນັ້ນ, ບັນຫາທີ່ເກີດຈາກການເກັບຮັກສາ ກໍຈະມີໜ້ອຍ ແລະ ກໍຈະສາມາດຫຼີກລ້ຽງໄດ້ ບັນຫາ ການທຳລາຍຂອງເຊື້ອລາ ແລະ ແມງມອດ. ພ້ອມດຽວກັນນັ້ນ, ມັນກໍສົ່ງຜົນ ເຮັດໃຫ້ ຜະຫຼິດຜົນ ສາມາດຄົງຄຸນນະພາບໄວ້ໄດ້ດີກວ່າ ແລະ ສຸດທ້າຍກໍເຮັດໃຫ້ຊາວກະສິກອນ ໄດ້ຮັບຜົນຕອບແທນ ຈາກການຂາຍ ດີຂຶ້ນໄປດ້ວຍ.

1. INTRODUCTION

The Lao-Swedish Upland Agriculture and Forestry Research Programme (LSUAFRP) started in 2003 to undertake on farm research in the uplands of Phonsay District, Luang Prabang Province, and Namor District, Oudomxay Province. The overall objective is to alleviate poverty among upland farmers by developing technology options that improve the productivity and sustainability of existing farming systems. This is done by implementation of on farm trials focusing on 14 different farming systems technology options. One of these technologies is the corn + legume intercropping system. The research trials show promising results with good growth and high acceptability by the farmers. Being a promising technology option in terms of productivity is not enough though. In order to have a positive effect on farmers' living standard there must also be a well performing market where the produce can be sold. Knowledge about the functioning of such a market is crucial to gain before recommendations to farmers and policy makers are given. Hence, the justification for undertaking this study is to provide such information.

1.1 Objectives

The overall objective of this case study is to document market and production conditions for corn in Namor District with a focus on the LSUAFRP project villages. The lessons learnt will then be valuable for LSUAFRP staff, policy makers and extension workers. Specifically, the study aims to:

1. Document the production and commercial status of corn at provincial, district and village level.
2. Map out the trade flows along the value chain: from the seed to the end user. In this phase of the study, only domestic trade flows will be covered.
3. Highlight the costs and revenues corn producing farmers face.
4. Explain what factors that drive production and market performance.
5. Suggest possible improvements of factors that influence production and market performance.

1.2 Methodology

The study started with a literature review of previous market studies (see Vernon 2005, Manivong et al. 2005) conducted in the uplands of Laos coupled with information gathered from different key informants. The knowledge gained from these sources made it easier to develop the guidelines used for the primary and secondary data collection. Based on the semi structured interview guidelines, quantitative and qualitative information was collected through interviews with the village leaders and 5-8 corn growing farmers in each of the LSUAFRP project villages:

- Pangthong
- Kokfat
- Pangdou
- Namor Tai
- Namor Nuea
- Phousang

The objective of the research has been to interview approximately as many women as men. We were, however, not able to keep up with this goal. This is partly due to the fact that all the village headmen are men, but also tend to be a result of cultural and social factors that prevent women from participating in meetings. Hence, about 30 percent of the respondents were women.

Interviews with one respectively two traders were carried out in Namor and Kuang village as well as informal discussions with two traders at the Mouten border to China. Further, interviews and secondary data collection were undertaken with officials at:

- The Provincial Agricultural and Forestry Office (PAFO)
- The Provincial Commerce Office (PCO)
- The Provincial Industry and Handicraft Office (PIHO)
- The Provincial Agricultural and Forestry Extension Center (PAFEC)¹
- The District Agricultural and Forestry Extension Office (DAFEO)
- The District Commerce Office (DCO)
- The Oudomxay branch of the Agricultural Promotion Bank (APB)
- The Mouten Border Custom Office

The accuracy of the secondary data is to some degree questionable. Taking that into consideration, the aim of presenting the statistics is to give the reader an indication of the major production and market trends rather than giving a completely true picture of production levels and traded volumes. When it comes to collection of primary information, methods of triangulation have been employed. Cross checking the information by asking similar questions to different stakeholders has helped us to improve the quality of the collected data. Nevertheless, some of the data might still be subject to biases. Further, it should be noted that trade policies with China is currently being reviewed. The description of these policies, and all other market and production information for that matter, is based on information gathered up until the 17th of December 2005. Possible changes in policy, market and production conditions that take place after this date will be covered in the final report.

The report is structured into four main parts. The first part describes the status of corn production in the province and shows which factors that drive production and quality of the produce. The second part gives a description of the commercial status of corn at province and district level, maps out the trade flows and illustrates what factors contribute to market efficiency. The third part gives a picture of what profit successful corn producers can expect. The fourth part discusses what factors that potentially can be improved in order to reach better production and higher market efficiency.

Collection of data in the field was separated into two sessions. The first session took place during 23rd of November to 3rd of December 2005 and the second between the 9th and 17th of December 2005. The research was carried out by staff members from the Socio-Economic Research Component at the National Agricultural and Forestry Institute (NAFRI) with assistance from staff at the Northern Agriculture and Forestry Research and Extension Center (NAFReC), LSUAFRP field station in Namor District and DAFEO in Namor District.

2. CORN PRODUCTION

Corn production has developed from mainly being a crop for home consumption to becoming the most important cash crop in the province. From 2003 on, production has increased sharply and the total production of the province is now more than 73,000 ton. The total area devoted to corn production is about 15,000 hectare and the yield per hectare has fluctuated between 4.2 and 4.8 tons during the last three years. The major corn producing districts are Baeng, Houn and Xai District. With 41,000 tons of corn produced in 2005, Houn District had by far the highest production. It was followed by Baeng District and Xai District which produce reached a level of 12,500 respectively 10,633 tons. Together, these three districts count for 87

¹ Formerly known as The Provincial Agricultural and Forestry Extension Services (PAFES)

percent of the province's total production. The annual produce in Namor District in the period 2003-2005 was 3,488, 4,062 and 3,200 tons. Namor and Nga District are the only districts that show a decline in production in this period.

Table 1. Development of corn production in Oudomxay Province, 1976-2005.

Year	Total corn area (hectare)	Total yield (ton)	Yield/area (ton/hectare)
1976	3,488	2,930	0.84
1980	3,700	3,330	0.90
1985	2,234	2,457	1.10
1990	4,150	14,525	3.50
1995	4,385	6,578	1.50
2000	2,572	10,284	4.00
2001	2,870	11,795	4.11
2002	3,918	16,457	4.20
2003	9,697	46,740	4.82
2004	10,898	45,781	4.20
2005	15,327	73,439	4.79

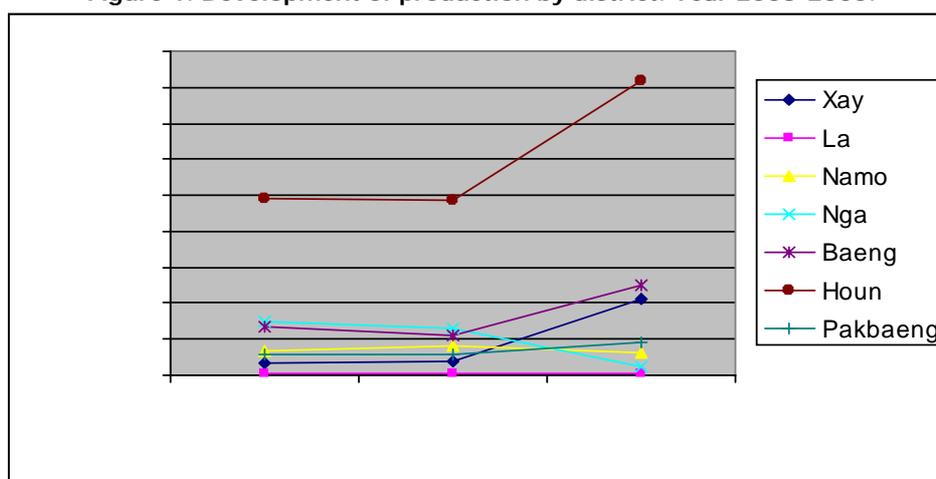
(Source: Year 1976-2002: Oudomxay Provincial Commerce Office, year 2003-2005: Provincial Agricultural and Forestry Extension Center, 2005)

Table 2. District share of corn production in Oudomxay Province, 2003-2005.

District	2003		2004		2005	
	Area (ha)	Prod. (ton)	Area (ha)	Prod. (ton)	Area (ha)	Prod. (ton)
Xay	349	1,570	471	2,023	2,363	10,633
La	35	140	35	140	80	320
Namor	872	3,488	967	4,062	800	3,200
Nga	1,500	7,500	1,575	6,615	250	1,250
Baeng	1,320	6,645	1,329	5,582	2,500	12,500
Houn	4,913	24,565	5,813	24,415	8,200	41,000
Pakbaeng	708	2,832	708	2,944	1,134	4,536
All	9,697	46,740	10,898	45,781	15,327	73,439

Source: Oudomxay Provincial Agricultural and Forestry Extension Center, 2005

Figure 1. Development of production by district. Year 2003-2005.



Source: Oudomxay Provincial Agricultural and Forestry Extension Center, 2005.

The study has looked into what effects the factors of land characteristics, provision of technical information, access to credit, monitoring and feedback system and the farmers' post harvest techniques have on production volumes and quality of the corn produced in the LSUAFRP project villages. These factors will be elaborated on below.

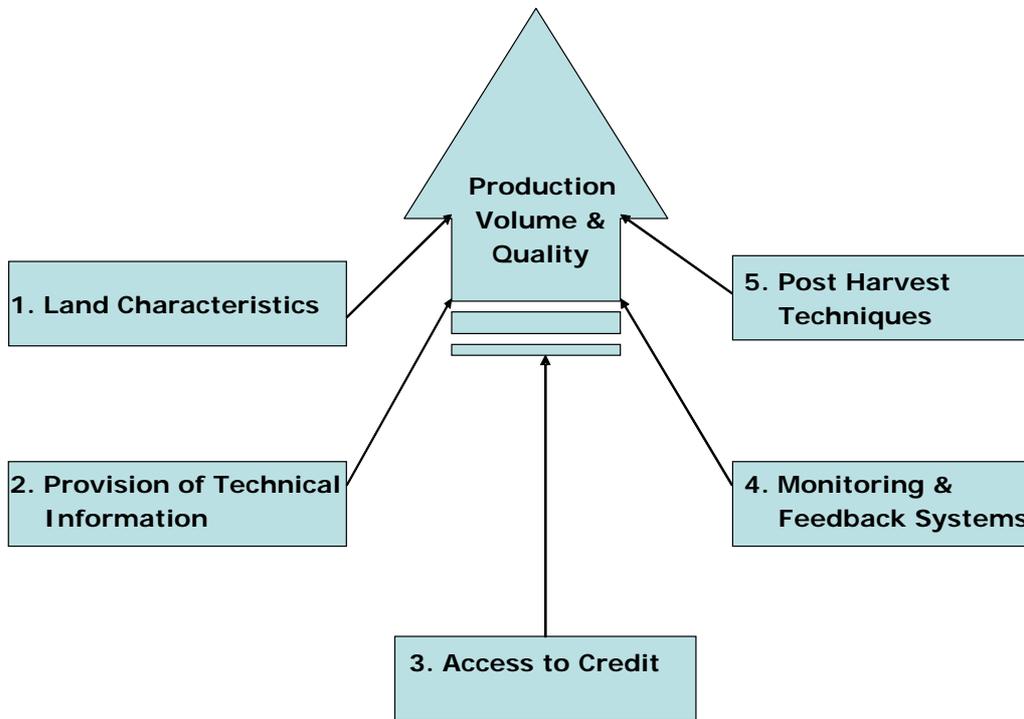


Figure 2. Factors that potentially affect the production volume and quality.

2.1 Land characteristics

Intuitively, land characteristics should be one of the factors that influence the yield. The better the land, the higher the yield is a logical conclusion to draw. Yet, the data collected in this study does not show any clear pattern of higher total yield in villages with a higher proportion of flat and semi-flat land with good soil. In fact, the figures tend to suggest the opposite. Whether this is a result of biased and incomplete data or other factors is not clear. The figures are based on the villagers' and village headmen's estimation and some of data is very inexact. This is certainly true for the production figures for Mxay village which we believe are highly over estimated by the villagers. Accordingly, no significant conclusions can be drawn from these figures. The data is rather to be seen as indicative instead of giving an exact description of the situation in each village.

Table 3. Land characteristics and yield per village.

Village	% slope land	Total produce (ton)	Total seed input (ton)	Seed multiplier: (yield/seed input)	Yield/ha
Pangthong	20	150	1.30	115	2.0
Kokfat	79	85	0.65	130	2.23
Pangdou	16	80	0.80	100	1.66
Namortai	10	-	1.00	-	-
Namornewa	13	-	-	-	-
Phousang	-	36	0.30	120	-
Mixay	42	70	0.20	350!	5.83!

Table 4. Land characteristics and yield for Pangthong village.

	Slope land	Semi slope land	Flat land
Size of plot	ca 13 hectare	ca 60 hectare	ca 3 ha
Spacing	around 70* 70 cm	"moderate spacing"	30 * 70 cm
Land preparation	No land preparation	Draft animal is used	Tractor
Soil quality	Low	Rather good	Good
Yield	Low	medium yield	relatively high
Wealth status of farmers²	Mainly very poor farmers grow corn on this land	Poor and less poor farmers	Farmers from the category poor.
Total seed input in 2005	ca 1,300 kg		
Total yield in 2005	ca 150 ton		

Table 5. Land characteristics and yield for Kokfat village.

	Slope land	Semi slope land	Flat land
Size of plot	ca 30 hectare	ca 5 hectare	ca 3 ha
Spacing	"closer than in flat land"	"closer than in flat land"	30 * 70 cm
Land preparation	No land preparation	Draft animal is used	Tractor
Soil quality	Low	Rather good	Good
Yield	Low	medium yield	relatively high
Wealth status of farmers	Mainly very poor farmers grow corn on this land	Poor and less poor farmers	Farmers from the category poor.
Total seed input in 2005	ca 650 kg		
Total yield in 2005	ca 85 tons		

Table 6. Land characteristics and yield for Pangdou village.

	Slope land	Semi slope land	Flat land
Size of plot	ca 8 hectare	ca 8 hectare	ca 32 ha
Spacing	"closer than in the flat land"	"closer than in the flat land"	30 * 70 cm
Land preparation	No land preparation	Draft animal is used	Tractor
Soil quality	Low	Rather good	Good
Yield	Low	medium yield	relatively high
Wealth status of farmers	Mainly very poor farmers grow corn on this land.	Poor and less poor farmers.	Farmers from the categories less poor and poor.
Total seed input in 2005	ca 800 kg		
Total yield in 2005	ca 80 tons		

Table 7. Land characteristics and yield for Namortai village.

	Slope land	Semi slope land	Flat land
Size of plot	ca 6 hectare	ca 46 tons	ca 7 ha
Spacing	50 * 50 cm	70 * 70 cm	70 * 70 cm
Land preparation	No land preparation	No land preparation	Tractor
Soil quality	Low	-	Good
Yield	Low	rather good	relatively high
Wealth status of farmers	Mainly very poor farmers grow corn on this land.	Poor and less poor farmers.	Farmers from the categories less poor and poor.
Total seed input in 2005	ca 1000 kg		
Total yield in 2005	-		

² The wealth ranking is based on the village headman's evaluation of the households' food supply. The food supply turn out to give a good indication of the households' general wealth status. The village headman uses the categories *wealthy*, *medium wealthy* and *poor*. Since even the wealthiest households are considered poor by national and international standards, we label the categories *less poor*, *poor* and *very poor*.

Table 8. Land characteristics and yield for Namorneua village.

	Slope land	Semi slope land	Flat land
Size of plot	ca 5 hectare	ca 30 hectare	ca 2.5 ha
Spacing	-	-	-
Land preparation	-	-	Tractor
Soil quality	-	-	Good
Yield	-	-	relatively high
Wealth status of farmers	Farmers from all wealth statuses.	Poor and less poor farmers.	Farmers from the categories less poor and poor.
Total seed input in 2005	-		
Total yield in 2005	-		

Table 9. Land characteristics and yield for Phousang village.

	Slope land	Semi slope land	Flat land
Size of plot	-	-	No flat land in Phousang
Spacing	-	-	-
Land preparation	-	-	-
Soil quality	-	-	-
Yield	-	-	-
Wealth status of farmers	-	-	-
Total seed input in 2005	ca 300 kg		
Total yield in 2005	ca 36 tons		

Table 10. Land characteristics and yield for Mixay village.

	Slope land	Semi slope land	Flat land
Size of plot	ca 5 hectare	ca 5 hectare	ca 2 ha
Spacing	70 * 70 cm	70 * 70 cm	70 * 70 cm
Land preparation	No land preparation	Draft animal is used	Tractor + draft animal
Soil quality	Low	Rather good	Good
Yield	Low	medium yield	relatively high
Wealth status of farmers	Mainly very poor farmers grow corn on this land.	Mainly farmers from category "poor".	Farmers from the categories less poor and poor.
Total seed input in 2005	ca 200 kg		
Total yield in 2005	ca 70 tons!		

2.2 Provision of technical information

Most farmers in the LSUAFRP project villages have traditionally grown corn for home consumption. The indigenous knowledge obtained from this traditional practice has of course been helpful when they have gone into cash cropping. Other sources of technical information come from DAFEO, LSUAFRP and farmers in other villages and districts. While DAFEO technicians are assigned to carry out training on cropping techniques, the majority of farmers interviewed claim that most of the technical information and training comes from LSUAFRP through farming demonstration days and study tours. The farmers interviewed in Kokfat village did, however, argue that they have not received training and sufficient technical information from LSUAFRP. Besides learning techniques from other farmers during the farming demonstration days and study tours, informal exchange of technical information is taking place between farmers in different villages through personal networks.

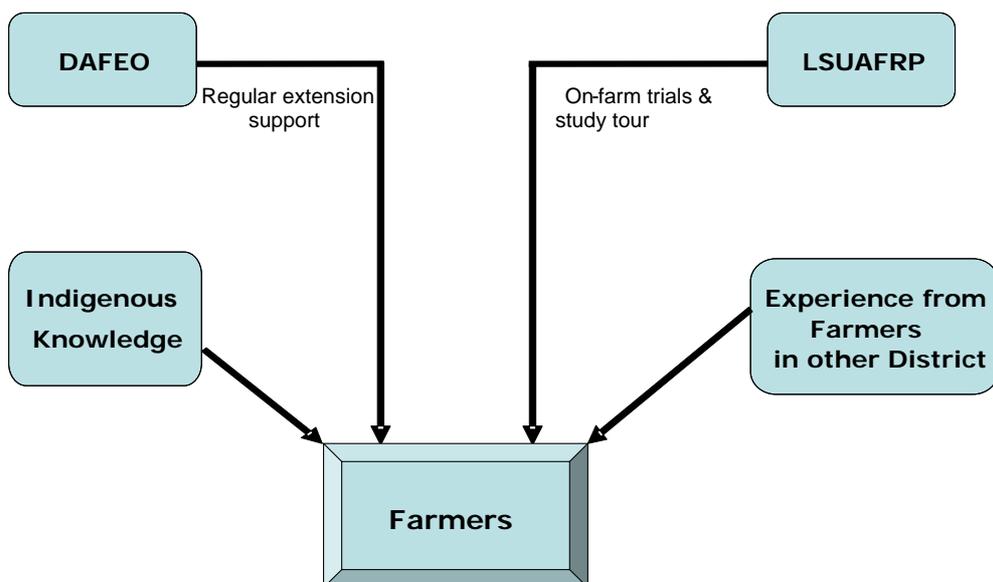


Figure 3. Flow of technical information between stakeholders.

2.3 Access to Credit

There are three different ways farmers in Namor District receive seed for corn production. Contract cropping schemes in which farmers receive seed and then have to sell back to the company with the cost of the seed deducted from the price exist in the south of the district. Others purchase seed from traders in Xai town and Namor village. Farmers who take part in the LSUAFRP corn trials receive seed as an interest free loan from the project. After harvest the farmers have to repay the seed at a cost of 17,500 kip per kg. Some farmers buy additional seed from traders, but compared to the seed provided by LSUAFRP these volumes are small. Accordingly, we can conclude that most of the farmers in the LSUAFRP villages do not need to access credit to finance their seed costs. Yet, seed cost is not the only input cost farmers are facing. Far from all households have a sufficient number of family members who can devote the time required for undertaking for successful corn production.

Hence, there is a need to finance these costs. It has been done in two different ways in the village. The households either use money generated from selling NTFPs, livestock, rice or other agriculture and forest products to finance the cost of hiring labor for corn cropping. In Mixay, Phousang, Namorthai and Pandthong village all corn growing farmers finance their input costs in this way. In Pangdou and Kokfat, on the other hand, the situation is somewhat different. Some of the farmers finance their input costs in the same way as in the other villages, but 6 respectively 10 households did instead prefer to borrow from the Agricultural Promotion Bank (APB). In Phangdou the average loan size was 2.5 million kip in year 2005. The bank charged an interest rate of 18 percent to be paid over an 8 month period. Half of the interest had to be paid before the farmer received the loan and the remaining interest has to be paid before 4 months after the loan is issued. Agricultural assets such as paddy fields or livestock have been used as collateral.

In Kokfat village the average loan size and interest terms are similar to the situation in Phangdou. Even though all loan takers have been able to repay the loans some of them have been forced to sell off assets in order to generate the required amount of money. Still, the majority of them believe that the APB loans have been beneficial. Worth noting is that no households from the wealth category "very poor", in a classification that covers the brackets "less poor", "poor" and "very poor", have

borrowed money from APB. Most of the loan takers belong to the wealth group labeled “poor” which indeed is the wealth status of most of the villagers.

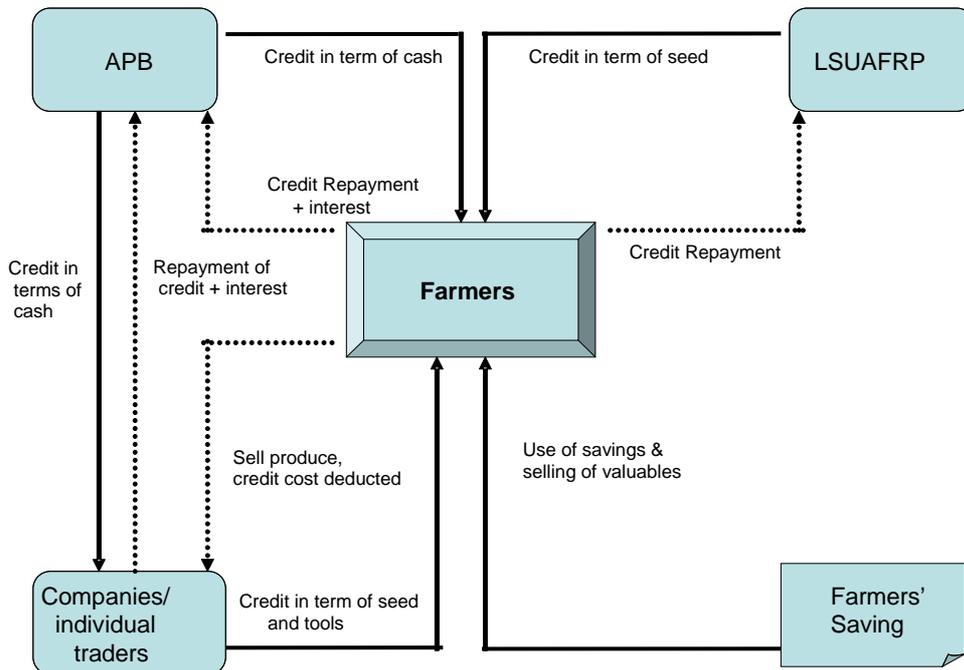


Figure 4. Financing of input costs for corn production in Namor District.

In conclusion, the possibilities at hand to finance input costs appear to be acceptable. Corn is the largest agricultural credit post for APB in Oudomxay and the terms that loan takers are being offered seem to be reasonable compared to alternative sources of credit. Better access for all households to financial services could of course help them to expand their corn production, but with expansion comes higher exposure to production and market related risks. Taking that into consideration, the current proportion of farmers who have access to financial services from APB for corn cropping is probably rather well balanced and the fact that not all households qualify for loans can to some extent act as a limiting factor to avoid a too big corn expansion.

2.4 Monitoring and feedback system

LSUAFRP and DAFE0 are the two main providers of training to the farmers in the surveyed villages. They are also the institutions farmers are supposed to report to in case cropping related problems occur. Ideally, representatives from LSUAFRP and DAFE0 shall monitor the performance of the farmers' activities closely so problems can be tackled before the effects will be too severe. Conversely, if an efficient monitoring and feedback system is not in place, cropping related problems are likely to remain unsolved with negative consequences for production and ultimately the income generation of the farmers.

It is within the mandate of the LSUAFRP, DAFE0 and the village headmen to monitor farmers' performance and share information about potential problems. So technically speaking there is a monitoring and feedback system in place. Nevertheless, there is a tendency that information does not flow efficiently between these stakeholders and the farmers. It has to be kept in mind that not very many of the corn growers in the LSUAFRP villages have experienced major cropping related problems. Still, among the farmers who have had such problems it appears to be a widespread lack of knowledge about who to report to. When LSUAFRP project staff visited the villages for

monitoring, some of the farmers reported about their problems. For problems that occurred on other occasions, some farmers were not sure about whom to report to.

In some of the villages, they have tried to develop production group headed by one person who should be responsible for reporting about the problems to the village headmen, DAFEO or LSUAFRP. For different reasons this system has not worked out well. Instead, farmers have to contact their village headmen directly.

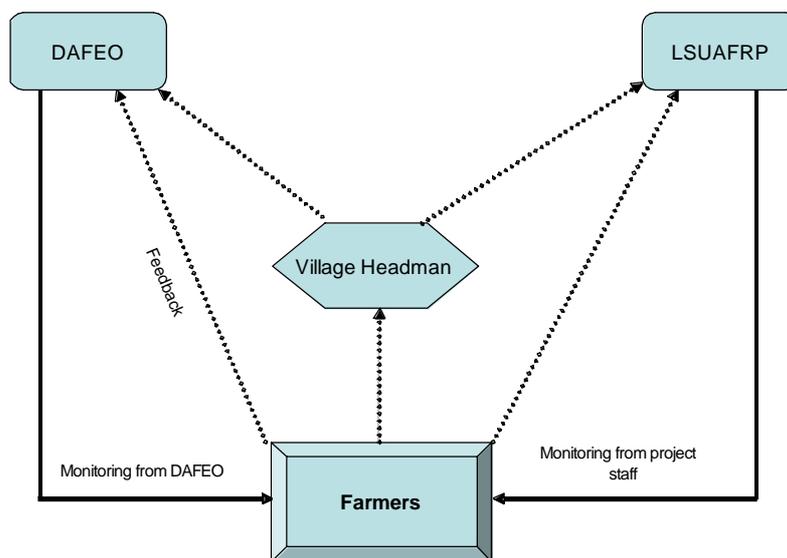


Figure 5. Monitoring and feedback system in LSUAFRP project villages.

2.5 Post harvest techniques

After harvest, the farmers let the corn dry on the stem before shelling. Some farmers shell by hand, others use small mechanical shelling machines. It is common that the owners of the shelling machine rent it out to other villagers who would like to use that service. In Pangdou, the LSUAFRP has provided a shelling machine. In Phousang, there are no machines which resulted in a situation where some villagers went to neighboring villages for renting machines.

Except from Pangthong, there is no clear difference in storage between the villages. In all of the villages, there is a mix of some farmers who build separate storage houses and others who keep the produce in a bag on the floor in their own house. The storage time typically varied between 10-20 days depending on when the traders showed up.

In Pangthong, on the other hand, the situation is different. Here traders came immediately after harvest which implies that farmers do not have to store the produce. If the traders' control of the corn quality indicates that the moisture content is too high, farmers have to keep the corn out in the sun until it is dry enough. The interviewed farmers mentioned that fungus and insect attacks was common during the storage period.



Figure 6. Post harvest techniques in LSUAFRP villages.

3. MARKET PERFORMANCE

With an increase of 377 percent in the period 2002-2005 (see table 1), corn production in Oudomxay Province has taken off on a large scale. It is the good that generates most income to Oudomxay Province and its export value is six times higher than the second most important good (Oudomxay Provincial Commerce Office, 2005). The development is demand driven and, not surprisingly, the demand comes from China. Going through rapid economic development, China's population is becoming wealthier and can now afford a diet consisting of more meat. That is good news for the country's piggeries which are expanding. That is also good news for suppliers of animal feed such as corn. China is a large corn producer and could potentially meet the country's demand by expanding its corn production.

Hence, two factors are likely to prevent China from producing a volume that will match the domestic demand. First, devoting the land to other agricultural activities such as horticultural crops, orchards, livestock and aquaculture appear to be more profitable than corn production. Second, prices on the large markets in South Korea and Japan are higher than in China. To take advantage of these higher prices, companies in northern China are likely to continue to allocate a large share of its corn supply to these markets (Vernon, 2005). Accordingly, southern China is predicted to face a corn deficit and increased demand for import during the period 2005-2014 (Economic Research Service, USDA, 2005).

This is the background to the sudden demand for corn import from Laos. With close proximity to the border with China, most of the corn produced in Oudomxay ends up in China. In the main cropping season in 2005, almost 90 percent of the corn produce was exported to China, 10 percent to Vietnam and less than 1 percent to Thailand (see table 4 below).

Table 11. Export from Oudomxay Province, October-December 2005.

Market:	Volume (ton):	Export value (million kip):
China	33,581	35,804
Vietnam	3,933	7,928
Thailand	98	88
TOTAL:	37,692	43,820

Source: Oudomxay Provincial Commerce Office, 2006.

3.1 Trade flows of corn in Namor District

The information in this section is, when not indicated differently, based on interviews with farmers in LSUAFRP villages, traders from Namor and Kuang village.

Provision of seed to farmers

The seed which is used in the LSUAFRP target villages is produced in Vietnam and the variety is LNV 10. LSUAFRP buys the seed from a trader in Xai town who in turn import it from Vietnam. Farmers receive the seed as an interest free loan and has to repay at a cost of 17,500 kip per kg after harvest. Some farmers buy additional seed from traders in Namor village for a price of 17,000-18,000 kip per kg.

Lao traders purchasing corn from Lao farmers

There is no contract cropping in the surveyed villages. Farmers basically plant and hope to be able to sell their produce at the time of harvest. The farmers have not access to reliable information on when, or if, traders will show up. After harvest 2-3 traders come to the villages and buy the produce for 900-1,000 kip per kg. The traders do not come in the same time though and when the first traders came to the village the farmers did not know if other traders would show up in the near future.

That tends to leave the farmers in a situation where their bargaining power is low and they have to accept whatever price they are being offered. In Phangthong village, the situation differs though. The village headman facilitates trade between the farmers and one trader in Luang Namtha. The trader gets information about the production volumes in the village and the farmers got in turn information about what the selling price approximately will be. There was no contract between the farmers and the trader, but the farmers were suggested to sell to this trader by the village headman. Still, the farmers ended up selling to other traders as well.

The most important quality aspect of the corn is the moisture content. The Chinese traders want corn with moisture content of 13-15 percent, but usually the received corn has a moisture level of 16-18 percent (Vernon 2005). No standardized quality controls and grading system exist and Lao traders' methods of checking the moisture content are not very rigorous. They usually employ one of the following methods:

- Stick a pen into one bag of corn and check how much corn will pour out of the bag. If too small a quantity pours out the moisture content is considered too high.
- Put a hand into the corn bag and see how hard it is to push it to the bottom of the bag. If the friction is too high the moisture content is also too high.
- Try to break the grain and observe how easily it breaks and how soft it feels.

If the traders' test indicates that the moisture content is too high, the farmers have to dry the corn further before the traders agree to buy the produce.

Lao traders sell corn to Chinese traders

The Lao traders will in turn bring the produce through the Mouten checkpoint into China. 13 km from the border a drying machine is operating. Here the Lao traders meet Chinese traders who they sell the produce to. Before 2004, there was no drying machine close to the border which forced Lao traders to bring the corn to Chinese traders in Mengla (see figure 7 below). In 2004, Lao traders got 0.97 Yuan per kg when selling in Mengla.

Since 2005, the local government of Mengla set up a drying machine 13 km from Moutuen border and now all corn from Laos is dried in this machine before being further distributed. Here, they meet Chinese traders who buy corn from their Lao counterparts. The Chinese traders have to pay a fee of 40 Yuan per ton (equivalent to 52,000 kip per ton) to the owner for drying the corn. Traders complained that the

drying machine capacity cannot meet the total supply in the peak season. The machine has a capacity of about 5-10 tons per day but the supply can some days reach 50 tons (Oudomxay Provincial Industry and Handicraft Office, 2005). It means that the traders have to wait rather long time before they can dry the corn. That certainly is a bottleneck in the value chain and should be object to improvements.

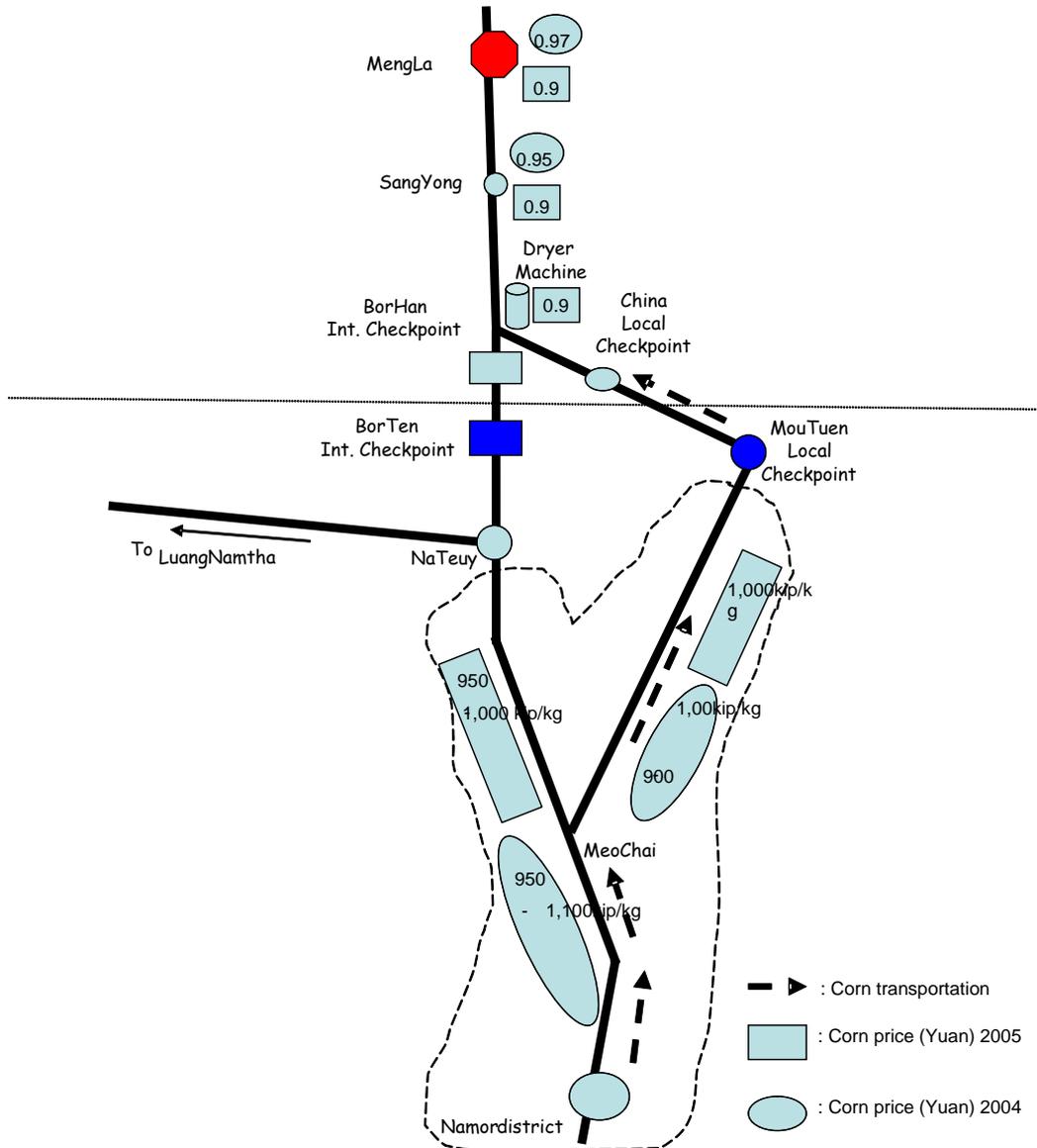


Figure 7. Trade flows of corn from Namor District to China in 2004 and 2005.

From Chinese traders to processing factories and piggeries

According to secondary information, Chinese traders dry the produce and then ship it north to Mengla or Sang Yong where large processing factories are located. The processed corn is then expected to be sold to wholesalers who in turn sell it to large piggeries (see figure 8 below). Whether corn is traded straight between the processing factories and the piggeries or via middlemen is not clear. In the second phase of the study, we aim to map out these value chains comprehensively.

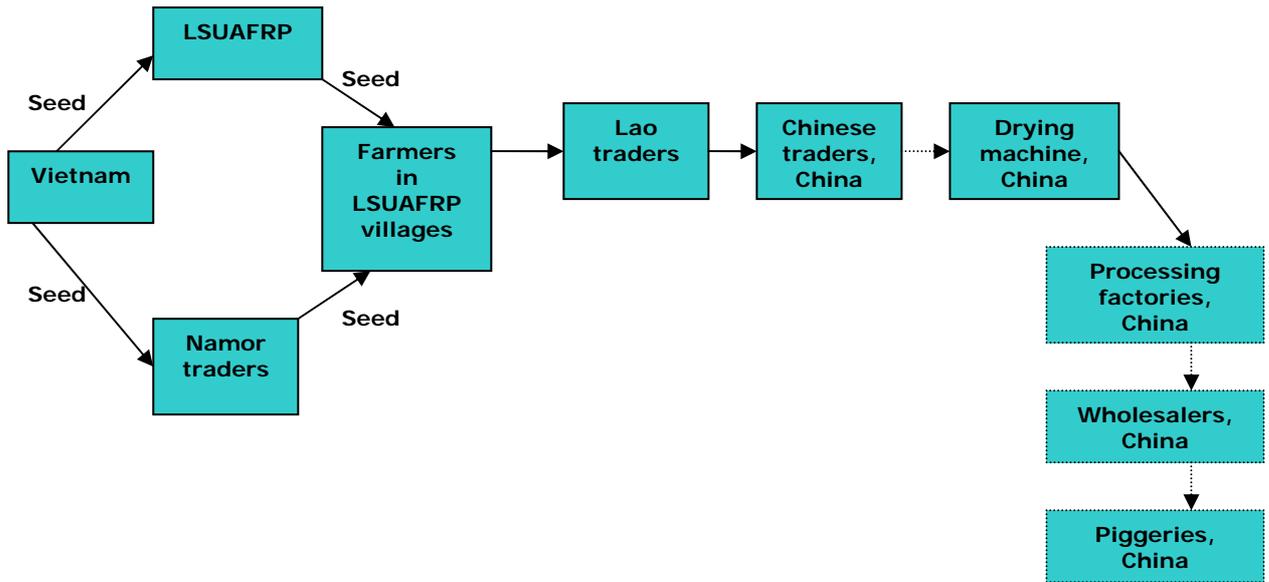


Figure 8. Trade flows for corn produced in LSUAFRP target villages.

So what factors influence the efficiency of the trade flows described above? The study has focused on access to market information for farmers and traders, domestic market policies and international trade policies and assessed the effects these factors have on the efficiency of the market and the trade flows.

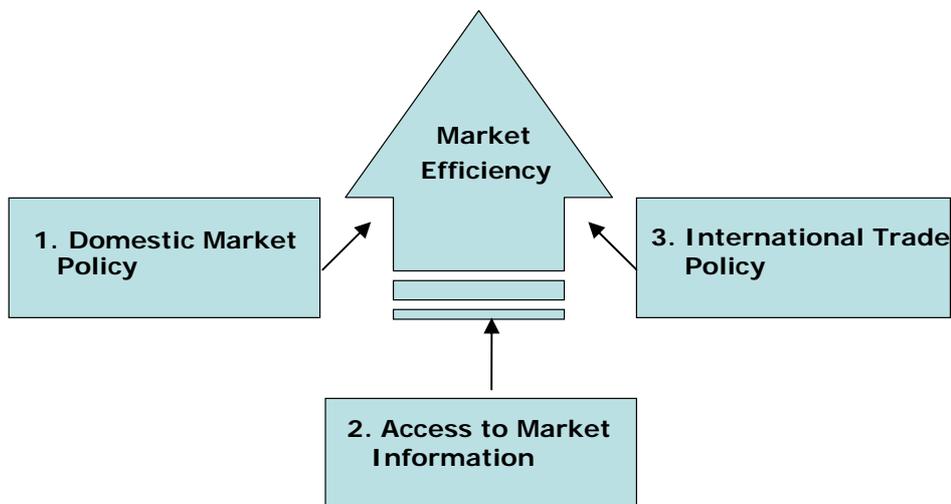


Figure 11. Factors that potentially affect the market efficiency.

3.2 Market policies and competition

In the initial phase of market development for agricultural products there is usually only one buyer of the produce but many producers (farmers). In this state, bargaining power and incomes for the producers are low, but the trader is earning excess profit. The wealth generated by the market is below its optimum. If no legal restrictions for entering the market exist, other traders will notice that profit can be made by going into this market. As the process of new traders entering the market continues, the market will go through the state of monopolistic competition and eventually reach the free market state where a high number of traders and producers and a maximized wealth generation for society.

In a previous study by the LSUAFRP on the market for soybeans in Xienguen District, Luang Prabang Province, it was shown that prevailing market policies and the contract cropping scheme tended to prevent the market from reaching this state. Instead, the market policies tend to keep the market in an unhealthy *monopsony situation* where competition among farmers is high while competition among trader(s) is non-existing. That enables the trader to keep the price low and farmers lack any possibility to influence the price (LSUAFRP, 2005).

In contrast, there are no signs of any corn trader benefiting from monopsony power in Oudomxay Province. Here, preconditions for a freer market where farmers and traders can choose from different traders to sell to are better. Market polices do not seem to have any limiting effect on competition and the number of traders who are allowed to enter the market. A total of 87 individual traders and two larger Vietnamese export companies based in Xai town are registered. Information indicates, however, that many of these traders are not active. In Houn and Baeng district, contract cropping is common. Larger companies and/or individual traders provide seed and tools as credit to corn producing farmers who in turn have to sell their produce back to these creditors shortly after harvest. Even though contract cropping schemes are practiced in all districts, trading between farmers and traders without contract is equally common.

In Namor District the trading is done by individual traders and China is the target market for the corn. There are 45 registered traders in Namor district, but far from all of them are active. 7 of these traders are based in Namor village and 10 are from Kuang village. Only about half of the registered traders in these villages did actually take part in the corn trading in 2005. In the LSUAFRP project villages there were 2-3 traders buying corn from the farmers and they come from Namor and Kuang village. Farmers in the LSUAFRP project villages are not restricted by a contract to sell to certain traders. In the southern areas of the district, on the other hand, a company provides funds for seed and tools for corn production to farmers within a contract cropping scheme and the farmers shall in turn sell back the produce to the company.

Even though there are no legal restrictions that prevent traders from entering the market, fees and taxes are rather substantial (see table 5 below). Whether these costs prevent many traders from entering the market is not clear. The interviewed traders complained about the high fees and taxes but they still chose to continue with the trading which implicitly suggests that a comparatively fair share of profit is to be made by trading corn.

Table 12. Fees, taxes and export tariffs for corn traders in Namor District.

District Level	Mouten Border Checkpoint	Chinese Border Checkpoint
1. Annual fee of for trading license that last for 5 years: 20000 kip.	1. Border pass document to be applied to Lao police authorities: 25000 kip/truck.	1. Fee to Chinese police authorities: 38 Yuan/truck (equivalent to 49400 kip).
2. Income tax: 200 000 kip/year.	2. Fee to PCO: 35000 kip/truck.	2. Fee to Chinese trade office: 100 Yuan/small truck (equivalent to 130000 kip), 300 Yuan/big truck (equivalent to 390000 kip).
3. Trading documents to be obtained by DCO: 35000 kip/document.	3. Border cross fee to custom office: 50000kip/truck.	
4. Documents from DAFEO: 17000 kip/document.		
5. Export tax to District Finance Office: 17 kip/kg.		

Source: Trader interviews in Namor and Kuang village and data from Mouten border custom office, 2005.

3.3 Access to market information

There are no formal systems for market information provision between the stakeholders in Oudomxay province. As discussed above, market policies in Oudomxay Province do not seem to discourage competition among traders. In order to benefit from the advantages the free market gives, all market players should have access to complete market information. This study indicates, however, that farmers in LSUAFRP villages generally lack such information. Some farmers get information from the District Commerce Office (DCO) about previous year's prices. Information about how many traders that possibly can buy the produce, when they will come to the village and if they will come in the same occasion is lacking though.

There are no formal sources of market information provision to the Lao traders. The traders interviewed in this study still manage to get access to crucial information on when and where to sell, to whom, expected price and demanded quantity. One trader from Namor village travels to China rather frequently for various reasons. In these occasions the trader meets Chinese traders who give information on where and when to sell the produce, to what price and approximately what quantity that is demanded. If there is a corn deficit on the Chinese market, the Chinese traders will come to the Kuang village and inform the Lao traders about the demand and price in China.

If there is no corn deficit in China, on the other hand, the traders from Kuang village have to go to China and get market information from the traders. In these occasions there are no trade agreements reached between the Lao and Chinese traders. The purpose is only to gain crucial market information. Since the price is determined by supply and demand for corn, Lao traders have received a higher price when there was a corn deficit. With the price information from China taken into consideration, the Lao traders calculate expected profit to be made and what price to offer the farmers they buy from in the LSUAFRP villages. How good information traders have about the farmers' corn activities before they come to the villages and buy the produce is not clear.

3.4 International trade policies

A volume of 300 tons of corn per year can be exported from Oudomxay Province to Vietnam without being charged any export tariffs from the Vietnamese authorities. If more is exported, Laos has to pay an export tariff to Vietnam.

In contrast, no thorough formal agreement between Laos and its biggest corn trading partner, China, exists. Taxes and fees are paid at both sides of the border and Lao traders who do not have a license have to pay an amount equivalent to the license cost when crossing the border. Up until the 2nd of December 2005, there were no import quotas on corn from Laos to China, but from this date on, China has decided to stop all import of corn from Laos! Lao border officials only got notice 4 days before the policy was implemented. Lao traders who had not been able to sell before that had to turn back when they reached the border. In the period 2-13th of December, 45 trucks have been forced to turn back when they came to the Mouten border. Each of these trucks had a corn load of about 29 tons (Mouten Border Custom Office, 2005). Yet, farmers and traders from LSUAFRP villages were lucky to sell most of the produce before the export stop.

The underlying reason for this drastic policy change appears to be that Chinese farmers cannot stand the competition from Lao farmers and traders. Chinese farmers have been offered a security price of 1.5 Yuan per kg (about 2000 kip) for the produce they sell to Chinese traders. The Lao traders, on the other hand, only get 0.9 Yuan per kg (about 12,000 kip) when they sell to these Chinese traders. In 2004, the demand for corn was huge in China so traders bought all corn that was sold in the area which included the low priced Lao corn and the higher priced Chinese corn. In

2005, however, the supply of corn from Laos has increased resulting in a situation where Chinese traders have chosen to buy all Lao corn but not all the corn produced by Chinese farmers. Obviously, the Chinese farmers were not satisfied with the situation and complained to the governor. In order to please its farmers the governor then decided to stop all import from Laos (Provincial Commerce Office, 2005).

4. EXPECTED PROFIT FROM CORN PRODUCTION

The case of the deputy village headman's household in Kokfat village will serve as an in depth illustration of the production characteristics and costs *successful corn producers* will face and what profit they can expect from growing corn. The household started to grow corn for commercial use in 2002. They did not receive any formal training from projects, DAFEO or other institutions involved in agricultural extension services. Instead they learned best practices from relatives in another village. The household then shared this knowledge with other farmers in their own and other villages.

The household bought seed from a trader in Namor village for 16,000 kip per kg and it soon realized that it can make a small profit by providing seed to other farmers in the village. Accordingly, they started to buy bulks of seed from the trader in Namor village and sold it for 16 500 kip per kg to a few other farmers in their village. The household continued to do so until the dry season 2004, when LSUAFRP started research activities in the village and provided seed in the form of interest free loans to farmers who wanted to participate.

Before year 2004, the household only mono-cropped corn in the flat land during the wet season. As part of the project research activity, the household experimented with growing cor in the dry season in 2004. The resulting yield was rather low though (2.6 tons/ha) and the household, advised by the project, came to the conclusion that the wet season is preferred if reasonable yield is to be expected. The following year the household mono-cropped corn in the wet season again and got higher yield (4.2 tons/ha). Besides mono-cropping in the flat land it also tried inter-cropping in the slope land as suggested by LSUAFRP.

The selling price increased until 2005, and then went down slightly. The prices referred to here are farm gate prices. The traders pick up the produce in the village or directly from the field. In this village, the trader picked up the corn directly from the field. The household received a higher price for corn produced in the upland because this plot was closer located to the road than the flat land field. The table below summarizes the production characteristics and prices this farmer faced in the period 2002-2005.

Table 13. Land and production characteristics, 2002-2005.

Year	Area (ha)	Land type	Season	Cropping technique	Seed variety	Seed volume (kg)	Yield (ton)	Multiplier: yield/seed	Yield/ha	Selling price (kip)
2002	1.2	Flat land	Wet	Mono	LVN 10, old	15	3.5	233.3	2.9	700
2003	1.2	Flat land	Wet	Mono	LVN 10, old	17	4.2	247.1	3.5	800
2004	1.2	Flat land	Dry	Mono	LVN 10,new	20	3.1	155	2.6	950
2005	1.2 & 1.5	Flat & slope	Wet	Mono & Inter	LVN 10,new	20 & 18	5 & 2	250 & 111.1	4.2 & 1.3	900 & 1000

The household does not have enough labor to carry out all the tasks required for corn production. Accordingly it hires labor to perform these tasks. Here, the complete number of labor, (family labor and hired labor) that take part in the work are included. If the family labor did not do this work they would have been able to

perform other income generating activities. In order to capture this *opportunity cost* for the family labor force, the same daily wage as the hired labor receives is used for them. The tables below show the input costs the household had in 2005 for production in the flat respectively slope land.

Table 14. Input costs for corn production in flat land, 2005.

Activity	Persons/unit	Days	Unit cost	Total cost (kip)
Labor daily wage costs:				
Clearing field	10	3	10,000	300,000
Planting	30	1	10,000	300,000
Weeding	8	5	10,000	400,000
Harvesting & threshing	15	1.33	10,000	200,000
Capital costs:				
Seed	20kg		17,500	350,000
Hires tractor to plough		1.5		500,000
TOTAL INPUT COSTS:				2,050,000

Table 15. Input costs for production in the slope land, 2005.

Activity	Persons/unit	Days	Unit cost (kip)	Total cost (kip)
Family labor costs:				
Clearing field	2	3.5	10,000	70,000
Burning field	2	4	10,000	80,000
Weeding	1	3	10,000	30,000
Daily wage cost, hired labor:				
Planting	10	0.75	10,000	75,000
Weeding	15	1.33	10,000	200,000
Harvesting & threshing	6	2.5	10,000	150,000
Capital costs:				
Weeding "salt"				40,000
Seed	18kg		17,500	315,000
Interest cost				
TOTAL INPUT COSTS:				960,000

In order to finance the costs of hiring labor, the household borrowed money from the APB. The loan size was 2.0 million kip and the interest 18 percent over a period of 8 months. All the interest had to be repaid before the loan was issued. The farmer had to travel to Xai town to apply for the loan. The assumed travel cost is 50,000 kip plus the opportunity cost of 10,000 kip. Before the loan was issued, APB officials came to the village and visited this and other households that had applied for a loan.

The household had to present a repayment plan and show the title deeds for the land and what livestock assets it possesses. The land and livestock serve as collateral on the loan. The APB officials also asked the village administration about the household's reputation and ability to repay the loan. The household had no problems to repay the loan. Taking the credit costs into consideration, we arrive at the total input costs in table 16 below.

Table 16. Total input costs per cropping season, 2005.

TOTAL INPUT COST: total flat costs + total slope land costs + credit costs
TOTAL INPUT COST: 2,050 + 960 + [(2 000 000 * 0.18) + 50,000 + 10,000] kip
TOTAL INPUT COST = 3,420,000 kip

The generated revenue from corn production is derived in table 17 below.

Table 17. Total revenue per cropping season, 2005.

Land type	Total produce (kg)	Unit price (kip)	Total revenue (kip)
Flat	5,000	900	4,500,000
Slope	2,000	1,000	2,000,000
			6,500,000

Subtracting the total input costs from the total revenue we arrive at the total profit to the household generated from corn production.

Table 18. Total profit per cropping season, 2005.

TOTAL PROFIT = total revenue - total cost

TOTAL PROFIT = 6,500,000 – 3,420,000 kip

TOTAL PROFIT = 3,080,000 kip

TOTAL PROFIT/Ha = 1 140 740 kip

So the total annual profit from corn cropping for one cropping season for this household is 3.08 million kip or 1.14 million kip per hectare. This can serve as an indication for what profit that is to be expected from corn production for *successful* corn growing households.

5. CONCLUDING DISCUSSION

5.1 Access to market information

Information about how many traders that possibly can buy the produce, when they will come to the village and if they will come in the same occasion is as important, or probably even more important, for the farmers than price information. Since the corn price tends to fluctuate year by year as a result of changes in market supply and demand, the historical prices are maybe not such an accurate price indication for the present year.

Information about how many traders that possibly can buy the produce, when they will come to the village and if they will come in the same occasion is certainly more important for the farmers if they are going to be able to influence the price they are getting. As the situation is right now, this information is generally lacking.

It appeared to be between 2-3 traders who bought the corn from each village. When the first trader came to each village and offered the farmers a certain price for their produce, the farmers did not know that other traders would come some days later. That probably worked in the favor of the traders who could dictate the price. If the farmers instead had information about which traders who will buy from their village, the farmers do not have to accept the price offer from the first trader if they believe it is too low. That would increase their bargaining power.

The price of 900-1,000 kip per kg Lao traders offered farmers does not; however, seem to be particularly low considering the fairly low quality (high moisture content) of the corn. Lao traders do not get a better price than about 1,200 kip per kg when selling to the Chinese traders. Accordingly, their margins are low and there is probably not room for much higher price to the farmers if the Lao traders shall find it profitable to continue to trade corn. Still, many of the farmers interviewed claimed that they would feel more secure if they knew that some traders would show up on a certain day and buy their produce even though the price would not be higher than today.

The largest benefit to be made from providing better market information to the farmers is instead likely to come from alleviating some of the problems associated with storing the produce. Many of the farmers reported that fungus and insects destroyed some of the stored produce. If farmers knew approximately when the traders would come they could plan when to harvest in order to cut down on the storage time. That would limit the time the stored produce is exposed to fungus and insect attacks. So with better access to market information, farmers can get a larger produce to sell to the traders and accordingly increase their incomes.

The traders already have access to information about demand and price trends in China. Still, a trip to China is required to get the information. The traders would save time and effort if they could avoid traveling to China to access this information. Since the bargaining process between farmers and traders can be seen as a zero sum game, the better knowledge about how many traders that will come and buy in the village and when they will come is likely to have a positive effect on the farmers' bargaining power while decreasing traders' ability to dictate the price.

Still, the fact that the price ultimately is driven by the market forces in China will probably mean that these changes in bargaining power and price will be rather small if the stakeholders got access to market information. Accordingly, traders could potentially gain as much from getting better market information from China that they potentially can lose by providing information to the Lao farmers. Hence, we believe they would not refuse to participate in an information sharing system.

5.2 Monitoring and Feedback System

As mentioned earlier, some villages have tried to develop a system where they establish a production group for corn. Exactly what tasks the groups were supposed to carry out is not clear though. What we do know is that one person was selected head of the group responsible for reporting about potential cropping problems to the village headman, DAFEO and LSUAFRP.

Yet, the contact linkages between these stakeholders seem to be weak. If that is a result of some of the farmers do not want to bother their village headman with their corn problems, or if they believe that the village headman, DAFEO or LSUAFRP could not help them anyway is not clear. What is clear though is that the feedback system certainly can be improved. Assigning one person in each village to act as a contact person for information provision is likely to improve the monitoring and feedback system and in the end have positive effects on production and income levels.

This person can also be responsible for contacting traders and access crucial market information. Accordingly, forming an informal production group for corn and assigning one person to act as a mediator for provision of technical and market information can be the first step in improving the monitoring and feedback system and establishing a market information system.

5.3 International trade policy

The problematic situation that the export stop of corn gives rise to is not unique to Laos. Trade policies to protect domestic farm production are practiced all over the world, with the European Union and the United States being two of the most active players. There are of course different pros and cons associated with such policies but leading researchers in the field of economic growth and trade policy (e.g. Venables, 1999) agree that the negative effects from substantial trade tariffs and quotas outnumber the gains. Trade restrictions will have negative effects on the potential for long term economic growth and development according to their research results. This

is true not only for countries that export goods to countries with high trade tariffs and quotas, but also for the countries that impose these trade barriers.

Even though there is a vast number of trade theories at hand that elaborate on the wealth effects from international trade, most of them are based on the logic of the *theory of comparative advantage* introduced by Ricardo and developed further by Heckscher & Ohlin. In a stylized description of this theory, the world economy is assumed to consist of two countries. These countries, country A and country B, both produce good 1 and 2. According to the theory, goods and services shall be produced where production costs for the specific good are comparatively lowest. So if country A has much lower cost for producing good 1 than country B, the countries shall start to trade with each other and country A shall be the only producer of good 1 and sell it domestically as well as exporting to country B (Samuelson, 2004).

Say that country A also can produce good 2 cheaper than country B but the difference in production costs is very little compare to the situation for good 1. Then country B shall produce good 2 and sell in country B as well exporting the good to country A. This is so because country B has a comparative advantage in producing good 2. By practicing such trade policy, both countries are devoting the time and factors of production to what they can do comparatively best and welfare gains to society in both countries are to be expected (Samuelson, 2004).

The theory makes perfectly sense in a world where political decisions are logical and based on the idea that maximizing wealth over a long period of time is to be preferred instead of short term political and economical gains. The objection to this argument is that political decisions can change the situation rapidly and if the countries only specialize in production of goods that they have comparative advantage in they will be very vulnerable to sudden changes in trade policy.

The current trade dispute between Laos and China highlights the fact that getting short term political and economical gains instead of extensive long term wealth generation often is the chosen approach. Corn produced in Laos was sold for approximately 1,200 kip per kg in China while Chinese produced corn was sold for about 2,000 kip per kg before the export stop.

If the theory of comparative advantage is applied to this situation it becomes rather obvious that Chinese traders shall buy corn from Laos instead of domestically produced corn. If doing so, they can get the same corn for a lower price. The Chinese farmers should instead focus on something they have a comparative advantage in. It might be livestock production, aquaculture or any other activity that China does comparatively cheaper and better than its trading partners.

Unfortunately the real world situation is different. In the best of worlds, China and Laos would initiate trade talks where Lao officials could argue for a lift of the imposed corn stop and referring to the potential wealth gains to be made for China by doing so. Considering the small size of the Lao economy compared to the economical and political might of China, it is less likely to happen. If the export stop will be lifted, the corn export will probably be subject to substantial tariffs.

Being a small economy surrounded by the bigger trading partners China, Vietnam and Thailand opens up a window of opportunities for Laos. The booming Chinese economy will create a huge demand for a number of goods that cannot be met by the domestic supply alone. Producing and exporting these goods to China can be very profitable, but the risk of sudden trade policy changes certainly needs to be taken into consideration which the current situation clearly shows.

Instead of fully exploring its comparative advantage of a good such as corn, a more balanced and diversified approach should be practiced. Diversification should not just be in terms of the number of crops that are grown but also in the terms of reaching different trading partners and markets. Diversification should preferably be along the whole value chain. That will leave farmers and traders in a situation where the negative effects on their total income from sudden changes in trade policy, sudden price drops, crop specific failures, etc will be minimized.

So what will be the immediate response by Lao traders and trade officials to cope with this severe situation?

Some of the traders store the corn at the border and hope that they will be allowed to export again in the near future. Other are turning back with their trucks and hope there will be other options. The head of the Provincial Commerce Office have done a good job and been active in trying to come up with such options for the traders. Last year about 10 percent of all corn produced in Oudomxay Province were exported to Vietnam and Thailand. The idea is now to export the produce that cannot be sold to China to these countries instead.

The head of the Provincial Commerce Office has been in contact with traders and he urges them to export the corn that could not be sold to China to Vietnam and Thailand instead. This appears to be the best way to cope with the situation for the moment. Even though the trade dispute with China can be solved for the next season and this market will continue to offer the highest price, corn traders in the area should continue to export part of their produce to Thailand and Vietnam in order to diversify their export markets and minimize the negative effects from potential market and policy related risks.

6. FUTURE ACTIVITIES

This progress report has covered the first findings from the research in Oudomxay Province. In the second phase of the study, we aim to visit the export markets (China and Vietnam) in order to collect information needed to give a better picture of all the trade flows and describe how much value that is added in each part of the value chain. Moreover, the research aims to follow and document the development of the currently changing trade policy on corn between Laos and China. Potential for development of value added activities within Laos is another issue that is to be assessed further. The research findings are then to be documented in a final report.

7. REFERENCES

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ANNEX 1. PERSONS INTERVIEWED

Organization	Name	Position
LSUAFRP	Mr. Bounsong	Field staff (Namor district)
	Mr. Sifong	Field staff (Namor district)
PAFO	Mr. BounGnuem Xaiyaven	Head of planning office
	Mr. Somvang	Head of livestock Section
Agricultural Promotion Bank (Oudomsay Branch)	Mr. BoaNgern Phongsavath	Director
Provincial Commerce and Forestry Office	Mr. Houmphaeng Mingboupha	Director
	Mr. SiOuphone	Deputy head of Moutuen Checkpoint
Provincial Industry and Handicraft Office	Mr. Khamlek Keovilaykon	Director
DAFEO (Namor)	Mr. Khamkong	Deputy head office
District Commerce Office (Namor district)	Mrs. Chankham	Deputy head
Individual Trader (Namor district)	Mrs. Saeng	Trader
Individual trader (Khuang village)	Mr. Kali	Trader
	Mr. Maikhong	Trader
Pangthong Village	Mr. Livone	Village Headman
	Villagers	
Kokfat Village	Mr. Norxoa	Village Headman
	+ selection of Villagers	
Pangdou Village	Mr. Cherxer	Village Headman
	+ selection of Villagers	
Namor Tai village	Mr. Ten	Village Head man
	selection of Villagers	
Namor Nuea village	Mr. Noyxoum	Village Headman
	+ selection of Villagers	
Phouxang village	Mr. Aber	Village Headman
	selection of Villagers	
Mixay village	Mr. Xaixue	Village Party Secretariat
Khuang village	Mr. Bounma	Village Headman
	Khamla	Head of village community
Moutuen border	Informal discussions with traders	Traders
IFAD	Mr. Eddie Vernon	Marketing Consultant
Friends of Uplands Farmers	Mr. Peter Dutton	Director