

Rice Value Chains in Dien Bien Province, Vietnam

**Prepared for
SNV Netherlands Development Organisation**

By

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Preface

A report prepared for the SNV Netherlands Development Organisation by Agrifood Consulting International.

This report¹ is a final report for the Rice Value Chains in Dien Bien Province, Vietnam study.

The fieldwork for the report was carried out over 3 months between January and March 2006. The report involved the analysis of background data, field trips and key informant interviews with people involved in all sectors of the rice value chain in Dien Bien Province.

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The views expressed in this report are those of the consultants and do not necessarily reflect the views of the SNV Netherlands Development Organisation or the Government of Vietnam.

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April 2006



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List of Abbreviations and Acronyms

| | |
|------|---|
| ACI | Agrifood Consulting International |
| DARD | Department of Agriculture and Rural Development |
| DoTT | Department of Trade and Tourism |
| GDP | Gross Domestic Product |
| HCMC | Ho Chi Minh City |
| LSR | Lowland Sticky Rice |
| MAP | Market Access for the Poor |
| PPC | Provincial People Committee |
| REP | Rural Enterprise Promotion |
| SNV | Netherlands Development Organisation |
| USR | Upland Sticky Rice |

Executive Summary

1. An examination was made of the value chain for rice from Dien Bien province, concentrating on the value chains for IR64 rice and Upland Sticky Rice. The conclusions of the research are that neither IR64 nor Upland Sticky Rice are optimal vehicles for support for poverty reduction amongst poor smallholders. Market analysis reveals that lowland aromatic varieties have far higher potential. However, support for the development of these varieties of rice may not necessarily benefit the upland and lowland **poor** to any significant degree.
2. A detailed examination was made of the rice value chain for Dien Bien Province. Concentration was upon the two varieties *IR64* and *Upland Sticky Rice*. The examination comprised of intensive production-based investigations in three Districts of the Province, and an examination of the marketing of rice in Dien Bien, Hanoi, Ho Chi Minh City, and Melbourne, Australia. From this examination and subsequent analysis a series of recommendations have been made.
3. The main conclusion of the value chain analysis is that neither IR64 nor USR are optimal rice types to support - especially if such support is designed to assist the poor or upland poor. The rationale for this conclusion is different for each type of rice.
4. **IR64** is a rice variety that is decreasing in popularity in Dien Bien, due to the fact that although it is an “improved” variety, it does not have characteristics that are demanded by modern consumers- such as aromatic fragrance, ease of cooking. As market signals increasingly penetrate the value chain, the decreasing demand for IR64 is resulting in decreased prices and decreased planting areas – especially when alternative varieties of rice are available for production.
5. **USR** is grown by poor smallholders in all upland districts of Dien Bien province. Many of these smallholders are ethnic minority people (H’Mong, Thai, etc.). However, in terms of levels of production, USR occupies a very small proportion of rice production of the province. A relatively small proportion of land, reliance on rain-fed single cropping and low yield per hectare mean that the total production of USR is estimated at 5,834 tonnes per year.
6. Potential for effecting major increases in household incomes through increased production of USR is limited for four main reasons:
 1. Overall land area for potential production is limited and there is limited potential for expansion.
 2. There is limited potential for increasing intensity of production through irrigation.
 3. The provincial government is discouraging expansion of area due to environmental concerns.
 4. Small plot sizes per household in the uplands mean that any marginal increase in productivity will only result in very small increase in absolute figures for household incomes.
7. For the reasons outlined above support of, IR64 and USR should not be considered as an optimal strategy for assisting smallholders and in particular poor smallholders. The results of the analysis indicated that are more optimal strategy for support, based on

consumer demand and production suitability- is to support the development of improvement in the value chain for 2 varieties of aromatic lowland rice – Bac Thom No 7 and Te Thom.

8. Demand for these varieties of aromatic rice is strong, both in local markets and in Hanoi.

9. Potential for expansion of area is strong, with a large lowland area still under non-aromatic varieties. This land area could potentially be transferred to aromatic production.

10. Economic Importance - Based on the estimates of production presented in Section 2, the 2 varieties of aromatic rice account for 45.5 percent of the production of lowland rice in Dien Bien, equal to almost 38 percent of the total production of Dien Bien province. The farm gate value of these two varieties of Dien Bien aromatic rice is estimated at \$US7,679,829, with a margin of \$ 3,961,931 accruing to producers. The retail value of this rice is estimated at \$ 17,225,785, implying a value added in the chain between producers and retailer at \$ 9,545,956.

11. **However, it is vital to note** that whilst the conclusion of this analysis is that the value chains of Bac Thom No 7 and Te Thom should be supported – based on value chain and market assessments, **this may not be an optimal strategy to undertake if poverty reduction amongst poor smallholders is the primary objective of the support intervention**. This is because poor smallholders are more concentrated in the uplands, where Bac Thom No 7 and Te Thom are not grown, and that the poor in the lowlands generally have very small plots of rice, so increases in production may only translate to very small income increases in absolute terms.

12. The recommendations below are structured in terms of production – based recommendations and marketing – based recommendations. These recommendations should be read, taking into account the key conclusion of the study and namely that Bac Thom No 7 and Te Thom should be promoted, rather than IR64 and USR.

13. The Study established that the Dien Bien rice value chain comprised the following activities: producers; input suppliers; primary and secondary collectors; primary and secondary processors; primary and secondary transporters; wholesalers; retailers; supermarkets; food service sector; end-consumers; government officials.

14. Over 200 interviews and observations were made with different actors along the Dien Bien rice value chain.

15. The Study established that because of favourable natural conditions rice is grown widely throughout Dien Bien. In the valley lands, two crops a year are produced with the help of irrigation systems. Upland rice is grown predominantly by ethnic minorities in the mountainous areas on a single crop rain-fed basis. From approximately 40 000 ha, around 122,000 tonnes of paddy are produced annually. Considerable yield variability occurs between the parts of the Province and between seasons. Reasons for the variability are related to poor seed quality, limitations in the application of water, poor cultivation techniques, inappropriate use of fertilizer, and poor pest control. There is a marked decline in *Upland Sticky Rice* due to declining soil fertility.

16. *IR64* has lost its position as the Province's premium rice because it is not aromatic. Nevertheless, it is highly resistant to dangerous diseases and pests such as planthopper

and leaf blast, it has a good yield, it has a medium requirement for fertilizer, it is well adapted to the soil and climate of Dien Bien especially the Dien Bien valley, and is affordable for most growers and consumers.

17. There are two types of sticky rice: lowland sticky rice (LSR) and upland sticky rice (USR). Among the upland types, the aromatic and big grained types are emerging as the most popular for several reasons: they are aromatic, are extremely soft and sticky, retain their aroma and sticky qualities well after cooling, have stable seed quality, and command a high price.

18. It is estimated that around 67,000 tonnes milled basis, or 80 percent of the rice grown in Dien Bien, is consumed within the Province. This suggests that around 17,000 tonnes of rice milled basis leaves the Province. There is an active trade in Dien Bien rice, especially in the North West region. It is possible that this may exceed the estimated 17,000 tonnes of surplus rice. Many producers grow some of the higher valued rice, usually aromatic Upland Sticky Rice and aromatic lowland ordinary rice that they sell rather than self-consume. The income they thus receive enables them to purchase a higher volume of less valuable rice.

19. Movement of rice within and beyond the Province occurs through primary and secondary collectors, primary and secondary processors, primary and secondary truckers, wholesalers, and retailers. Many of these value chain actors have multiple roles, such as the primary collector who may also own a small mill and may also act as trader, or a retailer in Dien Bien who sells to another retailer in Hanoi. What is noticeable is that the private sector has established a sustainable system. Those who collect, process and store the rice seem to exert the most influence on price. This is because of their cash and physical resources, principally transportation and storage. Critically, they also have good market information, something that the producers lack.

20. Along this entire chain, the term “Dien Bien rice” has market appeal. However, that appeal is directly related to the proximity of the consumer to Dien Bien. In Dien Bien itself, and Son La, Lai Chau, and Lao Cai, “Dien Bien” rice has market appeal. In Hanoi, Dien Bien rice is known. Retailers and supermarkets stocked a total of 21 different rices identified by the term “Dien Bien”. However, there were some pockets of consumers that had not heard of Dien Bien rice. Moreover, in the main, Dien Bien rice must compete in Hanoi on a value-for-quality basis with rice from Hai Hau. In Ho Chi Minh City, knowledge of Dien Bien rice was extremely poor, virtually non-existent. Certainly no rice was Dien Bien was observed in the seven markets, 30 retailers and 5 supermarkets visited. In Melbourne, not only was there no knowledge of Dien Bien rice, but the overall reputation of all Vietnamese rice in the 20 Vietnamese supermarkets was very poor. Just one brand from Vietnam, that of a company based in Ho Chi Minh City, was observed in Melbourne.

21. There was basically zero recognition of the variety *IR64* in Hanoi and, to a much lesser extent, Ho Chi Minh City. There, a few retailers had signs declaring that the rice on display was *IR64*, even though they had no knowledge what the term referred to.

22. Processors and retailers in Hanoi practice a high degree of product differentiation. They go to considerable effort to identify the attributes of rice which they think will increase the marketing appeal of their product. At the retailer level in Hanoi, 40 different names of rice were identified. This number rose to 60 at the supermarket level. Two Hanoi-based processors alone used just under 40 descriptions of attributes in order to differentiate their rice from their competitors. The attributes seen by the processors and retailers as being

important to the consumer were country (“Thailand”, “Japan”, “Taiwan”, “Korea”), region (“north”, “centre”, and province), geography (“upland”), softness, stickiness, aromatic, age (“new”, “old”), shape (*xuan*), colour (“*hong* pink”, “*cam*” black) and use (“*luc / lut* health”).

23. An analysis of retailer and wholesaler prices in Dien Bien, Hanoi, and Ho Chi Minh City is very difficult because of the difficulty to compare like with like due to the high degree of product differentiation between the processors, retailers and supermarkets within the same city as well as between the two cities. Nevertheless, it was established that there is very little difference between the retail price of rice in Dien Bien and the overall price in Hanoi. This is notwithstanding the cost of transport involved with moving the product from Dien Bien to Hanoi. At the retail level in Hanoi prices are highly differentiated. A high – low price variation of more than 100 percent was common. In contrast, the retail price gap in Dien Bien was much narrower. In Hanoi, the price of *Bac thom* rices is much higher at supermarket compared with retailers. The price of *Nep* rices is higher at retailers than at supermarkets. The price of *Tam* rices is comparable between supermarkets and retailers.

24. Above all, the attribute most desired by Hanoi rice consumers is first softness (*deo*) and second aroma. This is in contrast to Ho Chi Minh City where the most desired attribute is first aroma and second softness. Dien Bien rice is particularly associated with softness.

25. The marketing of rice in Hanoi is restricted because of the regulations governing the movement of trucks through the city. The result is that rice can only be delivered in large size trucks to processors on the outskirts of the city, principally in Ha Tay Province. These processors import from Dien Bien brown, or semi-processed, rice because of what the processors consider poor rice milling technology in the Province. They then mill (and polish) the rice before marketing it to wholesalers, retailers, supermarkets, and the food service sector in Hanoi.

26. Recommendations to address these findings can be categorised into production based and marketing-based options.

27. Production-based recommendations revolve around improving the yield and quality of the rice produced. They involve better use of the land and improved husbandry. Specific production-based recommendations relate to transforming sloping lands into irrigated terraces, improving the irrigation system in order to develop greater double cropping, using better quality seed that recognises the attributes required by the market, improving pest and disease control, and making better use of fertilizers. As these measures will require greater producer knowledge, as a prior step the Agricultural Extension Centre of the Department to Agriculture and Rural Development be strengthened. As far as possible the focus of the extension training should be the end producer.

28. Marketing-based recommendations include that producers be made more aware of market priorities in rice and, wherever possible, seed selection should be based on a mix of production and market priorities.

29. Lowland growers are encouraged to produce *Tam Thom Dien Bien* and *Te Thom Dien Bien* whilst upland growers are encouraged to produce *Nep Nuong Thom Dien Bien*.

30. Because Dien Bien is losing out on the value added associated with converting paddy and brown rice to milled rice, it is recommended that Dien Bien improve its rice milling technology.

31. Dien Bien definitely has a marked market presence. This suggests using “Dien Bien” as a provincial brand has merit. However, Dien Bien should adopt a branding procedure only after it can ensure that the rice in the packet is consistent with what is declared on the packet. Further, because of the importance that the market places on the three major attributes of *deo* “soft”, “aromatic”, and “sticky”, Dien Bien rice could be branded as “Dien Bien soft”, “Dien Bien aromatic”, and “Dien Bien sticky”⁶.

32. The Study identified that the dominant form of marketing Dien Bien rice is re-active rather than proactive. That is, the sellers come to Dien Bien and not the other way around. As a result Dien Bien is not fully maximising its marketing potential. Rice retailers in Dien Bien should be given marketing skills training. Thought should be given to assisting rice retailers in Dien Bien on a market development mission to Hanoi.

33. The Study Team considers that there should be a greater linkage of members along the value chain. This could start with the formation of Growers’ Associations.

⁶ There are other possibilities such as “Dien Bien soft and sticky” and “Dien Bien aromatic and soft”.

1 Introduction

34. A detailed examination was made of the rice value chain for Dien Bien Province. Concentration was upon the two varieties *IR64* and *Upland Sticky Rice*. The examination comprised of intensive production-based investigations in three Districts of the Province, and an examination of the marketing of rice in Dien Bien, Hanoi, Ho Chi Minh City, and Melbourne, Australia. From this examination and subsequent analysis a series of recommendations have been made.

35. The Study established that the Dien Bien rice value chain comprised the following activities: producers; input suppliers; primary and secondary collectors; primary and secondary processors; primary and secondary transporters; wholesalers; retailers; supermarkets; food service sector; end-consumers; government officials. Over 200 interviews and observations were made with different actors along the Dien Bien rice value chain, and these have formed the basis of the analysis and recommendations presented in this report.

36. The outline of the report is as follows;

37. Section 2 provides a background to the rice value chain study and the rationale for undertaking a study of *IR64* and *Upland Sticky Rice* value chains, Section 3 outlines the overall approach to value chain analysis undertaken in the study and Section 4 gives an overview of the general value chain for rice from Dien Bien province, including sub-sections on production, processing, logistics and marketing. Building on the general analysis in Section 4, Section 5 outlines a value chain analysis of *IR64* rice from Dien Bien province, and Section 6 outlines an upland sticky rice (USR) value chain. Section 7 discusses potential for rice from Dien Bien province, including *IR64*, USR and other varieties and types of rice and finally, Section 8 outlines production and marketing based recommendations for Dien Bien rice.

2 Background to Study

38. Dien Bien is located in the north-west region of Vietnam. Administratively it is a new province with a population of 440,000 and a land area of 9,554 km². The two overwhelming features of the province are its mountainous terrain and the high proportion of ethnic minorities.

39. When the province of Dien Bien was created in 2003, the the agriculture/forestry/fisheries sector held the largest share of provincial GDP, accounting for 37.55 percent of the total. Strong growth of the services sector (12.91 percent per annum) relative to the industrial sector (11.84 percent) and the agriculture/forestry/fisheries sector (6.45 percent) meant that by 2005, the services sector occupied a dominant part of the economy of Dien Bien province; see Table 1.

Table 1 Dien Bien GDP (2005)

| | GDP (US\$ million) | GDP % |
|-------------|--------------------|-------|
| Total | 79.94 | 100 |
| Agriculture | 27.97 | 34,99 |
| Industry | 21.56 | 26,97 |
| Services | 30.41 | 38,04 |

Source: <http://www.dulichdienbienphu.gov.vn>

40. The growth of the provincial economy (10.2 percent per annum) since 2003 has been higher than the national average over the same period (7.75 percent). However, the per capita GDP in Dien Bien (US\$182 in 2005) is still well below the national figure (\$440 in 2005), and the proportion of provincial GDP from agriculture/forestry/fisheries (34.99 percent in 2005) is also much higher than the national figure (21 percent in 2005).

41. Around 11 percent of the total land is used for agricultural production and 35 percent for forestry; see Table 2.

Table 2 Land Use in Dien Bien Province

| Land type | Area (ha) | % |
|----------------------|-----------|------|
| Agricultural | 108,158 | 11% |
| Forest | 348,049 | 35% |
| Land for special use | 6,503 | 1% |
| Unused land | 528,370 | 53% |
| Total | 991,080 | 100% |

Source: Dien Bien Department of Trade and Tourism (DoTT), 2005

42. Soil fertility, temperatures, rainfall, and humidity endow the province with the potential to produce high quality rice. However these conditions are localised to the Dien Bien Valley which is irrigated by the Nam Rom Irrigation System with a complete canal network.

43. Rice is the dominant crop. Around 40,000 ha are planted to rice representing about 37 percent of the total agricultural land. Other agricultural crops are maize, cassava, and soybeans.

44. Rice production in the lowlands in Dien Bien province is undertaken in two seasons, Winter-Spring and Summer-Autumn. In the uplands, rice is generally produced in the Summer season. Yields vary considerably between the three seasonal/locational types; see Table 4. Combined, the volume of rice produced in Dien Bien has gradually increased over the five years to 2004, when paddy production reached 122,000 tonnes, see Table 5.

Table 3 Dien Bien Province Rice Area

| | 2000 | 2001 | 2002 | 2003 | 2004 | Average Growth |
|--------------------|--------|--------|--------|--------|--------|----------------|
| Total area | 38,725 | 40,475 | 38,594 | 38,004 | 39,645 | 0.7% |
| Winter-Spring crop | 5,361 | 5,905 | 6,356 | 6,648 | 7,130 | 7.4% |
| Summer-Autumn crop | 11,188 | 11,481 | 11,957 | 11,819 | 14,137 | 6.3% |
| Upland Summer crop | 22,176 | 23,089 | 20,281 | 19,537 | 18,378 | -4.4% |

Hectares

Source: Agriculture Section, DARD, Dien Bien

Table 4 Rice Yields in Dien Bien Province

| | 2000 | 2001 | 2002 | 2003 | 2004 | Average Growth |
|--------------------|------|------|------|------|------|----------------|
| Average yield | 2.6 | 2.59 | 2.67 | 2.9 | 3.1 | 4.6% |
| Winter-Spring crop | 5.66 | 5.36 | 5.54 | 5.78 | 5.7 | 0.3% |
| Summer-Autumn crop | 4.03 | 4.19 | 3.83 | 4.11 | 4.22 | 1.3% |
| Upland Summer crop | 1.15 | 1.09 | 1.08 | 1.19 | 1.22 | 1.6% |

tonnes per hectare

Source: Agriculture Section, DARD, Dien Bien

Table 5 Rice Production in Dien Bien Province

| | 2000 | 2001 | 2002 | 2003 | 2004 | Average Growth |
|--------------------|---------|---------|---------|---------|---------|----------------|
| Total production | 100,872 | 104,884 | 102,931 | 110,146 | 122,755 | 5.1% |
| Winter-Spring crop | 30,355 | 31,644 | 35,239 | 38,438 | 40,652 | 7.6% |
| Summer-Autumn crop | 45,041 | 48,099 | 45,835 | 48,555 | 59,665 | 7.7% |
| Upland Summer crop | 25,476 | 25,141 | 21,857 | 23,153 | 22,438 | -2.9% |

Tonnes

Source: Agriculture Section, DARD, Dien Bien

45. Dien Bien Province is home to around 18 different ethnic minorities. Of these, the Thai, H'Mong, Kinh, Kho Mu, Lao, Khang, and Dao are the most common. Most of the minorities live in the more mountainous and remote parts of the province. There, the declining fertility of the land, difficulty in accessing modern inputs, lack of adequate water at the critical times of the farming year, and difficult access to markets results in the farmers in these regions having low incomes. Shifting cultivation and a self – sufficient lifestyle are common for the ethnic minorities. The main type of rice grown in the uplands is sticky rice. Whilst there are a large number of upland sticky rices, these tend to be referred to as a single type Upland Sticky Rice (USR).

46. Province wide, the number of households under the poverty line is around 60 percent. In an effort to address this issue SNV has undertaken a number of initiatives. In October 2002 a short initial market and opportunity scan was conducted. The scan resulted in numerous contacts at provincial level. The main findings showed a substantial scope for improvement of the agri-business sector in both the provinces Son La and Lai Chau, especially focusing on fruits, vegetables and locally processed fresh products. At that stage Dien Bien was part of Lai Chau.

47. In May 2003, a more extensive sector analysis was implemented to explore the potential of agro-products: marketing and processing of a certain number of crops, such as soy bean and rice, and buffalo meat, appeared to be highly beneficial for the rural economy, income growth and employment of the upland farmers in these provinces. In February 2004 a general sub sector analysis was made on IR64 rice and sticky rice. The study did not included any figures on production, market demand and value addition at any stage. The area planted to rice and the yield varies considerably from district to district within the province; see Table 6.

Table 6 Rice Production Statistics for Districts in Dien Bien Province, 2004

| District/town | Rice Season | Sowing area | | Yield (tonnes/ha /crop) | Production | |
|--------------------|--------------------|--------------|-------|-------------------------------|--------------|-------|
| | | (ha) | % | | (tonnes) | % |
| Dien Bien Phu City | Winter-Spring rice | 474 | 47.4% | 5.95 | 2821 | 50.0% |
| | Summer-Autumn rice | 501 | 50.1% | 5.56 | 2785 | 49.3% |
| | Upland rice | 25 | 2.5% | 1.60 | 40 | 0.7% |
| | Total | 1000 | | 5.65 | 5646 | |
| Lai Chau town | Winter-Spring rice | 89 | 43.8% | 4.78 | 426 | 48.1% |
| | Summer-Autumn rice | 89 | 43.8% | 4.79 | 429 | 48.5% |
| | Upland rice | 25 | 12.3% | 1.20 | 30 | 3.4% |
| | Total | 203 | | 4.36 | 885 | |
| Muong Nhe | Winter-Spring rice | 57 | 1.3% | 3.56 | 203 | 2.6% |
| | Summer-Autumn rice | 883 | 20.9% | 3.72 | 3289 | 42.7% |
| | Upland rice | 3286 | 77.8% | 1.28 | 4206 | 54.6% |
| | Total | 4226 | | 1.82 | 7698 | |
| Muong Lay | Winter-Spring rice | 315 | 7.1% | 4.07 | 1282 | 13.0% |
| | Summer-Autumn rice | 1568 | 35.4% | 3.47 | 5452 | 55.4% |
| | Upland rice | 2550 | 57.5% | 1.21 | 3106 | 31.6% |
| | Total | 4433 | | 2.22 | 9840 | |
| Tua Chua | Winter-Spring rice | 271 | 6.8% | 5.11 | 1387 | 17.1% |
| | Summer-Autumn rice | 1530 | 38.2% | 2.60 | 3987 | 49.1% |
| | Upland rice | 2200 | 55.0% | 1.25 | 2750 | 33.9% |
| | Total | 4001 | | 2.03 | 8124 | |
| Tuan Giao | Winter-Spring rice | 1418 | 19.5% | 5.43 | 7701 | 33.5% |
| | Summer-Autumn rice | 2521 | 34.6% | 4.62 | 11656 | 50.8% |
| | Upland rice | 3342 | 45.9% | 1.08 | 3610 | 15.7% |
| | Total | 7281 | | 3.15 | 22967 | |
| Dien Bien | Winter-Spring rice | 4048 | 33.1% | 6.24 | 25263 | 44.9% |
| | Summer-Autumn rice | 5669 | 46.4% | 4.94 | 28003 | 49.8% |
| | Upland rice | 2500 | 20.5% | 1.20 | 3000 | 5.3% |
| | Total | 12217 | | 4.61 | 56266 | |
| Dien Bien Dong | Winter-Spring rice | 458 | 7.3% | 3.42 | 1569 | 13.8% |
| | Summer-Autumn rice | 1376 | 21.9% | 2.96 | 4073 | 35.9% |
| | Upland rice | 4450 | 70.8% | 1.28 | 5696 | 50.2% |
| | Total | 6284 | | 1.80 | 11338 | |

Source: Dien Bien Statistical Yearbook, 2004 & 2005

48. Both SNV and the Dien Bien Department of Trade and Tourism (DoTT) are conscious that farmers tend to be oriented towards production rather than market signals. Further, the concentration upon production parameters does not extend to processing technology at the household level. Such technology would enable farmers to be able to preserve products for a longer period of time, especially during the wet season when farm prices tend to fall.

49. To contribute to the improvement of income and employment of the poor in Viet Nam's North West, SNV initiated the 'Market Access for the Poor' (MAP) programme in

2003, delivering advisory services throughout the value chain from producers up to the market.

50. In view of all of the above, the DoTT, supported by SNV undertook a programme on the marketing of agro-products. In first instance the Department selected paddy rice - notably *IR64* - as the value chain to be supported. The Department was aware that within the province there was a strong demand for this rice. Further, there appeared to be a good demand for the variety outside of the province. It was drawn to this conclusion by the obvious informal trade that occurs. Tourists to the province invariably seek to take Dien Bien rice back to their homes. Flights to Hanoi frequently have quite a number of unaccompanied bags of rice. Retailers in the markets and along the streets of Dien Bien receive phone calls from consumers in Hanoi and other nearby places to send Dien Bien rice to them.

51. SNV was conscious of the position of the growers of *USR*. It was aware that whilst such rice received a good price, the yields were low. Given the declining fertility of the soil, yields appear to be declining. Further, *USR* is a single crop product and very dependent on rain. As such, farmers are particularly vulnerable during the wet season when movement of product to markets is extremely difficult. This period coincides with the farmers high need for cash. It is for this reason that SNV sought to focus on the improvement of the marketing position of the poor upland farmers. As a result, SNV suggested analysing the value chain of *USR* as well.

52. The decision to concentrate on two specific types of rice was well based. Generally, the decline in the demand for starchy staples as income increases is referred to as Bennett's Law. A number of authors⁷ have traced the changes in food consumption patterns in Asia as the various countries develop. Urbanization, changing age structure of the population, increasing incomes, exposure to different imports, even changing work patterns, have influenced the movement away from a heavy coarse grain diet. Whilst rice consumption has declined in a number of Asian countries, there still is a large demand for the product. What does appear to be happening is that whilst the overall urban consumer's demand for rice has declined, there has been a shift in that demand towards the higher valued rices. As there is little reason to suggest that Viet Nam will not follow the general Asian trend, then it is fair to assume that *IR64* and *Upland Sticky Rice* could be two such higher valued rices that might see an increased level of consumer demand.

53. From the above came the Terms of Reference for the study. Overall, the goal of a value chain analysis is to give an overview of the value chain from producer to consumer and the potential of the chosen product in both value and market terms, in this case two varieties of rice in the province of Dien Bien.

54. Specific objectives of the analysis are:

⁷ See Vinning G and Tshering C. 2005. Recent Trends and Future Prospects of Fruit and Vegetable Marketing in Asia and the Pacific – an Overview. Presented to Seminar on Improvement of Agricultural Marketing Systems for Enhancing International Competitiveness. Asian Productivity Organization. Islamabad, Pakistan. February. See also Coyle. W., Gilmour B., Armbruster W. 2003. *Where Will Demographics Take the Asia-Pacific Food System?* Pacific Economic Cooperation Council, ERS of the USDA, the Farm Foundation, East-West Centre, College of Tropical Agriculture and Human Resources, University of Hawaii. Asia Pacific Economic Cooperation Forum Ministerial Meeting, Bangkok, Thailand.

1. To understand the rice industry in Dien Bien with a focus on **two** value chains from input supply to farmers to consumers. The two chains are:
 - a. The lowland variety of *IR64*, and
 - b. Upland Sticky Rice.
 2. Analyse the constraints and potentials both for domestic consumption and exports of upland and lowland Dien Bien rice.
 3. The potential for added value at the provincial level.
 4. Overview of existing local services in the sub sector.
 5. Recommend existing/ potential/ emerging services and improvements for both value chains in the region.
55. The full Terms of Reference are contained in Appendix A.
56. To carry out the analysis a Study Team was assembled. It comprised:
1. Mr Grant Vinning as the International Team Leader.
 2. Dr Nguyen Tu Siem and Dr Vu Van Liet as the two National Experts.
 3. Mr Pham Quang Trung from Agrifood Consulting International as the Research Assistant.
 4. Ms Anne-Claire Degail, Mr Cuong Nguyen Hung, and Mr Duong Van Khai from SNV – Dien Bien.
57. In addition, and in accordance with the Terms of Reference, the Study Team included officers from the DoTT in undertaking its activities.

3 Value Chain Methodology

3.1 The Approach

58. Value chain analysis ideally requires dealing with all actors along the value chain. In pursuance of the Terms of Reference, the Dien Bien rice value chain was identified as comprising government officials, producers, primary and secondary collectors, input suppliers, primary and secondary processors, transporters, wholesalers, retailers, supermarkets, and the food service sector. These actors are located with Dien Bien and in other parts of the country.

59. The Study Team combined desk and field work. A greater proportion of time was spent on field work compared with desk research activities.

60. The desk research comprised of two activities:

1. A review of the relevant literature, see Appendix B.
2. Gathering and analyzing statistics from the DoTT, Department of Agricultural and Rural Development (DARD) and the Provincial Agricultural Extension Centre of DARD.

61. The field work consisted of the examination of various value chain activities and the undertaking of interviews that ranged from short and ad hoc to formally structured interviews. A great deal of the activities incurred in the rice markets of Dien Bien, Hanoi, and Ho Chi Minh City. The field work consisted of six major activities.

62. **First**, in early January 2006, two teams from the Study Team each spent over a week in different parts of Dien Bien Province undertaking field research into production-based issues. Given that rice production in the province occurs both in the lowlands and the highlands, one team concentrated on analysing production in the lowlands of the Dien Bien Valley and the other team on the upland area of Muong Cha District. The detailed reports from these teams formed the basis of most of the observations on the production-oriented part of the value chain.

63. **Second**, most of the Study Team visited Dien Bien Province in late January 2006 to concentrate on the logistics and market actors within the value chain. In order to increase the spread of the research, different parts of the Dien Bien Valley and a distinctly different upland region (Dien Bien Dong) were visited. The information gathered during this field work is contained in Appendix C. Appendix C.1 concentrates on the Dien Bien Valley and Dien Bien Dong, and Appendix C.2 concentrates on Muong Cha. Notes from a number of the interviews that occurred at this stage are contained in Appendix D. Appendix C.1 and Appendix C.2 have as boxes some interviews with a number of value chain actors.

64. **Third**, a number of Study Team members undertook a rapid market survey of five major supermarkets in Hanoi. This work was preceded by a quick training session led by the Team Leader. This also occurred in late January 2006.

65. **Fourth**, in early February two members of the Study Team undertook a rapid market assessment of rice marketing in Ho Chi Minh City. This research had two basic aims:

1. Establish the demand for Dien Bien Rice away from the immediate production area.
2. Examine the distribution systems and marketing of rice in Ho Chi Minh City to see if they could offer a guide as to how like systems could evolve in Hanoi. The report of this fieldwork is contained in Appendix E.

66. **Fifth**, a much more extensive market survey was undertaken of rice marketing in Hanoi. Research concentrated on the retailing of rice by small stallholders and the city's rapidly growing supermarket system. Extensive data was established on prices and the various names by which the different forms of rice are marketed. The research led the Study Team to interviews with major processors of rice based on the outskirts of Hanoi. The research activity is reported in Appendix F. In addition this activity was supported by a large number of photos that highlighted issues in branding, packaging, wholesaling and retailing.

67. **Finally**, the opportunity arose during the study to undertake a rapid survey of rice marketing amongst the Vietnamese community in Melbourne, Australia. The purpose of the survey was to establish the position of, firstly Vietnamese rice and then secondly rice from Dien Bien in a market outside of Vietnam. Melbourne is home to possibly Australia's largest number of Vietnamese people⁸. At the same time, the research also provided information of brand names and packaging. The research notes are contained in Appendix G.

68. The scope of the number of the Dien Bien rice value chain actors interviewed by the Study Team is shown in Table 7.

Table 7 Number of Actors Interviewed by Study Team

| Value chain actors | Number |
|----------------------------------|--------|
| Government officials | 5 |
| Producers | 46 |
| Primary and Secondary Collectors | 14 |
| Wholesalers | 11 |
| Primary and secondary processors | 15 |
| Markets | 23 |
| Retailers | 82 |
| Supermarkets | 29 |
| Food service sector | 3 |
| End consumers | 7 |
| Others | 5 |
| Total | 240 |

69. It is noted that the one group that the Study team was not able to interact with was the input supply sector, due to limited time available for field work. This limitation should be addressed in the future.

70. Further, whilst some interviews were held with transport operators, this activity within the Dien Bien value chain should be further studied to establish the costs that occur along

⁸ The 2001 Australian census identified 56,563 persons residing in the state of Victoria (capital Melbourne) who were born in Vietnam. Further, 63,816 persons spoke Vietnamese at home as their first language. In Australia in total some 154,831 persons were born in Vietnam, while 174,236 persons speak Vietnamese at home.

the various points of the value chain from the producer to the penultimate consumer in Dien Bien, the North West, and Hanoi.

71. In accordance with the Terms of Reference, capacity building was undertaken with two groups.

1. DoTT staff; and
2. SNV staff.

72. Capacity building activities took two forms:

1. Formal training sessions. A short session on value chains was provided in Dien Bien to officers from DoTT. In addition, a full day's training in marketing skills occurred in Hanoi. Both were provided by the Team Leader and occurred before undertaking the field work at the two sites.
2. On-the-job exposure. Officers from the DoTT accompanied the Study Team on production and marketing field research in Dien Bien Province. The Director of the Trade Promotion Centre in the DoTT accompanied two members of the Study Team in undertaking the market research in Ho Chi Minh City. Two officers accompanied the Study Team on market research work it undertook in Hanoi.

3.2 Activities within the Value Chain

73. In undertaking the research, the Study Team quickly became aware that many of the same actors played a number of different value chain roles. The only value chain actor that appears to have a single role is the food service sector. Even then, the food service sector is comprised of many sub-sectors, ranging from:

1. Street food vendors
2. Hotels and restaurants of a wide variety of qualities
3. The canteens that serve state employees and workers in various industrial sites and facilities.

74. In broad terms, some of these multiple roles are shown in Table 8.

Table 8 Different Roles Played by Value Chain Actors

| Value chain actor | Roles played |
|-------------------|--|
| Producer | producing, collecting, processing |
| Collector | collecting, wholesaling, retailing, processing |
| Processor | processing, collecting, transporting, wholesaling, retailing |
| Transporter | transporting, collecting, retailing |
| Wholesaler | wholesaling, transporting, retailing |
| Retailer | retailing, wholesaling |

75. To address this issue, the Study Team adopted a slightly different definition of the various actors along the chain than that usually used in value chain literature. We considered that a specific actor is one whose primary focus was the activity for whom we named the actor. Thus, a "processor" is a value chain actor whose primary function was processing even though the same actor may have some collecting and marketing activities. A "wholesaler" is an actor whose primary focus was selling to others who

subsequently sold the rice to end-consumers even though the wholesaler also deals with end-consumers.

76. We also separated “retailers” from “supermarkets” by the simple expediency of defining a supermarket as a retailing operation working from a formal enclosed stand-alone building, irrelevant of the size of the operation⁹. At the same time, this definition of retailer and supermarket resulted in mini-marts being considered “supermarkets” even though most others do not treat them as such.

3.3 Margins

77. Value Chain Analysis usually ascribe margins to the different actors along the chain. During the Study there was a temptation to call the difference between the buying price and the selling price of different actors along the value chain as “margins / benefits”. This was resisted for two main reasons.

78. First, margins should relate to all costs. The figures that the Study Team was able to access were the cash only out of-pocket expenses. Such costs exclude the true financial costs. Margins relate to true financial costs. Such costs include the likes of depreciation, the cost of finance, and labour costs. It is useful to illustrate these.

79. **Depreciation.** As the activity Table 8 shows, there are a number of actors along the value chain that have invested capital in their operations. Transporters have trucks. Processors have milling equipment and storage facilities. Retailers and supermarkets have buildings and fittings. Even the very small open market retailers have capital equipment in the form of scales, bags, and sieves even if made of cane and bamboo. All of these have to be replaced eventually. Funding the replacement of equipment is done through the accounting device of depreciation. In no case were we able to determine if the costs presented to us represented included the deprecation allowance.

80. **Cost of finance.** A number of value chains beyond the paddy production level provide finance in the form of loans and advances. This has a cost associated with it. Again we were unable to determine if these costs were included in the selling prices.

81. **Labour costs.** The retailers (our definition) have to include the fact that one of their costs is paying themselves the equivalent of a salary. In simple terms, some-one who works in an office such as a public servant gets a salary, is able to take paid leave, and is paid a pension upon retirement. Self employed value chain operators have to fund these operations out of their earnings. The Study Team was not able to determine if the value chain actors costed these aspects into their final selling costs.

82. Thus whilst we willingly recognize that there are differences between the buying and selling price of many of the value chain actors beyond the farm gate, we are reluctant to call the difference a margin in the strict sense of the word. Instead we will use the accurate description of “cash margin”.

83. Second, margins differ. As Table 68 to Table 83 in Appendix C show, cash margins differed significantly according to the following criteria:

⁹ For a size-based definition of the different forms of supermarket operations, see Phan Thi Giac Tam and Le Thanh Loan (2005).

1. Commune
2. Ecological condition
3. Type of rice
4. Ethnic group
5. Trader type, that is individual trader or state owned enterprise in the same district.

84. The detailed research reported presented in Appendix C also showed that the cash margin differed throughout the year. Generally, cash and true margins are higher when the prices are high, and lower when the prices are lower. The Study Team's observations occurred at a high price period, that is, the lead up to Tet. Thus, the cash margins would have also been higher.

85. Finally, true margins should be expressed as a percentage rather than as an absolute level. This is to reflect that different members along the value chain have different levels of investment in their activity. Usually, the higher the level to capital then the greater the return that is expected on that capital. Further, the greater the degree of risk then the higher the return should be to reflect that risk. Thus, along the entire Dien Bien value chain, the value chain actors with the lowest level of capital involvement and the lowest levels of risk are the retailers (our definition). At the same time, the value chain actors with the highest levels of capital investment are the processors, especially what is termed in Table 9 as Paddy Processor #2, Transporters (especially Transporter #2), supermarkets, and the food service sector.

86. There are two conclusions from the above observations.

1. That a full margins study should be undertaken that encompasses financial as well as economic considerations.
2. That the margins study occur over a time period that encompasses both high and low price periods.

4 Dien Bien Rice Value Chains

4.1 Introduction

87. During the investigation of the rice value chains in Dien Bien, the Study Team recognised that many of the activities along the chain were common for virtually all of the types of rice in Dien Bien. To repeat each activity for each type of rice would produce a document of undue length without producing an equal increase in knowledge and understanding.

88. Instead, the approach taken is as follows.

1. Describe the generic Dien Bien rice value chain.
2. Analyse the common features. This takes the form of examining the four basic steps in the value chain, that is:
 - a. Production.
 - b. Processing.
 - c. Logistics.
 - d. Marketing.
3. Discuss in detail the distinguishing features of the value chains for *IR64* and *Upland Sticky Rice*.

4.2 Generic Dien Bien Rice Value Chain

89. The generic value chain for rice in Dien Bien is described below, see Table 9. The individual activities can be broadly classified under the four basic steps of production, processing, logistics, and marketing.

90. Four common features along the Dien Bien rice value chain; that is, production, processing, logistics, and marketing, are now analysed.

Table 9 Description of Dien Bien Rice Value Chain Roles

| Activity name | Description of value adding activity | Incoming product | Outgoing product |
|---------------------|--|---|---|
| Paddy production | <ul style="list-style-type: none"> • Purchase / production of seeds • Purchase and spray of fertilizers / pesticides • Production of paddy of different varieties. Main activity which occupies the family for a majority of the year. • Storage of paddy within the household | Land, seeds, fertilisers, pesticides, water, advice | Bulk paddy containing more or less impurities (stones, straw etc.) sold in small quantities on either a programmed manner or on a needs basis |
| Paddy collection #1 | <ul style="list-style-type: none"> • Collection of paddy from the farmers' doorstep and / or centralization of the paddy in a location close to one or several villages. • May involve some transporting, usually by motor-bike. • Segregation of paddy according to variety or groups of varieties. • Bagging of the paddy. | "Loose" paddy from different origins and varieties | Bagged, segregated paddy in bags commonly of 70 kg size. |
| Paddy collection #2 | <ul style="list-style-type: none"> • Collection of bagged paddy from a few central locations | Bagged paddy in 70 kg bags | Transported bagged paddy in 70 kg bags |

Table 9 Description of Dien Bien Rice Value Chain Roles

| Activity name | Description of value adding activity | Incoming product | Outgoing product |
|-----------------------|---|---|--|
| | <ul style="list-style-type: none"> Transportation of bagged paddy to processors close to a bigger market (Dien Bien market or Son La market). Transportation can be in truck sizes up to 10 t. | | |
| Paddy processing #1 | <ul style="list-style-type: none"> Storage of paddy Husking of paddy into brown rice and husks. Bagging the brown rice into 70 kg bags and the husks (used as firewood) | Bagged paddy in 70 kg bags | Stored paddy, brown rice, rice, bran, and husks in 70 kg bags and loose. |
| Paddy processing #2 | <ul style="list-style-type: none"> Storage brown rice Cleaning Milling of brown rice into white rice and bran Polishing the white rice into white polished rice Bagging the white polished rice in different sizes Storage of white polished rice (maximum 1 week) | Brown rice in 70 kg bags | <ul style="list-style-type: none"> White polished rice in different sized bags and bran. Bags can generically or specifically branded. With the latter, the size of the bags is based on direct contract. |
| Transportation #1 | <ul style="list-style-type: none"> Transportation of 70 kg bags of paddy, brown rice or white rice from the area of production to the area of final processing. | Paddy, brown rice and / or white rice in the area of production / first processing | Paddy, brown rice and / or white rice in a limited range within the area of final consumption |
| Transportation #2 | <ul style="list-style-type: none"> Transportation of 70 kg bags of white polished rice on short distances within the area of final consumption of the white polished rice | White polished rice in a range of 30 km within the area of final consumption in different size bags | White polished rice in different size bags at wholesalers and / or retailers and / or final consumer doorstep. |
| Wholesaling | <ul style="list-style-type: none"> Centralization of paddy and/or brown and/or white rice from different processors Storage of paddy | Bagged paddy, white rice, and brown rice in 70 kg bags | <ul style="list-style-type: none"> Transported paddy in 70 kg bags Transported white rice in 70 kg bags Transported brown rice in 70 kg bags. Servicing of other wholesalers, retailers, end-consumers, and the food service sector. |
| Individual retailing | <ul style="list-style-type: none"> Buys white polished rice in different size bags Stores a limited quantity of rice Rents either a shop, stall in a market place or from a space on the footpath. Has minimal storage. Sells by small quantities to customers | Rice in bags varying from 1 to 70 kgs but usually between 2 to 10 kgs. | Rice in varying quantities that can either be loose or packed. |
| Supermarket retailing | <ul style="list-style-type: none"> Buys white polished rice in different size bags that can be either custom-bagged or generic. Stores a limited quantity of rice Operates a stand alone facility. Sells by small quantities to customers. On-sells rice, along with a range of other food stuffs, to the food service sector. | Rice in bags varying from 1 to 25 kgs but usually between 2 to 10 kgs. | Rice in varying quantities. |
| Food service sector | <ul style="list-style-type: none"> Buys white polished rice in different size bags that can be either custom-bagged or generic. Stores a limited quantity of rice Sells rice as a fully cooked product either as a stand alone dish or incorporated with other dishes | Rice usually in 25 kg bags | Rice in cooked form |

91. Figure 1 shows a schematic representation of the value chain for Dien Bien Rice. The proportions of rice and paddy flowing along each channel in the value chain are based

on best estimates derived from the fieldwork in Dien Bien and in other locations, including key informant interviews and formal and informal survey activities.

92. The value chain diagram below clearly shows that own consumption of rice in Dien Bien province is the dominant end use of rice produced in the province, accounting for around 58,000 tonnes of the total 84,000 tonnes of milled rice equivalent produced in the province. A further 9,000 tonnes of rice is consumed by consumers in Dien Bien.

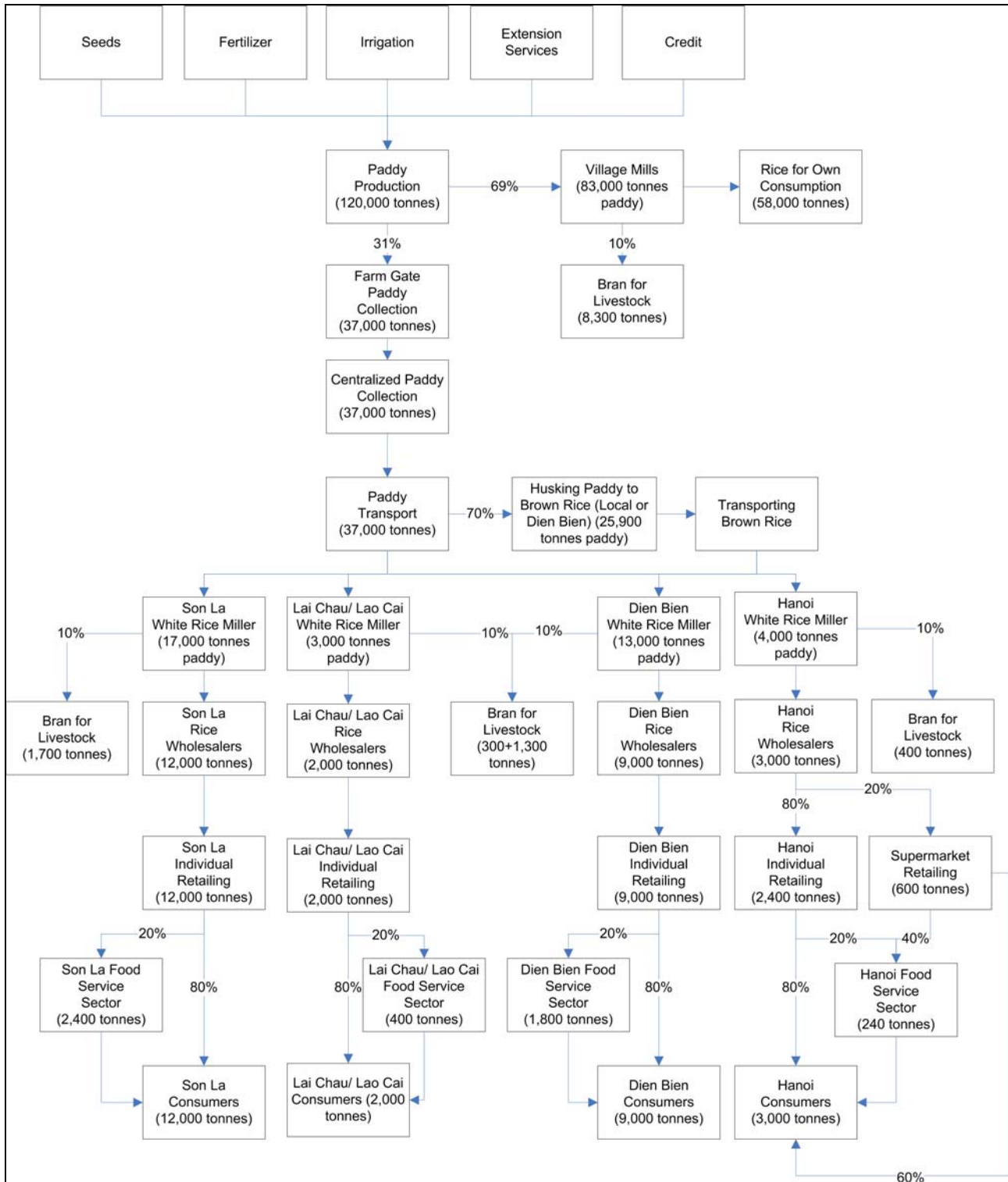


Figure 1 Schematic Representation of Dien Bien Rice Value Chain

93. Of the remaining rice, 14,000 tonnes is consumed in the North West (Son La and Lai Chau/Lao Cai) and 3,000 tonnes is consumed in Hanoi. Outside Dien Bien province, the largest single destination for Dien Bien rice is Son La, with an annual estimated consumption of 12,000 tonnes of Dien Bien rice.

4.3 Production

94. About 40,000 ha of land are devoted to rice production in Dien Bien. This results in production of around 120,000 tonnes paddy basis or around 84,000 tonnes milled basis. Production occurs in both the lowlands and the uplands.

4.3.1 Lowland Production Systems

95. Most of the Dien Bien irrigated rice is grown in the lowlands, especially in the Summer – Autumn season. This is when the availability of water is the most favourable. However, this is also the time when the incidence of pests and diseases is the highest.

96. Production conditions in the Dien Bien Valley mean that the quantity and quality of the rice grown there is higher than in the highlands. Around 6 000 ha of the Valley area is devoted to rice production. Because of soil fertility, climatic suitability, and access to water, most of the Valley can be double cropped.

97. The evolution of rice types in the lowlands has followed the following pattern over the past 30 years: *Tap Giao* to *Bao Thai* and *IR61* to *CR 203* to *IR64* to the aromatic *Huong Thom* and *Bac Thom*.

98. One possible reason for the evolution was that originally farmers were growing traditional varieties (*Tap Giao* and *Bao Thai*), then the extension services started promotion of improved varieties (*IR61* – *CR203* and *IR64*). Then, with the move towards a more market orientated economy farmers started producing varieties that fetched a higher price in the market, *Huong Thom* and *Bac Thom*.

99. Improved rice varieties of aromatic quality constitute around 65 percent of total production in the lowlands. Of this, *IR64* constitutes around 19.5 percent, *Huong Thom No.1* or “*Te Thom*” constitutes 26 percent, and *Bac Thom* 19.5 percent. The remaining 35 percent of rice production includes ordinary *Khang Dan* and lowland sticky rice varieties of *Nep Ruong*, *C 97*, and *IR352*.

Table 10 Lowland Rice Types in Dien Bien

| Low Land Rice Types | Percent of Total Production |
|------------------------|-----------------------------|
| IR64 | 19.5 |
| Te Thom (Huong Thom 1) | 26 |
| Tam Thom (Bac Thom 7) | 19.5 |
| Ordinary Khang Dan | 25 |
| Sticky Rice | 10 |
| Total | 100 |

estimate of proportion of total lowland rice production

100. *Bac Thom No 7* is now marketed as *Tam Thom Dien Bien* or “quality aromatic rice from Dien Bien” *Huong Thom No 1* is now called *Te Thom Dien Bien* and constitutes about

40 percent of production. A comparison between these two varieties and *IR64* is produced in Table 18 below.

101. Sticky rice types are also grown in lowlands. In the main, their eating quality is considered *lower* than that of upland sticky rice. They are grown by Kinh, Thai and Kho Mu groups. A variety of lowland sticky rice varieties are found, however the most commonly seen in the markets are lowland *Khau Tan Ruong*, *Nep Can Bo*¹⁰, *C 97*, *IR 352*, and *Nep Xoi Thuong*. The potential to expand lowland sticky rice production is considered much greater than that of the upland sticky rices. This is due essentially to the availability of land that is not sloping and access to water through irrigation.

102. Whilst irrigation is used, some of the communes visited during the Study, such as Muong Nha, Sai Long, and Na Pen, could expand their production if the canal system was improved.

4.3.2 Upland Production Systems

103. Rice is vital to the uplands. This is because rice provides not only the major form of sustenance but also the means of raising income as families sell a part of their production to fund everyday expenses.

104. Whilst irrigated rice production does occur in the uplands, it represents a very small percentage of total upland area planted to rice. Upland rice production more commonly occurs under extensive, rain-fed production conditions. This includes shifting cultivation and slash-and-burn practices. In the main, yields are low and soil degradation is increasing. Alley cropping, mulching, contour farming, and intercropping would assist arresting the declining soil fertility. Even simple measures like leaving rice straw on the fields for natural decomposition would assist.

105. Upland rain-fed rice growing is generally not encouraged by the province. Upland rice is gradually reducing as the land on which it grows is used for reforestation. At the same time, the province is encouraging farmers to convert rice dry-land farming into terraces by a subsidy of VND 2.5 m for making one ha of dry terraces or VND 5.0 m for transforming sloping lands into irrigated terraces.

106. As with lowland rice production, there has been an evolution in the types of sticky rice grown in the uplands. This is shown below: *Khau Luong Phuong* to *Nep Cam* to *Nep Nuong Thom* (big grain) to *Khau Pe* and *Nep Nuong Thom* (small grain) to *Khau Tan Nuong* to *Nep Nuong Thuong*.

107. A well know upland ordinary rice is *Te Thailand*. Whilst it probably originated from Thailand, the variety is now common in the uplands of Northwest Vietnam. The rice is produced under rain-fed systems by the H'mong people. It is sold in the region for special occasions such as wedding, holidays and Tet. It is also consumed on a daily basis by consumers in Hanoi and higher income consumers in Dien Bien.

¹⁰ Used mainly for alcohol and cake production.

4.3.3 Rice Yields

108. It is noted that lower yields occur in the poorer households. There are a number of reasons for this. First, the land area that they have is essentially too small to warrant the investment required to convert to irrigated production. Second, they use little or no organic manures. In contrast, the better-off households, especially the Kinh people, used larger organic manures such as farm yard manure, crop residues, and green manures. Third, they exhibit both low and poor applications of chemical fertilizers. It was noted that where chemical fertilizers are used, they are used poorly. There is a strong emphasis on nitrogen but a noticeable neglect of phosphorus and potassium. There is a considerable variation in yields, both between the various districts in Dien Bien, and also within districts

4.3.4 Seed

109. Seed quality is relatively poor for many rice varieties. For upland sticky and ordinary rices, farmers do seed selection and production of seed by themselves. For the upland sticky rices, farmers select each panicle and dry above the kitchen, so genetic quality is stable and germination rate is high. Sometimes, farmers also import seed from Lao. Hybrid seed is imported from China but the Study Team found that these varieties were not popular amongst farmers.

110. Government agencies involved in seed supplies play only a minor role with regard to the provision of upland rice seeds. This is because farmers are self sufficient in seed production. In regard to lowland rice seeds, seeds are partly provided by the Provincial Seed Company and partly produced by farmers. Because farmers produce their own seeds, *IR64* quality is deteriorating. A twin effect has set in. Because of deteriorating seed quality, the final grain is also of poorer quality. As a result consumers are moving towards the two types *Tam Thom* and *Te Thom*. With the change in demand, growers of *IR64* have less incentive to produce *IR64* beyond their own house-hold self-sufficiency needs. At the same time it is also noted that *Tam Thom* and *Te Thom* were introduced some years ago by the research centers who provide breeders' seeds to the Provincial Seed Company for multiplication in Dien Bien.

111. Dien Bien Province has a policy to promote rice development in accordance with the cropping systems and patterns recommended by the province through seed subsidies. Half of the rice growing area within the province is subsidized at different rates:

1. Zone I was considered the difficult area to grow rice. The subsidy was as the rate of 20 percent of seed expense. However, due to the extension activities, growers have adopted a number of more advanced production techniques. As a result, the subsidy was removed for the 2006 season.
2. In Zone II, considered more difficult, the subsidy is 50 percent.
3. In Zone III, considered the most very difficult area, the subsidy is 100 percent.

112. Appendix C provides details of three sets of producer costs. Two of these dealt with *IR64*. The percentage of total costs contributed by the cost of seed varied from 3.9 percent to 6.4 percent; see Table 11.

Table 11 Cost of Seed as Percentage of Total Production Costs on Selected Farms

| Farm | Seed costs | Total production costs | Seed costs as percentage of total costs | Notes |
|--|--|------------------------|---|---|
| Sam Mun Commune | 100 kg @ VND 4,800 /kg, total costs of VND 480,000 | VND 11,485,500 | 4.2 | Based on one hectare of IR64. Based on 17 input items. |
| Che Can village, Muong Phang commune, Dien Bien District | 12 kg @ VND 2200 /kg, total cost of VND 26,400 | VND 663,400 | 3.9 | Based on 1000 m ² of IR64. Based on 11 input items for which cash was paid. Excludes self ploughing, self-provided farm yard manure, and self harrowing. Considered a better-off household |
| Che Can village, Muong Phang commune, Dien Bien District | 15 kg @ VND 3000 / kg, total cost of VND 45,000 | VND 698,000 | 6.4 | Based on 1000 m ² of Khau Tan and 10 input items for which cash was paid. Excludes self ploughing, self-provided farm yard manure, self leveling and self harrowing. Considered a better-off household |

4.3.5 Extension

113. The activities of the agricultural extension system provided by the Provincial Agricultural Extension Centre and the Department of Agriculture and Rural Development appear limited to the district level with little activity being on a farmer-basis within the communes and even village levels. Given the resources available, the extension approach has been to work on a train-the-trainer basis. That is, the commune cadres such as the local cooperative chairman and leaders of the Farmers' Union and Women's Union who, in turn, train village heads who in turn train farmers. The training does not appear to be directed at women. Recently, the Dien Bien Pesticide Company in collaboration with the District Plant Protection Sub-division has introduced a new training method that deals directly with farmers. The approach uses a form of Farmer Field School that lasts over the entire cropping cycle with extension agents demonstrating to farmers each step from land preparation through to harvesting. The approach seems greatly appreciated by the farmers.

4.3.6 Rice Type

114. The demand for rice in Vietnam, like the demand for all consumer goods is changing. The current demand in Hanoi is for rice that is considered *deo* "soft" and aromatic. The demand for rice in Ho Chi Minh City is for aromatic and soft rice. In Australia, the demand is for aromatic rice. *IR64* does not have these properties to the extent that these markets demand. Thus in terms of the value chain beyond Dien Bien province there is just a small market for *IR64*. This demand appears to be shrinking.

4.4 Processing

115. The Study revealed two processing issues of significance to the Dien Bien rice value chain.

116. **Mixing.** Some time ago, processors and wholesalers mixed *IR61* and *AIT77* with *IR64*. These varieties had an external appearance comparable with *IR64*. However the grains are much harder and thus of lower market quality. The resulting grain was marketed as *IR64* to capitalise on the good market reputation of *IR64*. Consumers reacted against the poorer quality grain by reducing their demand for *IR64*.

117. **Processing technology.** Three of the major processors who are based on the outskirts of Hanoi, principally in Ha Tay Province, have a low opinion of the milling technology prevalent in Dien Bien. As a result, they procure from Dien Bien semi-processed or brown rice that they then apply final processing to in their facilities before sending to the Hanoi market. This has several implications for Dien Bien:

1. By transporting brown rice and not white rice, the per unit transport costs increase and thus the cost of Dien Bien rice increases.
2. Dien Bien loses the economics of value adding. This could result in the loss of employment within the Province and the discouragement of further investments.
3. Dien Bien loses all the bran that could be gained if the full extent of the processing was carried on the province.

118. At this stage, it is sufficient to say that processors in Hanoi go to considerable effort to identify the attributes of rice which they think will increase the marketing appeal of the rice. The degree of product differentiation observed in Hanoi was extensive. Product differentiation in Hanoi was a little more than observed in Ho Chi Minh City but certainly much greater than compared with Dien Bien. Two Hanoi-based processors used just under 40 descriptions of attributes in order to differentiate their rice from their competitors. These processors do not perceive that the term “*IR64* from Dien Bien” has any market appeal and thus the identity of the *IR64* from Dien Bien is lost.

4.5 Logistics

119. Dien Bien rice is moved to a number of final destinations: throughout the province, to other provinces in the the North West, to Hanoi, and to other parts of Viet Nam. Utilizing an assumption of an average value of milled rice of VND 6,000/kg (US\$375/ton) the proportionate quantities and value of milled rice to various destinations from Dien Bien is shown in Table 12.

Table 12 Quantity and Estimated Value of Dien Bien Rice Marketed Annually

| Destination of Milled Rice | Quantity (tonnes) | Percentage of Total | Value of Production (US\$) |
|----------------------------|-------------------|---------------------|----------------------------|
| Dien Bien | 67,000 | 79.8 | 25,125,000 |
| Son La | 12,000 | 14.3 | 4,500,000 |
| Lai Chau/Lao Cai | 1,000 | 1.2 | 375,000 |
| Other parts of Viet Nam | 1,000 | 1.2 | 375,000 |
| Ha Noi | 3,000 | 3.6 | 1,125,000 |
| Total | 84,000 | 100 | 31,500,000 |

120. The population of Hanoi in 2004 was estimated at 3.08 million, of which 1.78 million are urban residents and 1.3 million are rural residents. FAO estimates of per capita

consumption in Hanoi are 178kg per person per year. On this basis, the estimated annual demand for rice by Hanoi residents is around 549,000 tonnes per year, with urban residents demanding about 317,000 tonnes and rural residents accounting for roughly 232,000 tonnes.

121. Based on the quantity of rice produced in Hanoi, Hanoi is around 23 percent self-sufficient in rice production. The production of milled rice equivalent in Hanoi is around 130,000 tonnes per year. The balance of rice consumption (almost 420,000 tonnes per year) comes from outside Hanoi.

122. The movement of this rice into Hanoi is by three basic means:

1. Road for rice produced in central and north Vietnam,
2. Road but mainly rail for rice grown in the Cuu Long Delta,
3. Barge along the Red River for rice produced in the Red river Delta. Our attention centred on road transport.

123. The movement of rice into Hanoi is severely restricted by regulation in terms of the truck size that can enter Hanoi and the hours that trucks of various sizes can operate within parts of Hanoi. The regulations have resulted in an enforced multi-tiered distribution system based on the existence of processors that ring Hanoi. Most are located in Ha Tay. It is these value chain actors who play a pivotal role in the marketing of rice, any rice, in Hanoi.

124. Three levels of road transport are identified.

125. **Movement to the outskirts of Hanoi.** Dien Bien rice comes into the Hanoi area in trucks of various sizes. Most of these trucks have 10 tonne capacity. These trucks are strictly limited as to where and when in Hanoi they can move. Most deliver brown rice to the processors who variously perform a processing role, a warehouse role for both brown and white rice, a transport role (many own their vehicles whose size allows them to move at will through Hanoi), wholesaling role as they on-sell to agents, and a retail role as they sell direct to the public and the very large industrial canteens that ring Hanoi.

126. Some vehicles from Dien Bien deliver rice directly to end consumers within Hanoi. This is rice that has been ordered through the retailers in Dien Bien. Rice is placed on trucks by retailers for delivery to designated points throughout the city, albeit, within the regulations. End-consumers proceed to these points, pick up the rice and pay the truck driver who in turn pays the retailer.

127. **Movement to Hanoi city.** This activity tends to be in small vehicles of less than ten tonne capacity. Rice goes from the processors on the outskirts of Hanoi to wholesalers, retailers, supermarkets, and the food service sector on the city's industrial estates.

128. **Movement within Hanoi.** This is the penultimate leg of the value chain. Rice is distributed from the wholesalers to retailers in Hanoi by motorbike and bicycle.

129. Two forms of moving the rice by vehicles are involved. One is in the processor's own branded bags, albeit usually graded and bagged to various supermarket and retailer specifications. Bags are 1, 2, 5, 10, and 15 kg sizes, with the 5 and 10 kgs bags being the most common. This product is sent directly to supermarkets and some agents. Large bags are sent to the food service sector such as the Army, different forms of canteens at sites

throughout the city, and to canteens in the factories in the many industrial zones that surround Hanoi. Other rice is bagged into 50 kg bags for movement to wholesalers who then further break the lots into small bags and on-sell either to retailers or end-consumers.

130. At each stage the unit of rice moved gets smaller and smaller and thus economies of scale in transport become less and less.

4.6 Marketing

131. The marketing of Dien Bien rice starts at the paddy production stage. The Study Team observed that there was disjointedness between the periods of producing, selling, and buying rice. There are two peak production periods. One is the Spring crop and the other the Summer crop. Growers are very active sellers in June just after the Spring harvest and in October just after the Summer harvest. In contrast, the periods of the farmers most intensive demand for rice is in March – April and in August – September. This is when the farmers' supplies of paddy are exhausted. At the same time this is also the period when the ability to transport rice to the various selling points is inhibited by the rainy season.

132. One of the adverse consequences of this disjointedness is that farmers have to sell when their need for cash is the highest and the prices are usually the lowest. The Study Team interviewed a number of producers who sold when prices were low, that is VND 1500 – 1800 / kg paddy basis, even though they knew that prices would rise around 40 percent, to VND 2500 – 3000 / kg paddy in the near future.

133. Four marketing channel have been identified for rice from Dien Bien; see Figure 1:

1. That which occurs just within Dien Bien.
2. That which involves movement to Son La.
3. That which includes movement to other parts of the North West.
4. That which includes movement to the rest of Viet Nam (including Hanoi).

4.6.1 Marketing Channel - Dien Bien

134. The marketing channel with the highest volume is that for Dien Bien.

135. If it is assumed that each of Dien Bien's 430,000 citizens consume an average 13 kgs per month, then around 67,000 tonnes of milled rice is consumed within the Province annually. Given that the province produces around 122,000 tonnes of paddy or around 84,000 tonnes of milled rice, then around 80 percent of the rice produced in Dien Bien is consumed within the Province.

136. As is noted below, there is a high degree of circulation of rice within the Province. Some producers of *Upland Sticky Rices* will sell their more highly priced rices in order to purchase a greater volume of cheaper rices for their on-farm consumption.

4.6.2 Marketing Channel - Son La

137. Son La is an important outlet for Dien Bien rice. The Study Team was unable to be estimated if the basis of the flow is the cheapness of the Dien Bien rice or its preferred taste. This was because the chain was not specifically studied.

138. The Study Team was advised by some interviewees that there is a two-way flow of rice with Son La. Higher valued aromatic upland sticky rices are exported from Dien Bien to Son La and a greater volume of lower valued rice is imported. One estimate is that 1,000 tonnes a month of Dien Bien rice is traded into Son La.¹¹

139. Given that Dien Bien has an estimated surplus volume of 17,000 tonnes of milled rice, then the trade with Son La would appear to occupy a very large percentage of this surplus.

140. The existence of some large scale construction sites in the Son La provide a potential market that could be exploited by Dien Bien.

141. This chain should be subjected to further study.

4.6.3 Marketing Channel - North West

142. The Study Team was able to establish that Dien Bien aromatic *UPS* is marketed into Lai Chau and Lao Cai.

143. No volume estimates were able to be established during the Study period. Anecdotal evidence was cited that the rice from Lai Chau and Lao Cai was both exceptionally cheap and of very poor quality.

4.6.4 Marketing Channel - Rest of Viet Nam and International

144. For the purposes of the study, this market channel is composed of Hanoi and Ho Chi Minh City; see Appendix F and Appendix E respectively. Comments are also made about the rice market in Melbourne, Australia, see Appendix G.

145. The marketing segment of the value chain analysis is comprised of retailers, supermarkets, and the food service sector. For the following analysis, retailers and supermarkets will be considered as one.

146. The attributes of any rice variety valued by the market can be totally different to the attributes valued by producers. With the latter, desired attributes include early and late maturity, length of growing season, and tolerance to different soil, pests, and different climatic regimes.

147. The Study Team was able to establish ten attributes perceived by processors, retailers and supermarket as being important to the consumer. These were:

1. Country: "Thailand", "Japan", "Taiwan", "Korea".

¹¹ Pers.comm, Marije Boomsma, February 2006. Marije established this figure as part of the sectoral analysis she was undertaking in Son La for SNV.

2. Region. Two suites of regional names were observed. One suite is the broad geographic grouping of “north” and “centre”. The other is specific provinces. The following provinces were noted: Den Bien, Hai Hau, Thai Binh, Ha Bac, and An Giang.
3. Geography (“upland”).
4. Softness for eating (deo).
5. Stickiness.
6. Aroma.
7. Age (“new”, “old”).
8. Long Grain or Short grain (xuan).
9. Colour (“hong pink”, “cam” black).
10. Special use – such as for feeding to the elderly or invalids (“luc / lut health”).

148. The volume of Dien Bien rice marketed in Hanoi is estimated at around 3,000 tonnes milled basis annually. This assumption is based on two parameters:

1. There is an estimated 17,000 tonnes of surplus milled rice available for external trade beyond Dien Bien Province. From this at least 12,000 tonnes, milled basis, goes annually to Son La. It is assumed that 1,000 tonnes, milled basis, goes annually to Lai Chau and Lao Cai. The balance is around 4,000 tonnes.
2. The Study Team interviewed three of the processors that are located on the outskirts of Hanoi where large scale trucks are able to deliver their loads. Their estimate of the rice coming from Dien Bien to Hanoi is around 3,000 tonnes, milled basis.

149. It is stressed that this estimate is on a milled basis. It is known that the bulk of the rice received from Dien Bien by the processors on the outskirts of Hanoi is in the brown or semi processed form due to their low opinion of milling technology in Dien Bien.

150. Based on the frequency of names, and thus market valued attributes, used to market rice in Hanoi, the attribute considered by processors, retailers, and supermarkets as being most desired by Hanoi rice consumers is softness *deo* then aroma.

151. It is clear that in Hanoi “Dien Bien” is a term with market appeal. At the retail level, six names contained the term “Dien Bien” and at the supermarket level there were ten names containing the term “Dien Bien”, see Table 13.

Table 13 Names Used to Describe Dien Bien Rice in Hanoi

| Retailers | Supermarkets |
|--|--|
| <ul style="list-style-type: none"> • <i>64 Dien Bien</i> (NOTE: it is 64, not IR64) • <i>Dien Bien moi</i> • <i>Tam Dien Bien moi</i> • <i>Tam Dien Bien moi bac san</i> • <i>Te Dien Bien moi</i> • <i>Thom deo dam da Dien Bien</i> | <ul style="list-style-type: none"> • <i>Bao thai hong Dien Bien</i> • <i>Huong thom Dien Bien</i> • <i>Nuong Thom Dien Bien</i> • <i>Tam Dien Bien</i> • <i>Tam xoan Dien Bien</i> • <i>Tan Dien Bien</i> • <i>Te thom Dien Bien</i> • <i>Te thom dac sac Dien Bien</i> • <i>Thai lan tom Dien Bien bao</i> • <i>Thai Thom Dien Bien bao</i> |

Source: Study Team Interviews, Jan-Feb 2006

152. However, it is equally clear that the term *IR64* is not considered a term with marketing appeal in Hanoi. In Hanoi a few retailers who had signs declaring that the rice on display was *IR64*. When questioned, they had no knowledge what the term referred to, let alone any association with Dien Bien.

153. The most commonly used marketing term were:

1. Bac Hung Moi, used four times
2. De Bun Moi, Du Hung Moi, Te Thom Moi, each used three times

154. Rice from Hai Hau district in Nam Dinh Province is commonly cited as the competitor to rice from Dien Bien. Yet the term “Hai Hau” was only seen twice at the retail level and five times at the supermarket level.

155. Despite the frequent positive references to Dien Bien rice’s superior organoleptic properties, it is considered to be too highly priced. It is stated that on a comparable value-for-taste basis, Hai Hau rice is more competitive. A comparison of the prices of various types of rice in Hanoi is shown in Table 14.

Table 14 Rice Prices in Hanoi

| | Retailer #1 | Retailer #2 | Retailer #3 | Retailer #4 | Retailer #5 | Retailer #6 | Retailer #7 |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 480 | | | | | 5200 | | |
| Bac huong moi | 6800 | 6800 | 6800 | | | 6800 | |
| Bao thai | 6000 | | | | | | |
| Bac thom (i) | | | | | 6500 | | |
| Bac thom (ii) | | | | | 7000 | | |
| De bun moi | 4800 | 4800 | 4800 | | | | |
| Di | | | | | 6200 | | |
| Di huong | | | | | | | 7000 |
| Dien Bien moi | | 5000 | 5000 | | | | |
| Du | | | | 6000 | 6200 | | |
| Du huong moi | | 6800 | 6800 | | | | 7500 |
| Gao | | | | 4400 | | | |
| Gao | | | | 4800 | | | |
| Gao | | | | 5200 | | | |
| Gao | | | | 5600 | | | |
| Gao | | | | | 4800 | | |
| Gao | | | | | 5200 | | |
| Gao | | | | | 4400 | | |
| Gao bac | | | | 7000 | | | |
| Gao di | | | | 6000 | 6200 | | |
| Huong lai doi | | | | | | 8000 | |
| Nang huong | | | | | | | 5800 |
| Nep (i) ^A | | | | 7500 | 7000 | | |
| Nep (ii) ^A | | | | 9000 | | | |
| Nep cam | 9000 | | | | | | |
| Nep cam moi | | 9000 | | | | | |
| Nep cai hoa vang loai 1 (i) | | 8000 | | | | | |
| Nep cai hoa vang loai 1 (ii) | | 11000 | | | | | |
| Nep Dien Bien cao doc san vang | 12000 | | | | | | |
| Nep hoa vang | | | | | 9000 | | |
| Nep hoa vang xuất | 11000 | | | | | | |

| | | | | | | | |
|---------------------------|------|-------|-------|------|------|------|------|
| khan | | | | | | | |
| Nep nuong Dien Bien moi | | 12000 | 12000 | | | | |
| On moi | | | | | | | 5500 |
| Tam | | | | 8000 | | | |
| Tam deo | 7000 | | 7000 | | | | |
| Tam Dien Bien moi | 7800 | | | | | | |
| Tam Dien Bien moi bac san | 9000 | | | | | | |
| Tam Hai Hau | 7500 | | | | | | |
| Tam thai | | | | 9000 | | | |
| Tam thom | | | | | 8000 | | |
| Tam thai lan moi | 8500 | 8500 | | | | | |
| Tam thai lan xin | | | | | | 9000 | |
| Tam thom Hai Hau moi | | | 7500 | | | 7500 | |
| Tap dao moi | 4400 | | | | | | |
| Tao giao | | | | | | | 4700 |
| Te Dien Bien moi | 5500 | | | | | | |
| Te thom moi | 4600 | | 4500 | | | 5200 | |
| Xuan con | | | | | | | 5000 |
| Xi deo gia | | | | | | | 5400 |

(VND/kg)

Source: Study Team Interviews, February 2006

156. In Ho Chi Minh City, knowledge of Dien Bien rice was extremely poor, being virtually non-existent. Certainly no rice from Dien Bien was observed in the seven markets, 30 retailers and 5 supermarkets visited.

157. No rices were seen at the wholesaler, retailer, or supermarket levels that were identified by variety. Instead, rices were identified by attributes. These were usually:

1. region
2. softness
3. stickiness / glutinous
4. fragrance
5. old / new

158. In Ho Chi Minh City, the most desired attribute appear to be aroma and then softness.

159. Table 15 below summarises 53 names used by marketers that they think distinguishes their rice and enhances its marketability.

Table 15 Names Used to Describe Rice in Ho Chi Minh City

| | | |
|-----------------------------|---------------------------|--------------------------|
| 1. 8 Thom | 19. Nang thom | 37. Tam mot bui |
| 2. 64 deo ngot ^A | 20. Nang huong plu xuang | 38. Tam nang huong |
| 3. 64 mem deo ^A | 21. Nang thom cho dao | 39. Tam thom |
| 4. 64 moi ^A | 22. Nang thom cho dai moi | 40. Tao nguyen cu |
| 5. 64 tham ^A | 23. Nhat deo | 41. Thai lai |
| 6. 108 cu | 24. Nhung got | 42. Tau huong noxap |
| 7. 108 no mem | 25. Ngoc nu no men | 43. Thai nguyen cho bao |
| 8. Bui | 26. No | 44. Thom cho dao |
| 9. Bui ca mau | 27. No 4200 | 45. Thom dai loan |
| 10. Bui cao lanh | 28. SARI | 46. Thom huong laid biet |
| 11. Bui sua | 29. Thai lan | 47. Thom my |

| | | |
|------------------------------------|-------------------------------------|--------------------------|
| 12. <i>Cai nguyen cho dao</i> | 30. <i>Thai lan jasmine rice</i> | 48. <i>Thom nhop</i> |
| 13. <i>Cu</i> | 31. <i>Tai nang thom</i> | 49. <i>Thom nhat</i> |
| 14. <i>Dai</i> | 32. <i>Tai nguyen han</i> | 50. <i>Thom thai</i> |
| 15. <i>Deo thom 64^A</i> | 33. <i>Tai nguyen lun</i> | 51. <i>Thom thai moi</i> |
| 16. <i>Deo</i> | 34. <i>Tai nguyen thom</i> | 52. <i>Thom thai deo</i> |
| 17. <i>Huong lau thom deo</i> | 35. <i>Tai nguyen cho dao</i> | 53. <i>Xuong ga</i> |
| 18. <i>Nang huong dho dao</i> | 36. <i>Tai nguyen thom dac biet</i> | |

^A Specifically not IR64

Source: Study Team Interviews, February 2006

160. It is noteworthy that across the 53 names, only two were used four times, one was used three times and eight used twice. This illustrates the extent to which marketers seek to differentiate their product through names in order to enhance the marketing appeal. The most common names are listed in Table 16.

Table 16 Most Common Market Names used by Wholesalers, Retailers, and Supermarkets in Ho Chi Minh City

| Market name | Times used |
|---|------------|
| nep thom cho dao, thai nguyen cho dao | Four |
| nep ngong | Three |
| nep dac dai hoa vang, nep nong thom, SARI, tai nguyen thin, tai nang huong, tai nguyen cu, thom my, thom thai | Two |

Source: Study Team Interviews, February 2006

161. As noted in Table 15, a few retailers had signs declaring that the rice on display was “64”. When questioned, they had no knowledge what the term referred to, let alone any association with Dien Bien.

162. In Melbourne, more than 20 Vietnamese supermarkets¹² were visited. Not only was there no rice from Dien Bien, there was just the one brand of Vietnamese rice seen. Further, Vietnamese rice has a very poor reputation. The reasons given for this include:

1. Commercial loads not true to sample.
2. Poor quality in terms of high off stones and broken, lack of any appealing aroma, poor taste, poor shelf life¹³.

4.6.5 Comparison of Prices across Retail Markets

163. An analysis of retailer and wholesaler prices in Dien Bien, Hanoi, and Ho Chi Minh City is very difficult because of the inability to compare like with like because of the extent of product differentiation between the cities. Nevertheless, the following observations are made.

1. There is very little difference between the retail price of rice in Dien Bien and the overall price in Hanoi (Appendix C). This is notwithstanding the cost of transport involved with moving the product from Dien Bien to Hanoi.
2. Prices in Ho Chi Minh City are markedly lower than compared with Hanoi.

¹² Defined as either a supermarket operated by Vietnamese or a supermarket with a Vietnamese name even if operated by Chinese people. Appendix G contains the names and locations of the stores visited.

¹³ Vietnamese rice was considered to have a shelf life of three to four months compared with the 12 months that the store operators consider they got with product from Thailand.

3. At the retail level in Hanoi prices are highly differentiated. A high – low price variation of more than 100 percent was common. In contrast, the retail price gap in Dien Bien was much narrower.
4. Excluding the very highly priced imported rices from Japan, the high-low price gap in supermarkets was much lower.
5. In Hanoi, the price of Bac Thom rice is much higher at supermarket compared with retailers.
6. The price of Tam Thom rice is comparable between supermarkets and retailers.

4.6.6 Food Service Sector

164. The food service sector is comprised of the gamut from road /street-side vendors of cooked food, restaurants in a variety of quality ranges, hotels that also range from no star to five star and canteens that serve meals as part of the workers' remuneration.

165. The sector is enormous. For Hanoi, if we assume that one in three of its citizens eats at least one meal a day away from home, and that that meal includes 200 grams of rice, then the food service sector has an annual demand for around 75,000 tonnes.

166. The food service sector was not explicitly studied by the Team, even though interviews were held with three food service value chain actors. The interviews were with chefs at high end and mid-level hotels. Their demand was met largely from imports or from supermarkets.

167. This sector is a major component of the overall rice value chain and should be subjected to further study.

4.7 Marketing

168. Interviews with many retailers in Dien Bien City, see Appendix D and Appendix F, indicates quite a high level of activity in supplying Dien Bien rice to Hanoi. The interviews showed that the rice goes directly to end-consumers, and, to lesser extent to the food service sector and to small scale retailers who on-sell to end-consumers. The method of transportation to Hanoi is by truckers going down to Hanoi on other businesses or in the back of personal cars of tourists. One source stated that she made high use of the postal system's trucks to drop off Dien Bien rice along the route down to Hanoi. This observation was supported by interviews with Paddy Processor #2 and Transporters #2, see Appendix D and Appendix F. This activity was further supported by casual observations at the airport where bags of Dien Bien rice were being sent to Hanoi both as accompanied and unaccompanied rice.

169. The retailers and processors involved do not actively seek out new customers. Instead they wait for the customer(s) to contact them. The customers have found them by either personally visiting them when in Dien Bien City for whatever reason or from word-of-mouth from other customers.

170. The marketing chain is shown in Table 17.

Table 17 Marketing Chain for Dien Bien Rice

| Value chain actor | Value chain activity | Origin of initiation of activity |
|---------------------|---|--|
| Production | | |
| Paddy Collection #1 | Collects paddy from villages | Order from either Paddy Collection #2, Processor #1, and / or Processor #2. |
| Paddy Collection #2 | Paddy moves from village to market in Dien Bien | Order from Processor #1 and / or Processor #2. |
| Processing | | |
| Processing #1 | Receives paddy, mills to white rice, moves rice to Dien Bien. | Order from Processing #2, Transport #1, Retailers #1, and / or Retailers #2. |
| Processing #2 | Receives paddy, mills to white rice, moves rice to either Dien Bien or directly to Hanoi | Order from Transport #1, Retailers #1, Retailers #2, and / or end consumer.. |
| Transport | | |
| Transport #1 | Small and large scale trucks move milled rice to either Dien Bien for on-movement to Hanoi or directly to designated points within the environs of Hanoi for consumers to move to collect | Order from Processing #2, Retailers #1, Retailers #2, and / or end consumer. |
| Transport #2 | Small scale vehicles move from large vehicles on outskirts of Hanoi directly into Hanoi | Order from Retailers #2, and / or end consumers. |
| Transport #3 | Small parcels of milled rice move by passenger car and aircraft | Initiated by end-consumers. |
| Marketing | | |
| Retailers #1 | Receives milled polished rice to sell to end consumers in Dien Bien and Hanoi. | Retailers #2, end consumer. |
| Retailers #2. | Receives milled polished rice to sell to end consumers in Hanoi. | End consumer |
| End consumer | Receives milled polished rice from Processing #2, Retailing #1, Retailing #2, and/ or direct orders. | |

5 IR64 Rice Value Chain

5.1 Production

171. The International Rice Research Institute introduced *IR64* into the Dien Bien State Farm some decades ago. It became one of principal varieties of ordinary rice grown in the winter-spring and summer-autumn seasons in the lowlands. Although *IR64* is grown widely in Vietnam, the *IR64* grown in Dien Bien province, and more specifically in Dien Bien valley, is considered by some to be the most appreciated. In the past, the variety has constituted up to 60 percent of the area in the lowland dedicated to rice. However, this area is steadily declining. For the Winter-Spring crop of 2005-06, DARD advises that the two lowland districts of Dien Bien and Tuan Giao had planned to allocate around 45 percent of the total area to *IR64*.

172. In order to estimate the total amount of production of *IR64* per annum in Dien Bien, the following calculations will be utilized. *IR64* is assumed to account for 19.5 percent of the total lowland production for the Summer-Autumn season, as shown in Table 10. For Winter-Spring, the estimate of *IR64* accounting for 45 percent of production as discussed above will be applied. Applying these parameters gives an estimated annual production of 29,930 tonnes of *IR64* paddy, equivalent to 19,454 tonnes of milled rice.

173. Utilizing estimates of *IR64* farmgate price (average VND2675/kg) and average farmer margin (VND1380/kg) (see Appendix C) an estimate of the total farmgate value of paddy *IR64* can be obtained (US\$5,035,393) and the total farmer margin that this represents (US\$2,599,518).

174. *IR64* is one of a number of lowland ordinary rices. Table 18 compares the main features of *IR64* with the other two major lowland ordinary rices.

175. The yield of *IR64* is mid-range for the seven types of rice for which data are available, see Table 19.

176. The range of yields varies between 5.5 and 9.0 tonnes per hectare per crop. Factors that affect the yield have already been outlined above, that is, seed quality, fertilizers, and pest control.

177. *IR64* faces a number of adverse circumstances, that is, somewhat average yield, declining acreage, and a declining off-farm consumer appeal due to mixing, its not being aromatic, and its being relatively less soft.

178. Despite this, *IR64* was, and still remains, one of main ordinary rice in production, circulation and consumption in the province. In its favour the following are noted:

1. *IR64* is highly resistant to diseases and pests, especially plant hopper, leaf blast, and leaf folder;
2. *IR64* has high yields in both of the two cropping seasons;
3. It has a medium requirement of fertilizer.
4. *IR64* is particularly adapted to the soil and climate of Dien Bien, especially the Dien Bien Valley;

5. Although non-aromatic, the taste of IR64 is still acceptable by the majority of consumers in both Dien Bien and those who are familiar with it outside of the province.
6. The price of IR64 is affordable for medium-poor growers and consumers.

179. As a result of these attributes, *IR64* accounts for a significant share of the total provincial sale in the local market and the Northwest region;

180. The profitability of *IR64* is shown below in Table 20.

Table 18 Main Features of IR64, Tam Thom and Te Thom Rices

| | IR64 | Tam Thom (Bac Thom 7) | Te Thom (Huong Thom 1) |
|--|---|---|---|
| Estimated area in the Dien Bien valley | 20 percent of total area | 33 percent of the total area | 13 percent of the total area |
| Average yield (tonne/ha) | High | Medium | Medium |
| Winter-Spring | 6.5 | 6 | 7 |
| Summer-Autumn | 6 | 6 | 6.3 |
| Growth duration (day) | longer | shorter | shortest |
| Winter-Spring | 130 | 130 | 110 |
| Summer-Autumn | 120 | 115 | 100 |
| Other issues | | Highly adapted to acidic soil and cold and hot climate. | Resistance to soil acidity and cold. |
| Crop season | Two crops per year | Two crops per year | Two crops per year |
| Winter-Spring | Broadcast | Broadcast | Broadcast |
| Summer-Autumn | broadcast | broadcast | broadcast |
| Disease resistance | Very high, few diseases, no or low chemicals. | Very low. In 2002, high losses were associated with leaf-blast. | Low resistance, easy to be lost if no chemicals are used. |
| Fertilization | Medium | Medium | Medium |
| Eating quality | Soft, not aromatic | Aromatic, soft | Aromatic, soft |

Table 19 Average Paddy Yield in Dien Bien Province

| Varieties | Winter-Spring crop | Summer-Autumn crop |
|--------------------------|--------------------|--------------------|
| Overall provincial yield | 3.18 | |
| Provincial average | 5.81 | 4.2 |
| Upland rice | na | 1.28 |
| IR 64 | 6.5 | 6 |
| Te thom | 7 | 6.3 |
| Bac thom | 6 | 6 |
| Khang dan | 6.5 | 5.5 |
| Sticky C 97 | 5 | 5 |

Tonnes per Hectare

Source: Agriculture Section, DARD of Dien Bien

Table 20 Comparison of IR64 and Hybrid Rice Performance

| Variety | Yield (kg/ha/crop) | Price (VND/kg) | Return (VND/ha) | Notes |
|-------------|--------------------|----------------|-----------------|--------------|
| <i>IR64</i> | 6000-8000 | 3,200 | 2,560,000 | High quality |
| Hybrid rice | 8000-9000 | 2,300 | 2,070,000 | Low quality |

Source: Study Team Calculations

5.2 IR64 Dien Bien Marketing Channel

181. Dien Bien Province is the major marketing channel for IR64. Table 21 shows the value chain activities involved.¹⁴

Table 21 Marketing Channel for IR64 within Dien Bien Province

| Value chain step | Details of activities |
|---------------------|--|
| Paddy production | <ul style="list-style-type: none"> • Purchase / production of seeds • Purchase and spray of fertilizers / pesticides • Production of paddy of different varieties. Main activity which occupies the family for a majority of the year. • Storage of paddy within the household. • Receiving advice. <p>NOTE</p> <ul style="list-style-type: none"> • In most villages visited by the Study Team, there were a few better off farmers who would buy paddies at low prices, store them, and then resell when prices increased. |
| Paddy collection #1 | <ul style="list-style-type: none"> • Collection of paddy from the farmers' doorstep and / or centralization of the paddy in a location close to one or several villages. • May involve some transporting, usually by motor-bike. • Segregation of paddy according to variety or groups of varieties. • Bagging of the paddy. <p>NOTE:</p> <ul style="list-style-type: none"> • Nearly all villages visited by the Study Team had at least one, in some cases three, milling machines. • Most communes have a number of larger collectors who stored, milled and re-sold rice. |
| Paddy collection #2 | <ul style="list-style-type: none"> • Collection of bagged paddy from a few central locations • Transportation of bagged paddy to processors close to bigger markets in Dien Bien. • Transportation can be in truck sizes up to 10 t. |
| Paddy processing #1 | <ul style="list-style-type: none"> • Storage of paddy • Husking of paddy into brown rice • Bagging the brown rice into 70 kg bags and the husks (used as firewood) |
| Paddy processing #2 | <ul style="list-style-type: none"> • Storage brown rice • Cleaning • Milling of brown rice into white rice and bran • Polishing the white rice into white polished rice • Bagging the white polished rice in different sizes • Storage of white polished rice (maximum 1 week) |
| Transportation #1 | <ul style="list-style-type: none"> • Transportation of 70 kg bags of paddy, brown rice or white rice from the area of production to the area of final processing. |
| Transportation #2 | <ul style="list-style-type: none"> • Transportation of 70 kg bags of white polished rice on short distances within the area of final consumption of the white polished rice |
| Wholesaling | <ul style="list-style-type: none"> • Centralization of paddy and/or brown and/or white rice from different processors |
| Retailing | <ul style="list-style-type: none"> • Buys white polished rice in different size bags • Stores a limited quantity of rice • Rents either a shop, stall in a market place or from a space on the footpath. • Has minimal storage. • Sells by small quantities to customers |

182. The market research undertaken in Hanoi and elsewhere makes it clear that the term IR64 is not considered one with marketing appeal. In Hanoi a few retailers had signs declaring that the rice on display was IR64. When questioned, they had no knowledge what the term referred to, let alone any association with Dien Bien.

¹⁴ Details are provided in Appendix C.

183. Based upon the large number of interviews detailed in Table 7, the constraints that occur along the Dien Bien *IR64* rice value chain are shown below in Table 22.

Table 22 Constraints in the Dien Bien IR64 Value Chain

| Value chain step | Constraints |
|---------------------|---|
| Paddy production | <ul style="list-style-type: none"> • Poor quality seed. • Small plots of land of around 1000 m² that are too small to warrant investing in irrigation facilities even though there would be a higher yield from the investment. • Degrading soil quality. • Poor use of fertilizer, including the non-use of any type of fertilizer, to limited use of green manures, to imbalance in what chemical fertilizers that are used. • Poor application of chemicals to control pests and diseases. • Lack of capital to access improved seed and chemicals. • Poor access to timely water. • Poor water channel distribution to some lowland farms. • Poor on-farm storage of paddy. • Harvesting in the rainy season or when the grain is immature with the lack of filled grains and / or broken grains reduces quality and reduces returns to growers. • Prior commitment of the sale of paddy that occurs at less than current market prices • Lack of knowledge of prices beyond the immediate area. • The disjointedness between the timing of harvest with the need for cash. • Lack of widespread extension services. • Poor extension techniques. |
| Paddy collection #1 | <ul style="list-style-type: none"> • Deliberate and accidental mixing of different types of rice. • Difficulties of locally transporting rice during the rainy season. • Lack of knowledge of prices beyond the immediate area. |
| Paddy collection #2 | <ul style="list-style-type: none"> • Deliberate and accidental mixing of different types of rice. • Difficulties of locally transporting rice during the rainy season. • Poor local roads inhibit the use of larger scale trucks that are associated with the gaining of volume discounts with the selling of larger volumes of paddy. • Lack of capital. |
| Paddy processing #1 | <ul style="list-style-type: none"> • Poor storage of paddy • Mixing of rice types. • Poor husking technology. |
| Paddy processing #2 | <ul style="list-style-type: none"> • Poor storage of paddy • Mixing of rice types. • Poor husking, milling, and polishing technology. • Poor storage conditions. • White rice stored in inappropriate bags. |
| Transportation #1 | <ul style="list-style-type: none"> • Transporting limited during the wet season. • Poor roads limits the size of truck that can be used to collect. Larger trucks means that the collectors and thus the growers can gain a premium for volume. |
| Transportation #2 | <ul style="list-style-type: none"> • This system seems to work well |
| Wholesaling | <ul style="list-style-type: none"> • Apart from the lack of capital for expansion, this system seems to work well. • Some mixing occurs. |
| Retailing | <ul style="list-style-type: none"> • Limited capital and limited storage that prevents them from operating at a scale that results in economies of scale. • Most lack permanent facilities that offer protection from the weather and thus their operations are restricted to rain-free days. • Being sole-operators they cannot afford the time off to spend developing new sources of supply and new markets. • Reactive rather than pro-active marketing in that they depend on the market coming to them. |

Table 22 Constraints in the Dien Bien IR64 Value Chain

| Value chain step | Constraints |
|---------------------|---|
| Supermarkets | <ul style="list-style-type: none"> Non-existent. As supermarkets sell package rice and not loose rice, until Dien Bien gets what the supermarkets consider to be competent milling and bagging technology, the rice will most likely be imported into the province and will not be Dien Bien rice. If it is Dien Bien rice, its costs are likely to be higher than that of the local retailers because of the transport costs associated with exporting the rice in brown or par-processed form and importing back into Dien Bien. |
| Food service sector | <ul style="list-style-type: none"> Potential to supply canteens and large scale industrial sites. Dien Bien has few large scale industrial sites that have canteens. |

5.3 Prices and Margins along the IR64 Dien Bien Value Chain

184. Section 4.6.5 above notes that retailer and supermarket prices vary significantly between outlet forms and rice types. As the comment on the comparison of retailer and wholesaler prices in Dien Bien, Hanoi, and Ho Chi Minh City showed, it is difficult to compare like with like because of the extent of product differentiation and different prices charged by different outlets. This makes it hard to establish a consistent time series analysis of cash prices along the marketing chain. However, this section will present some estimates of prices and margins along the IR64 Dien Bien Value Chain.

Table 23 Rice Value at Producer Stage of H'Mong People

| | Variety | Cost price (VND/kg paddy) | Selling price (VND/kg paddy) | Benefit (VND/kg paddy) |
|---------------------|--------------------|------------------------------|---------------------------------|---------------------------|
| Irrigated rice land | <i>Normal rice</i> | | | |
| | IR64 | 757.0 | 2,500.0 | 1,743.0 |
| | CR203 | 898.6 | 2,000.0 | 1,101.4 |
| Upland rice land | CH5 | 850.9 | 2,000.0 | 1,149.1 |
| | <i>Normal rice</i> | | | |
| | Mong xi | 1,560.2 | 2,233.3 | 668.9 |
| | <i>Sticky rice</i> | | | |
| | Lau Ple lang | 2,185.0 | 3,000.0 | 815.0 |

185. Kho Mu people produced IR64, bao thai and hybrid rice in irrigated rice land, IR 64 has highest value are cost price with IR64 is 1424.5 VND, selling price is 2600 VND and got benefit 1175.5 VND/kg whereas bao thai only 721.1 VND/kg, hybrid rice 455.7 VND/kg and sticky rice at lowest value of benefit is 455.7 VND/ha; see Table 24.

Table 24 Rice Value at Producer Stage of Kho Mu People

| | Variety | Cost price (VND/kg paddy) | Selling price (VND/kg paddy) | Benefit (VND/kg paddy) |
|---------------------|--------------------|------------------------------|---------------------------------|---------------------------|
| Irrigated rice land | <i>Normal rice</i> | | | |
| | IR64 | 1,424.5 | 2,600.0 | 1,175.5 |
| | Bao Thai | 1,478.9 | 2,200.0 | 721.1 |
| Upland rice land | Hybrid rice | 1,544.3 | 2,000.0 | 455.7 |
| | <i>Sticky rice</i> | 2008.89 | 2,500.0 | 491.11 |

186. Thai people in Muong Muon 2, Muong Muon commune, Muong Cha district planted wet rice, on the slopping land they planted maize and cassava. Normal rice varieties are

IR64, Bao Thai and hybrid rice. Average data of 10 household interviewed showed that IR 64 attained highest value per kg, benefit is 1,227.2 VND/kg whilst hybrid rice has the lowest benefit value although it gave the highest yield; see Table 25.

Table 25 Rice Value at Producer Stage of Thai People

| Variety | Cost price (VND/kg paddy) | Selling price (VND/kg paddy) | Benefit (VND/kg paddy) |
|--------------------|------------------------------|---------------------------------|---------------------------|
| Irrigated land | | | |
| <i>Normal rice</i> | | | |
| IR64 | 1,700.6 | 2,925.0 | 1,227.2 |
| Bao thai | 1,667.2 | 2,500.0 | 832.8 |
| Hybrid | 1,829.8 | 2,500.0 | 670.2 |
| <i>Sticky rice</i> | | | |
| Tan | 2,069.6 | 3,000.0 | 930.4 |

187. The collectors are Thai and Kinh people who live in central villages lying beside national or province road. Collectors come to villages to buy then take it by motorbike to agencies at district centre to sell.

188. The Study Team interviewed 2 collectors in Na Pheo village on the quantity and kind of paddy collected every month (Table 26).

Table 26 Value of Paddy at the Collector's Stage

| Rice kinds | Quantity (kg/year) | Buying price (VND/kg paddy) | Sell price (VND/kg paddy) | Marginal price (VND/kg paddy) | Total income (VND) | Total cost (VND) | Benefit (VND/month) |
|-------------------------------|-----------------------|--------------------------------------|------------------------------------|--|--------------------------|---------------------|------------------------|
| Normal rice (Te Rau) | 1000 | 3000 | 3300 | 300 | 3,300,000.0 | 3,150,000.0 | 150,000.0 |
| IR64 | 300 | 2500 | 3000 | 500 | 900,000.0 | 795,000.0 | 105,000.0 |
| Sticky rice (non-fragment) | 100 | 3300 | 3500 | 200 | 350,000.0 | 330,000.0 | 20,000.0 |
| Total benefit/month | | | | | | | 170,000.0 |

189. Rice retailers in the district market in Muong Cha district are very small, there are 3 retailers with quantity every day about 60 kg rice/day/retailer. Consumers are employees and staff are living and working in district and involved in non agricultural production as teachers, government staff. Retailer got benefits from 200 to 300 VND/kg of rice. The retailers in Muong Cha market sell about 6 tonnes of rice/year equal 10 tonnes of paddy, see Table 27.

Table 27 Quantity and Benefit of Rice Retailer in Muong Cha Market

| Rice kind | Quantity (kg rice /day) | Buying price (VND/kg rice) | Selling price (VND/kg rice) | Total income (VND) | Total cost (VND) | Benefit (VND/day) |
|---------------|-------------------------------|-------------------------------------|--------------------------------------|--------------------------|---------------------|----------------------|
| Te Rau | 30 | 5,100 | 5,300 | 159,000 | 153,000 | 6,000 |
| IR 64 | 30 | 5,200 | 5,500 | 165,000 | 156,000 | 9,000 |
| Total per day | 60 | | | 324,000 | 309,000 | 15,000 |

190. In the District town there are 7 rice traders, most of them are from the private sector with the only public agency being the Northern Food Company (NFC) with a branch in Muong Cha town. The NFC has 3 three staff assigned to buying paddy then transferring to

their headquarters in Son La. Other traders buy paddy then process to sell rice. They buy paddy direct from farmers or collectors.

191. Each trader has a husking enterprise from 4 – 6 huskers and two trader hires labor for their business.

Table 28 Quantity of Rice Bought by Traders in Muong Cha District Centre

| Trader | | Tap Thi Phan | Nguyen Duc Giap | Lo Thi Phinh | Northern Food Company | Total |
|-------------|--------------------|--------------|-----------------|--------------|-----------------------|------------|
| Quantity | (tonnes rice/year) | 11 | 100 | 50 | 200 | 361.2 |
| Normal rice | IR64 | 1 | | 3 | | 4.2 |
| | Te rau | 10 | 50 | 18 | | 78 |
| | Bao thai | | | 3 | | 3 |
| | Tam thom | | | 2 | | 2 |
| | Te nuong | | | | 100 | 100 |
| | Te do | | 30 | 4 | 60 | 94 |
| Sticky rice | Long grain | | 10 | 12 | 20 | 42 |
| | Short grain | | 10 | 8 | 20 | 38 |

Table 29 Quantity of Rice Bought by NFC in Muong Cha District Centre

| Variety | Quant. (kg rice/year) | Selling price (VND) | Total income (VND) | Total cost (VND) | Total benefit (VND) | Benefit/kg (VND/kg rice) |
|-----------|-----------------------|---------------------|--------------------|------------------|---------------------|--------------------------|
| Te do | 40,000 | 4,200 | 168,000,000 | 125,400,000 | 42,600,000 | 1,065 |
| Te nuong | 100,000 | 5,200 | 520,000,000 | 376,200,000 | 143,800,000 | 1,438 |
| Nep nuong | 40,000 | 5,200 | 208,000,000 | 150,480,000 | 57,520,000 | 1,438 |

Table 30 Quantity, Price and Benefit of Tap Thi Pan Trader in Muong Cha Centre

| Variety | Kind of product | | Selling price (VND) | Total income (VND) | Total cost (VND) | Total benefit (VND) | Benefit /kg (VND/kg) |
|-------------|-----------------|--------------|---------------------|--------------------|------------------|---------------------|----------------------|
| | Paddy | Rice | | | | | |
| Te rau | 10,000 | 7,000 | 5,500 | 38,500,000 | 35,885,000 | 2,615,000 | 261.5 |
| IR64 | | 1,200 | 5,000 | 6,000,000 | 5,643,000 | 357,000 | 297.5 |
| Bran | | 1,300 | 1,700 | 2,210,000 | | 2,210,000 | |

Table 31 Quantity, Price and Benefit of Nguyen Duc Giap Trader in Muong Cha Centre

| Kind of rice | | Normal rice | Te rau | Te do | Sticky rice | Bran | Total |
|--------------------------|-------------|---------------|-------------|------------|-------------|------------|---------|
| Paddy | | | 50,000 | 30,000 | 20,000 | | 100,000 |
| Rice | Sell retail | (tonnes/year) | 17000 | 20400 | 14000 | 12000 | 63.4 |
| | | (VND/kg) | 5000 | 4500 | 5500 | 1500 | |
| | Wholesale | (tonnes/year) | 18000 | | | | 18 |
| | | (VND/kg) | 4800 | | | | 4,800 |
| Total Income ('000 VND) | | | 171,400,000 | 91,800,000 | 77,000,000 | 18,000,000 | 358,200 |
| Total Cost ('000 VND) | | | 165,250,000 | 84,810,000 | 75,350,000 | | 325,410 |
| Total benefit ('000 VND) | | | 6,150,000 | 6,990,000 | 1,650,000 | 18,000,000 | 32,790 |
| Benefit /Kg (VND/kg) | | | 123 | 233 | 83 | | 439 |

Table 32 Quantity, Price and Benefit of Lo Thi Phinh Trader in Muong Cha Centre

| Kind of rice | Paddy | Rice | | Total income ('000VND) | Total cost ('000VND) | Total benefit ('000VND) | Benefit /kg (VND/kg) |
|--------------|--------------|-------------------------------------|-----------------------------------|------------------------|----------------------|-------------------------|----------------------|
| | | Sell retail (tonnes/ year) (VND/kg) | Wholesale (tonnes/ year) (VND/kg) | | | | |
| Normal rice | 30,000 | 12,600 | 9,100 | 115,360 | 97,519 | 17,842 | 595 |
| Te rau | 18,000 | 5,600 | 7,000 | 70,420 | 60,831 | 9,589 | 533 |
| Bao Thai | 3,000 | 2,100 | | 8,820 | 8,571 | 249 | 83 |
| IR64 | 3,000 | | 2,100 | 11,760 | 9,512 | 2,249 | 750 |
| Tam thom | 2,000 | 2,100 | | 12,600 | 7,177 | 5,423 | 2,712 |
| Te do | 4,000 | 2,800 | | 11,760 | 11,428 | 332 | 83 |
| Sticky rice | 20,000 | 4,000 | 10,000 | 80,200 | 68,426 | 11,774 | 589 |
| Long grain | 12,000 | 2,400 | 6,000 | 49,800 | 43,062 | 6,738 | 562 |
| Short grain | 8,000 | 1,600 | 4,000 | 30,400 | 25,364 | 5,036 | 630 |
| Bran | | 6,000 | 1,500 | 9,000 | | 9,000 | |

192. The market in Dien Bien town has 20 rice retailers; they bought rice from farmers or rice agencies (about 30 percent from farmers and 70 percent from rice agencies) in Dien Bien. The buying price of rice from rice agencies is 100 VND/kg higher than the price from farmers.

Table 33 Quantity and Benefit of Rice Retailers in Dien Bien Town Market

| Rice kind | Quantity (kg /month/retailer) | Quantity rice (kg /month) | Buying price (VND/kg) | Selling price (VND/kg) | Benefit (VND/kg) |
|---------------------------|-------------------------------|---------------------------|-----------------------|------------------------|------------------|
| <i>Normal rice</i> | | | | | |
| IR64 | 800 | 16,000 | 5,600 | 6,000 | 400.0 |
| Tam Thom | 200 | 4,000 | 6,550 | 7,000 | 450.0 |
| Te thom | 300 | 6,000 | 5,800 | 6,000 | 200.0 |
| Te Thai Lan | 200 | 4,000 | 5,400 | 5,800 | 400.0 |
| Bai Thai | 200 | 4,000 | 4,300 | 4,500 | 200.0 |
| Te nuong | 100 | 2,000 | 5,300 | 5,700 | 400.0 |
| <i>Sticky rice</i> | | | | | |
| Sticky rice(fragrant) | 600 | 12,000 | 8,500 | 9,000 | 500.0 |
| Sticky rice(non fragrant) | 200 | 4,000 | 6,000 | 6,500 | 500.0 |
| Sticky rice (tan) | 300 | 6,000 | 7,000 | 7,500 | 500.0 |

193. Dien Bien town has both public and private sector rice traders. Whilst the public sector traders tend to be large scale, the private traders are both small and large scale. Small traders have some huskers (2 – 4 huskers) buy several tens tonne of paddy per year. After processing they sell either wholesale, or under retail arrangements to consumers in Dien Bien. Bigger traders have good potential, and well developed processing systems, as they are buying several hundreds tonnes of paddy per year.

Table 34 Quantity and Benefit of Trader in Dien Bien Town

| | Quant. (kg paddy /year) | Quant. Rice (kg/year) | Selling price (VND/kg) | Total income (1000VND) | Total cost (1000VND) | Total benefit (1000VND) | Benefit (VND/kg) |
|-------------|-------------------------|-----------------------|------------------------|------------------------|----------------------|-------------------------|------------------|
| Te Thom | 40,000 | 28,000 | 5800 | 162,400.0 | 156,300.0 | 6,100.0 | 153 |
| Tam Thom | 50,000 | 35,000 | 6600 | 231,000.0 | 221,500.0 | 9,500.0 | 190 |
| IR64 | 10,000 | 7,000 | 6000 | 42,000.0 | 39,075.0 | 2,925.0 | 293 |
| Nep Thom | 30,000 | 21,000 | 8000 | 168,000.0 | 148,575.0 | 19,425.0 | 648 |
| Nep Thuong | 50,000 | 35,000 | 7000 | 245,000.0 | 231,950.0 | 13,050.0 | 261 |

194. Ms Dung in Dien Bien town buys rice from big trader in Dien Bien to transport to sell in Hanoi city. Every month she bought about 10,300 kg of rice to wholesale to Hanoi. Rice value in this stage as presented in Table 35. She said transport cost from Dien Bien to Hanoi city is 350 VND/kg with professional traders.

Table 35 Quantity, Price and Benefit Trading of Rice in Dien Bien

| | | | |
|------------------------|-------|-------------------|-------------------|
| Variety | | IR64 | Sticky Rice |
| Quantity (kg rice) | | 10,000 | 300 |
| Buying price (VND/kg) | | 6,500 | 8,000 |
| Selling price (VND/kg) | | 7,500 | 9,500 |
| GR (NVD) | | 75,000,000 | 2,850,000 |
| Cost | (VND) | Total | 68,600,000 |
| | | Buying cost | 2,508,000 |
| | | Carry cost | 65,000,000 |
| | | Transport | 2,400,000 |
| | | | 100,000 |
| | | | 3,000 |
| | | | 3,500,000 |
| | | | 105,000 |
| Benefit(VND) | | | 6,400,000 |
| | | | 342,000 |

195. The estimated benefit from the above transactions is 640 VND/kg of IR64 variety and 1140 VND/kg of fragment sticky rice. However, the sticky rice really only sells during the Tet period.

5.4 Knowledge of Dien Bien Province's IR64

196. Demand for *IR64* appears to be closely linked to the proximity of the consumer to Dien Bien. In Dien Bien knowledge of and thus demand for *IR64* is the highest. It is lower in the North West, even lower in Hanoi, minimal in Ho Chi Minh City, and negligible outside of the country. This is schematically illustrated in Table 36.

Table 36 Extent of Knowledge and Demand for IR64

| Knowledge and Demand | Proximity to Dien Bien | | | | |
|----------------------|------------------------|--------------------|-------|------------------|--------------------|
| | Highest | Dien Bien province | | | |
| Good | | North West Vietnam | | | |
| Some | | | Hanoi | | |
| Minimal | | | | Ho Chi Minh City | |
| Negligible | | | | | Outside of Vietnam |

197. The above representation recognizes those who have visited Dien Bien Province as tourists or business people and have tried the rice from there appreciate its taste and seek it out when they return to their homes. However, it is unclear if they have tasted specifically *IR64* or what is now marketed as *Te Thom* and *Tam Thom*. Even if it is *IR64*, the demand based on tourists to the province represents a relatively small volume. Finally, the spurt in the demand for Dien Bien rice can be linked to the spurt in tourist numbers that was associated with the commemoration of the fiftieth anniversary of the battle of Dien Bien Phu. Tourist-linked growth is now experiencing steady growth so too will there likely be a steady growth in the demand from this sector for rice from Dien Bien.

6 Upland Sticky Rice Value Chain

6.1 Production

198. The marketing of Upland Sticky Rice (USR) in Dien Bien has a number of production-based limitations. These include:

1. There is only one crop a year. This indicates limited volumes.
2. Expanding the area devoted to USRs is extremely difficult to virtually impossible. This is because of its being grown on sloping lands and these are the types of land that government polices is seeking to preserve.
3. The area devoted to USR planting is declining with the area under sticky rice in 2005 being 276 ha lower compared with 2004 (DARD).
4. Production is rain fed. This means that production is low and quite variable.
5. No fertilisers are applied and the rice is susceptible to attacks by a number of pests and diseases such as root, tiller borers, and phytophthora. As a result, yields are low and variable.

199. No exact figures are available for the production area or production quantities of USR in Dien Bien province. However, during fieldwork in upland areas, a reliable estimate of USR area as being 40 percent of total upland rice area was developed. Table 37 shows production estimates for USR based on this derived estimate of production area. The table shows an estimated total annual production level of 5834 tonnes of USR.

Table 37 Estimated Production Area and Production Quantity of USR in Dien Bien, by District

| District | Estimated area of USR (ha) | Estimated Production of USR paddy (tonnes) | Estimated Production of USR (tonnes) |
|--------------------|----------------------------|--|--------------------------------------|
| Dien Bien Phu City | 10 | 16 | 10 |
| Lai Chau town | 10 | 12 | 8 |
| Muong Nhe | 1314.4 | 1682.4 | 1094 |
| Muong Lay | 1020 | 1242.4 | 808 |
| Tua Chua | 880 | 1100 | 715 |
| Tuan Giao | 1336.8 | 1444 | 939 |
| Dien Bien | 1000 | 1200 | 780 |
| Dien Bien Dong | 1780 | 2278.4 | 1481 |
| Total | 7351.2 | 8975.2 | 5834 |

200. Utilizing estimates of USR farmgate price (VND3000/kg) and average farmer margin (VND750/kg) (see Appendix C) an estimate of the total farmgate value of paddy USR can be obtained (US\$1,693,434) and the total farmer margin that this represents (US\$423,358).

6.2 Marketing

201. Off-setting these production-based challenges, upland sticky rice varieties have a number of inherent marketing advantages:

1. Upland sticky rice varieties are considered to have a greater degree of varietal diversity compared with lowland sticky varieties.
2. There is a higher level of seed purity as farmers produce their own using traditional standardization, selection and storage methods.
3. At the collector and processor levels there appears to have been no mixing of types so the consumer is getting what is expected.
4. They are especially aromatic, extremely soft, and sticky.
5. When steamed, *USR* retains its aroma and sticky quality for long time. It does become hard and dried when cooled. These features are highly suitable for special uses such as holiday foods, religious uses, wedding ceremonies, and making traditional cakes.

202. Among the *USRs*, the aromatic and big grains varieties are emerging as the best quality sticky rices that can compete with similar types produced in the Red River Delta such as *Nep Cai Hoa Vang* and *Nep Hai Hau*.

203. Interviews and observations detailed in Appendix C to Appendix G indicate that aromatic *USR* is always highly demanded in the region and has no market problems in the North West. This leads to the observation that the demand for Dien Dien's *USRs* is ethnically based. In turn this indicates that the demand will be strong in the North West and limited elsewhere.

204. There is some demand for *USR* in Hanoi. The demand can be categorized as having three features.

1. There is a constant year-round demand associated with temple offerings. This demand specifically peaks during the period associated with the beginning of the lunar month.
2. The annual demand that is associated with the Tet festive period.
3. Demand rises during the winter when the consumption of sticky rice is held to warm the body.

205. Most of the value chain steps that operate for *IR64* are equally relevant to the Upland Sticky rices.

206. An exception is made with regard to processors, retailers, and supermarkets. The Study Team established that these three value chain actors consider that *nep* has a high degree of consumer acceptance. Table 38 shows 14 marketing terms incorporate the word *nep* in describing the rice being marketed in Hanoi:

Table 38 Marketing Terms for Sticky Rice in Hanoi

| | | | |
|----|---------------------------|-----|--------------------------------|
| 1. | Nep cai hao vang | 8. | Nep nuong dac san Dien Bien |
| 2. | Nep cai hoa vang loai | 9. | Nep Dien Bien cao doc san vang |
| 3. | Nep cam | 10. | Nep hoa vang |
| 4. | Nep cam dac san Dien Bien | 11. | Nep hoa vang xuất khan |
| 5. | Nep cam moi | 12. | Nep huong Dien Bien |
| 6. | Nep cao hao vang dac biet | 13. | Nep nuong Dien Bien moi |
| 7. | Nep dac san mien bac | 14. | Nep thom Dien Bien |

Source: Study Team Interviews

207. Six of the marketing terms used in Hanoi identified the rice as being specifically associated with Dien Bien.

208. In Ho Chi Minh City, the three value chain actors used a slightly higher number of marketing terms that incorporated the term *nep*; see Table 39.

Table 39 Marketing Terms for Sticky Rice in Ho Chi Minh City

| | | | |
|----|-----------------------|-----|----------------|
| 1. | Nep bac | 9. | Nep ngong sang |
| 2. | Nep bac sang | 10. | Nep nong thom |
| 3. | Nep bac thom | 11. | Nep o mon |
| 4. | Nep bac thom hoa vang | 12. | Nep sap |
| 5. | Nep bac dai hoa vang | 13. | Nep sap sang |
| 6. | Nep cu | 14. | Nep thom |
| 7. | Nep lao | 15. | Nep toc loi 1 |
| 8. | Nep ngong | 16. | Nep toc thom |

Source: Study Team Interviews

209. None of the 16 terms referred to any geographic identification and specifically none referred at all to Dien Bien.

6.3 Prices and Margins along the USR Dien Bien Value Chain

210. The prices and margins for USR at various levels of the value chain are presented, along with those for IR64 and other rice types in Section 6.3. Table 85 summarizes the costs, prices and margins at various levels of the USR value chain.

Table 40 Sticky Rice Price Chain

| | Cost price (VND / kg) | Buying price (VND / kg) | Selling price (VND / kg) |
|-----------------------|--------------------------|----------------------------|-----------------------------|
| Producer | | | |
| - H'Mong | 3121 | | 4286 |
| - Thai | 2956 | | 4286 |
| - Kho Mu | 2870 | | 3571 |
| Collector | 0 | 4714 | 5000 |
| Trader | | 4500.0 | 5600.0 |
| | | 4200.0 | 4900.0 |
| Retailer in Dien Bien | | 5900.0 | 6500.0 |
| | | 4900.0 | 5200.0 |
| | | 5200.0 | 4500.0 |
| Transporter | | 5600.0 | 6600.0 |
| Retailer in Ha Noi | | 7000.0 | 8500.0 |

NB: all prices and costs are in kg milled rice equivalent for ease of comparison.

7 Potential for Rice from Dien Bien Province

7.1.1 IR64

211. It is considered that *IR64* has a limited potential for expansion in demand. There are several reasons for this:

1. The mixing of different rices to capture the once strong demand for *IR64* has resulted in consumer disillusionment with rices termed *IR64*.
2. Marketing people outside Dien Bien Province are moving away from naming rices in terms of their production attributes and instead are concentrating on their marketing attributes. Thus the use of the term *IR64* is declining and terms such as *Te Thom* and *Tam Thom* are increasing.
3. The characteristics of *IR64* are not what consumers are currently seeking. It is not considered to be a soft aromatic rice.

7.1.2 Upland Sticky Rice

212. Demand for Dien Bien's Upland Sticky Rice follows an even more narrow geographic and ethnocentric demand pattern than that of *IR64*.

213. Demand is centered on the ethnic people of the Province and those in the contiguous provinces of the North West. There is a demand in Hanoi but this appears to be linked directly to the North West's ethnic minorities in the city. No demand was noted in Ho Chi Minh City and in Melbourne.

214. It is noted that the demand is for aromatic and not ordinary Upland Sticky Rice.

7.1.3 Other Rice Types

215. Like all products, rice varieties experience within the market what is called the product life cycle. That is, demand rises, plateaus, and declines. Current consumer demand in the north is for soft and aromatic rices.

216. *Te Thom* and *Tam Thom* are perceived to have these attributes and are marketed as such.

217. It is noted that these two types of rice can come from a number of varieties with different production characteristics. That is, they could be early or late maturing, they may be best suited to different soils, and they could respond differently to different climatic regimes.

8 Recommendations

218. The main conclusion of the value chain analysis is that neither IR64 nor USR are optimal rice types to support - especially if such support is designed to assist the poor or upland poor. The rationale for this conclusion is different for each type of rice.

219. **IR64** is a rice variety that is decreasing in popularity in Dien Bien, due to the fact that although it is an “improved” variety, it does not have characteristics that are demanded by modern consumers- such as aromatic fragrance, ease of cooking. As market signals increasingly penetrate the value chain, the decreasing demand for IR64 is resulting in decreased prices and decreased planting areas – especially when alternative varieties of rice are available for production.

220. **USR** is grown by poor smallholders in all upland districts of Dien Bien province. Many of these smallholders are ethnic minority people (H’Mong, Thai, etc.). However, in terms of levels of production, USR occupies a very small proportion of rice production of the province. A relatively small proportion of land, reliance on rain-fed single cropping and low yield per hectare mean that the total production of USR is estimated at 5834 tonnes per year.

221. Potential for effecting major increases in household incomes through increased production of USR is limited for four main reasons:

1. Overall land area for potential production is limited and there is limited potential for expansion.
2. There is limited potential for increasing intensity of production through irrigation.
3. The provincial government is discouraging expansion of area due to environmental concerns.
4. Small plot sizes per household in the uplands mean that any marginal increase in productivity will only result in very small increase in absolute figures for household incomes.

222. For the reasons outlined above support of, IR64 and USR should not be considered as an optimal strategy for assisting smallholders and in particular poor smallholders. The results of the analysis indicated that are more optimal strategy for support, based on consumer demand and production suitability, is to support the development of improvement in the value chain for 2 varieties of aromatic lowland rice – Bac Thom No 7 and Te Thom.

223. Demand for these varieties of aromatic rice is strong, both in local markets and in Hanoi.

224. Potential for expansion of area is strong, with a large lowland area still under non-aromatic varieties. This land area could potentially be transferred to aromatic production.

225. Economic Importance - Based on the estimates of production presented in Section 2, the 2 varieties of aromatic rice account for 45.5 percent of the production of lowland rice in Dien Bien, equal to almost 38 percent of the total production of Dien Bien province. The farm gate value of these two varieties of Dien Bien aromatic rice is estimated at

US\$7,679,829, with a margin of US\$3,961,931 accruing to producers. The retail value of this rice is estimated at US\$17,225,785, implying a value added in the chain between producers and retailer at US\$9,545,956.

226. **However, it is vital to note** that whilst the conclusion of this analysis is that the value chains of Bac Thom No 7 and Te Thom should be supported – based on value chain and market assessments, **this may not be an optimal strategy to undertake if poverty reduction amongst poor smallholders is the primary objective of the support intervention.** This is because poor smallholders are more concentrated in the uplands, where Bac Thom No 7 and Te Thom are not grown, and that the poor in the lowlands generally have very small plots of rice, so increases in production may only translate to very small income increases in absolute terms.

227. The recommendations below are structured in terms of production – based recommendations and marketing – based recommendations. These recommendations should be read, taking into account the key conclusion of the study and namely that Bac Thom No 7 and Te Thom should be promoted, rather than IR64 and UR5.

228. In order to improve the income of rice producers, two basic sets of options exist. One set relates to improving the volume and quality of the rice that is grown, the other is to improve the marketing of the rice.

8.1 Production Based Recommendations

229. Three basic options exist. These are:

1. Increase the area sown to rice.
2. Improve the yield of rice.
3. Improve the quality of the rice presented to the market.

230. The first is rejected because the amount of land devoted to rice production in Dien Bien is probably towards its maximum already. Further, for UR5 there is an active Provincial policy of discouraging the expansion of upland areas into rice production. Indeed, the policy is to convert existing upland rice areas into forestry.

231. It is considered that there are steps to improve the yield and quality of the rice produced. These relate to better use of the land and improved husbandry.

232. **It is recommended that:**

1. **Sloping lands be transformed into irrigated terraces whenever possible.** This could be done through financial and physical assistance.
2. **Double cropping be increased in the lowlands by improving the irrigation system.** This will require better field canal and a concerted effort to reduce water loss.
3. **Seed quality be improved.** This can be achieved by organizing quality seed production at the commune level in parallel with supplying breeders' seeds.
4. **Improve pest and disease control.** Improvement can occur through several ways. These include better extension advice to improve farmers' knowledge of pesticides and other chemicals, reducing the number of applications but improving the timing

of applications, and teaching farmers not to mix chemicals. As there is doubt that the suppliers of the chemicals are competently informed of their product, then they also should be the beneficiary of extension knowledge.

5. **Improve the use of fertilizers.** This has several components. First, it involves the greater use of environmentally friendly fertilizers. Second, the fertilizers used should be better balanced with greater attention being paid to phosphorus and potassium. Above all, greater use should be made of mulching, green manure, and farm yard manure. The third point is particularly relevant to the uplands the Thai ethnic farmers have a tradition of low use of farm yard manures.
6. **Improve on-farm post harvest preservation.** This includes the development of suitable equipment for the cutting of the rice.

233. However these activities will require improvement in producer knowledge. One means of achieving this is through the extension system. This suggests the need to improve both the quality of the advice that the producers receive and the delivery system where-by the improved information is provided.

234. It is recommended that the Agricultural Extension Centre of the Department to Agriculture and Rural Development be strengthened. As far as possible the focus of the extension training should be the producer.

8.2 Marketing Based Recommendations

235. The rice value chain in Dien Bien starts with the rice producer.

236. As a first step it is important that growers grow the seed that is demanded by the market. The analysis showed that whilst the demand for *IR64* remains strong within Dien Bien, the demand outside of the Province is declining. The Study showed that the market now prefers rice that is soft and aromatic. Growers should be made aware of the different suites of production and market parameters and use this to guide the selection of seed.

237. It is recommended that producers be made more aware of market priorities in rice and wherever possible seed selection should be based on a mix of production and market priorities.

238. Rice that are soft and fragrant such as *Tam Thom Dien Bien* and *Te Thom Dien Bien* have good market appeal in Hanoi.

239. It is recommended that growers be encouraged to produce *Tam Thom Dien Bien* and *Te Thom Dien Bien*.

240. Of the upland sticky rices, *Nep Nuong Thom Dien Bien* large grain is considered to have the best potential, albeit in the North West rather than in Hanoi.

241. It is recommended that upland growers be encouraged to produce *Nep Nuong Thom Dien Bien*.

242. Low income rice producers tend to sell their rice at the low priced periods of the year. They do this because of the need for cash.

243. It is recommended that the rural credit system be improved in order that it can support producers at the critical times of the year.

244. Apart from the growers who are compelled to sell for every-day expenses, growers with the option to sell at any time appear to do so without a full or even partial knowledge of prices. Without this knowledge, they sell from a position of weakness. This is because the next step in the value chain to whom they sell, be it Paddy Collection #1, Paddy Collection #2, Paddy Processing #1 or Paddy Processing #2 seems to have better knowledge of the market situation which puts the grower in a weaker position. One method of addressing this weakness is improved market information.

245. It is recommended that a market information system be established. Promulgation of the market information will depend on the most appropriate form of media in the various parts of the Province.

246. It is further recommended that through market extension growers be advised as to how to use the market information.

247. Because of poor milling technology, Dien Bien is losing out on the value added associated with converting paddy to milled rice. For the rice going to Hanoi, the value-added benefits are accruing to the processors on the outskirts of Hanoi.

248. It is recommended that Dien Bien improve its rice milling technology. This recommendation has several components. First, investigation need to be made to establish why Dien Bien rice milling is of such poor quality. Then having established the problems and identified the solutions, steps need to be taken to have the improved technology introduced and adopted.

249. At the same time, there is the need for the industry in Dien Bien to be aware of the implication of the move into packaged rice. Whilst packaged rice is usually associated with just supermarkets, a surprising number of retailers in Hanoi also stock packaged rice, albeit just a few bags. In all likelihood, the same will occur in Dien Bien. Packaged rice contains milled rice. Such rice loses its aroma over time. The quality of the packaging technology, principally having a very low to zero volume of air, will help maintain freshness. However, such packaging technology is relatively advanced.

250. It is recommended that rice packaging technology be introduced into Dien Bien.

251. Dien Bien definitely has a marked market presence. As such there is merit in developing the Dien Bien brand. However, caution must be exercised. Branding refers to a product of known consistency with the implicit guarantee of that consistency. As we have seen with *IR64*, there has been a dilution of the original rice that was *IR64*. The dilution may have occurred inadvertently, such as the mixing of seed, or deliberately when collectors and primary processors mix rices of different attributes to produce a product that they believe suits their consumer's requirements. Until Dien Bien can ensure that, say, *Tam Thom Dien Bien* and *Te Thom Dien Bien* rice is true to type then it should not brand them as such. Even then, the branding should relate solely to packaged rice, and not loose rice, in order that brand integrity be maintained.

252. It is recommended that Dien Bien adopt a branding procedure only after it can ensure that the rice in the packet is consistent with what is declared on the packet.

253. It is further recommended that the branding be initially just for packaged rice.

254. The Study established that in the market place rice is invariably identified in terms of attributes desired by the consumers rather than production-based attributes. The three major attributes identified are *deo* “soft”, “aromatic”, and “sticky”.

255. It is recommended that Dien Bien rice be branded as “Dien Bien soft” or “Dien Bien aromatic”.

256. The Study identified that the dominant form of marketing Dien Bien rice is re-active rather than proactive. The Study considers that this should be changed to be pro-active. The Study accepts that most of the Dien Bien City-based retailers lack the financial strength to be able to visit Hanoi to develop new outlets. Yet it is this marketing channel that appears to handle the bulk of rice being exported out of the Province to Hanoi. Any increases in the volumes of Dien Bien rice that retailers could market would be to the benefit of Dien Bien rice producers.

257. It is recommended that rice retailers in Dien Bien be given marketing skills training. This is designed to change their mode of operation from re-active to pro-active.

258. It is further recommended that rice retailers in Dien Bien be assisted on a market development mission to Hanoi. The purpose of such a mission is to expose them to the wider market environment of Hanoi so that they may observe and learn other methods of packaging, display, and marketing. Participation in such a mission must be based on receiving marketing skills training. Whilst it is accepted that the retailers have very low financial resources, it is anticipated that they make a contribution to the costs. The Province could assist by having a rice exhibition in Hanoi.

259. The Study established that rice from Dien Bien is actively traded in the North West, especially Son La. This marketing channel was not subjected to specific study.

260. It is recommended that the value chain of Dien Bien rice into Son La be studied.

261. It is further recommended that the value chain of Dien Bien rice into the North West be studied.

262. The price of transport is a critical factor influencing the final price of Dien Bien rice in Hanoi. Whilst the Study Team was able to identify some of the components of price, it is clear that the part of the value chain requires much more research.

263. It is recommended that the research be undertaken into the costs of transporting rice from parts of Dien Bien to the contiguous provinces in the North West, and to the various processors that ring Hanoi. The study should also analyse the increase in costs as the rice moves among the value chain from the processors to the wholesalers, retailers and end-consumers.

264. The Study Team considers that there should be a greater linkage of members along the value chain. This could start with the formation of Growers’ Associations. These would have several objectives, with the principal one being a conduit along which information would flow up to the consumer in terms of crop information and back down to the producer

in terms of market information, especially preferred characteristics in rice that can be identified with specific varieties. Grower Associations make it easier for the processor to deal with more directly with groups of growers as they prefer to deal with one organization representing, say, 100 growers rather than one hundred separate growers. Growers' Associations could have a role in developing contract farming. Processors have expressed a willingness to work directly with grower associations through the likes of hosting growers on visits to their processing facilities so that growers have a better understanding of the parameters of "quality". Such associations could also interact with like associations in other provinces in the sharing of information regarding production, processing, and marketing.

265. It is recommended that a Growers' Association be formed. In the first instance it is suggested that this occur in a region that can be easily serviced by the production and marketing authorities. This is because it is imperative that the first Association be a success in order to act as a model for subsequent one.

266. The Study noted the complexity of using the term "margins" when discussing price movements along the value chain.

267. It is recommended that a full margins study be undertaken that encompasses financial as well as economic considerations. The study should occur over a time period that encompasses both high and low price periods.

Appendix A Terms of Reference

A.1 Introduction

Dien Bien province

268. Dien Bien is one of the most poor and vulnerable provinces of Viet Nam. DB has large mountainous areas with a majority of ethnic minorities, DB is especially poor due to its limited natural resources and fertile land. The number of households under the poverty line is up to 60 percent. To contribute to the improvement of income and employment of the poor, SNV has initiated the 'Market Access for the Poor' programme in 2003, delivering advisory services throughout the value chain from producers up to the market.

269. Dien Bien is located in the North West region of Vietnam. The province has a great potential of natural resources, which are under capitalized at present. Most of the people in Dien Bien work in the agricultural sector. Stimulated by the Government, farmers are still much focussing on the production, in which they try to produce as much as possible rather than listen to market signs. There is little evidence of applied processing technology at household level for the farmers to be able to preserve the products for a longer period of time. Therefore, very often in recent times, the high production of agricultural products results in high decrease of price and causes the loss of margin for farmers. Therefore the Department of Trade and Tourism of Dien Bien supported by SNV, will start a programme on marketing of agro-products. In first instance the Department has selected paddy rice - notably IR64 - as the value chain to be supported. However, as SNV would notably like to focus on the improvement of the marketing position of the poor upland farmers, SNV has suggested to analyse the value chain of certain types of sticky upland rice as well.

Previous activities

270. In October 2002 a short initial market and opportunity scan has been conducted. This scan has resulted in numerous contacts at provincial level. The main findings showed a substantial scope for improvement of the agri-business sector in both the provinces Son La and Lai Chau, especially focussing on fruits, vegetables and locally processed fresh products.

271. In May 2003, a more extensive sector analysis has been implemented to explore the potential of agro-products: marketing and processing of a certain number of crops (like soy bean and rice) and buffalo meat, appeared to be highly beneficial for the rural economy, income growth and employment of the upland farmers in these provinces. In February 2004 a general sub sector analysis has been made on IR64 rice and sticky rice in general. However, this study has not included any figures on production, market demand and value addition at any stage. To be able to identify the real market potential and a comparison between the paddy (IR64) rice and sticky upland varieties, a value chain analysis should be made.

The value chain analysis

272. The value chain (the research) will be conducted by joint efforts of staff of the Department of DoTT, SNV, and an independent consultant. The study will be part of the strengthening of the partners in methodology and understanding of the value chains of

both paddy and local sticky rice varieties. This ToR will define objectives, methodology, timeframe and output of the research.

A.2 Objectives of the Research

273. The goal of a value chain analysis is to give an overview of the whole value chain from producer to consumer and the potential of the chosen product in both value and market terms, in this case two varieties of rice in the province of Dien Bien.

274. Specific objectives of the analysis are:

1. Understanding the rice industry in Dien Bien with a focus on two value chains (from input supply to farmers to consumers): for one lowland variety of rice (IR64) and one upland variety (sticky rice).
2. Analysis of constraints and potentials both for domestic consumption and exports of upland and lowland Dien Bien rice
3. Their potential for added value at the provincial level.
4. Overview of existing local services in the sub sector;
5. Recommendations for existing/potential/emerging services and improvements for both value chains in the region.

A.3 Scope of Work

Geographic scope

275. The research will be focused on the Province of Dien Bien with some market information search in Hanoi.

Scope of analysis

276. This study can be characterised as a general value chain analysis with particular focus on the assessment of the potential in market and production for rice (both paddy and upland sticky) in Dien Bien, with special reference to the potential benefits for upland farmers.

A.4 Methodology

1. Combination of field and desk research
2. Analysis of market potential in urban Vietnam and export markets
3. Analysis of potential for value addition at different levels (production, processing, retailing, etc.)
4. Analysis of impact on upland farmers (including gender issues)

A.5 Output

277. The output of value chain analysis will be:

1. Summary of the existing documentation of the rice value chains in Dien Bien
2. Final report on the rice industry in Dien Bien including:
 - a. an overview of the value chains with its opportunities and its constraints
 - b. an overview of the potential value addition at the different levels,

- c. Recommendations on how to strengthen the marketing of rice for the upland farmers,
3. Presentation of the findings and recommendations to a taskforce of different departments
4. Capacity building on value chain analysis to SNV staff and government staff involved in the study.

A.6 Team Composition

278. The team will consist of:

1. Three Consultants, of which one international team leader and two nationals, and one research assistant.
2. SNV staff
3. 2 part time officers from DoTT to support the analysis, and learn the methodology.

279. SNV will provide transportation facilities to and within the provinces; it will also provide additional translation services to the team subject to the availability of support staff.

A.7 Time Frame

280. The value chain analysis will be done between December 2005 and February 2006. The exact period for the study will be decided upon between the team leader and SNV.

A.8 Planning of Activities

Phase 1: Initial identification of value chains

281. During this phase, the local consultants and research assistant will work in Dien Bien and in Hanoi to make an initial identification of the value chains for IR64 rice and sticky rice produced in Dien Bien and sold in Hanoi. The team will spend 1 week in Dien Bien and 2 weeks in Hanoi. This phase will have the objective of providing comprehensive background information for the international consultant prior to his arrival.

Phase 2: Value Chain Mapping and Capacity Building for Staff

282. During this phase, the international consultant will work with the local team from ACI and also with DOTT staff and SNV staff. The team will be in the field in Hanoi and Dien Bien for 3 weeks collecting data. Each stage of the value chain will be considered. The Team Leader will also conduct separate interviews and focus group discussions.

Phase 3: Finalization and analysis

283. During this Phase, the analysis of the value chains will be completed, and the team will produce the Draft Final Report. The Draft Final Report will be presented in a Workshop and based on the comments received during the Workshop, the Final Report will be completed.

A.9 Acronyms and Abbreviations

| | |
|------|---|
| DARD | Department of Agriculture and Rural Development |
| DB | Dien Bien |
| DOTT | Department of Trade and Tourism |
| MAP | Market Access for the Poor |
| GDP | Gross Domestic Production |
| PPC | Provincial People Committee |
| REP | Rural Enterprise Promotion |
| SNV | Netherlands Development Organisation |

Appendix B Literature Reviewed

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Appendix C Field Work Results

C.1 Dien Bien Valley and Dien Bien Dong

C.1.1 Introduction

284. The goal of a value chain analysis is to give an overview of the whole value chain from producer to consumer and the potential of the chosen product in both value and market terms, in this case two varieties of rice in the province of Dien Bien..

285. Specific objectives of the analysis are:

1. Understanding the rice industry in Dien Bien with a focus on two value chains (from input supply to farmers to consumers): for one lowland variety of rice (IR64) and one upland variety (upland sticky rice - USR).
2. Analysis of constraints and potentials both for domestic consumption and exports of upland and lowland Dien Bien rice
3. Their potential for added value at the provincial level.
4. Overview of existing local services in the sub sector; and
5. Recommendations for existing/potential/emerging services and improvements for both value chains in the region.

286. Geographic scope. The research will be focused on the Province of Dien Bien with some market information research in Hanoi.

287. Scope of analysis. This study can be characterised as a general value chain analysis with particular focus on the assessment of the potential in market and production for rice (both paddy and upland sticky) in Dien Bien, with special reference to the potential benefits for upland farmers.

288. The first field trip was conducted in Dien Bien from January 2 to 8, 2006 by Messrs Duong Van Khai (SNV, Dien Bien), Vu Van Liet, Nguyen Tu Siem and Pham Quang Trung (ACI). After working together at provincial level in Dien Bien city, Messrs Liet & Khai went to Muong Cha district while Mr Siem & Trung worked in Dien Bien and Dien Bien Dong districts. In Dien Bien district, two communes were selected (Sam Mun and Muong Phang). In each commune, two villages each with two households (one poorer and one better-off) have been chosen for case studies.

289. The second trip was between January 15 and 18, 2006 with Mr Grant Vinning as Team Leader and Messrs Duong Van Khai (SNV), Nguyen Tu Siem and Pham Quang Trung (ACI). Dien Bien and Dien Bien Dong districts were studied.

290. These notes made by Mr Nguyen Tu Siem and Pham Quang Trung are primary inputs to the Team Report.

291. The following discussions are based on interviewing 8 growers, 3 village collectors, 2 district collectors cum processors/re-sellers, 1 trucker, 7 retailers and 3 big companies in Dien Bien. Several companies, super-markets and retailers in Hanoi were also interviewed.

C.1.2 Main findings

C.1.2.1 Overall Rice Industry in Dien Bien

292. Dien Bien province has favorable natural conditions for rice cultivation. Rice is grown throughout the province. In valley lands, wet rice is popular with irrigation systems. Upland rice is grown in the mountainous areas and highlands, where rice is cultivated only one crop in a rain-fed system and practiced predominantly by ethnic minorities.

293. Rice is a major food for the population. The province currently grows around 40,000 hectares of 83,323 hectares of total agricultural land areas. In terms of planting areas, upland rain-fed rice account for about 50 percent and lowland irrigated rice occupy about 50 percent. In terms of acreage and production, Dien Bien rice occupies a modest place in the national rice sub-sector.

294. Potential land for rice is quite limited. Total provincial rice area is 40,042 ha of which irrigated rice is 21,940 ha (one winter-spring crop 7324 ha plus autumn rice 14,616 ha) and upland rainfed rice is 18,102 ha.

295. Dien Bien quality rice is grown in concentration in Dien Bien valley on 6000 ha, irrigated by Nam Rom Irrigation System with a complete canal network. Rice is directly sown with 100 kg seed per ha (between 80 and 120 kg). Ordinary rice varieties of aromatic quality constitute around 65 percent of the total valley area of which IR 64 accounts for 30 percent, Te Thom 40 percent, Bac Thom 30 percent (reducing because of leaf blast disease). The remaining 35 percent includes conventional ordinary Khang Dan and lowland sticky rice of Nep Ruong, C 97, IR 352. Hybrid high yielding rice once was broadly grown, nowadays disappear because of low quality.

296. As IR 64 is not aromatic, consumers used to mix with aromatic ones, and therefore IR 64 lost its reputations. Some 3 to 4 years ago, IR 64 was predominant and well known; however with introduction of aromatic rice, it became a secondary rice. Traders have changed the real names of some common rice for real aromatic rice for attracting buyers, for example, traders give the name of Tam Thom Dien Bien for Bac Huong No 7 and Te Thom Dien Bien for Huong Thom No 1.

297. Using data provided by the Department of Agriculture and Rural Development, Table 41, Table 42 and Table 43 show the development of rice production in Dien Bien for the period 2000 – 2004.

298. Change in rice production was going in the following sequence of time during the last decade:

Tap Giao (8-10 tonnes/ha; 80 percent) → Bao Thai & 61 (6 tonnes/ha) → CR 203 (6-7 tonnes/ha) → IR 64 (7-8 tonnes/ha) → Aromatic Huong Thom & Bac Thom.

299. Two kinds, i.e. IR 61 and AIT 77, have lower quality (harder) and higher yield (max 10 tonnes/ha), but the external appearance is very similar to IR 64, so sellers used to mix with IR 64 making IR 64 reputation decline. All interviewees from provincial officials to farmers in Dien Bien stated that IR 64 can not be excluded from their cropping pattern because it is essential for self-consumption, particularly for medium and poorer households, thanks to its less affected by diseases and high resistant to dangerous planthopper and leafblast.

Table 41 Rice Area of Dien Bien Province

| | 2000 | 2001 | 2002 | 2003 | 2004 |
|--------------------|--------------|--------------|--------------|--------------|--------------|
| Total area | 38725 | 40475 | 38594 | 38004 | 39645 |
| Winter-Spring crop | 5361 | 5905 | 6356 | 6648 | 7130 |
| Summer-Autumn crop | 11188 | 11481 | 11957 | 11819 | 14137 |
| Upland Summer crop | 22176 | 23089 | 20281 | 19537 | 18378 |

hectares

Table 42 Rice Yield of Dien Bien Province

| | 2000 | 2001 | 2002 | 2003 | 2004 |
|----------------------|-------------|-------------|-------------|-------------|-------------|
| Average yield | 2.60 | 2.59 | 2.67 | 2.90 | 3.10 |
| Winter-Spring crop | 5.66 | 5.36 | 5.54 | 5.78 | 5.70 |
| Summer-Autumn crop | 4.03 | 4.19 | 3.83 | 4.11 | 4.22 |
| Upland Summer crop | 1.15 | 1.09 | 1.08 | 1.19 | 1.22 |

Tonnes per hectare

Table 43 Rice Production of Dien Bien Province

| | 2000 | 2001 | 2002 | 2003 | 2004 |
|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Total production | 100872 | 104884 | 102931 | 110146 | 122755 |
| Winter-Spring crop | 30355 | 31644 | 35239 | 38438 | 40652 |
| Summer-Autumn crop | 45041 | 48099 | 45835 | 48555 | 59665 |
| Upland Summer crop | 25476 | 25141 | 21857 | 23153 | 22438 |

Tonnes of Paddy

300. It is noted that area under rice is rather stable hence rice output is significantly dependent on increased yield. In 2004, rice production increased approximately 23 percent compared with that in 2000. Because of water deficit in Winter-Spring season, rice is grown mainly in Summer-Autumn season. In this warm season, diseases are increasing and causing lower yields. Lowland rice growing area can be expanded, if irrigation facilities are updated allowing to convert one crop areas into two crop areas.

301. The Dien Bien valley have fertile soils and climate conditions suitable for two crops of rice per year producing major part of export rice volume. The remaining rice areas do not have favorable conditions for rice commodity production. However, farmers still grow rice there to meet their needs in subsistence; see Box 1.

302. Dien Bien valley cover 10 of 19 communes of Dien Bien district producing averaged yield of 6.6 tonnes/ha paddies per crop. The district has potential and attempt to extend IR 64 and other quality ordinary rices (Bac Thom, Huong Thom) up to 80 percent of rice area. Potential for expand irrigated rice is about 500 ha (Muong Nha, Sai Luong, Na Pen, each commune 100 ha more and Nam Co Hu 60 ha), and some more in other scattered villages. Water source is available but water canal systems should be consolidated.

303. Water use is well operational with water use groups since 2001 collecting fee of VND 200 kg paddies/ha in 2004 and VND 550,000 kg/ha in 2005. Inter-village group of Muong Pon, for instance, has a saving of VND 30,000,000 per year and rice yield averaged 5.0 tonnes/ha/crop.

304. Seed quality is the weakest point for many rice varieties. For upland sticky and ordinary rices, farmers do seed selection and production of seeds by themselves. For USRs, for example, they select each panicle and dry above the kitchen, so genetic quality is stable and germination rate is high. Sometimes, they also imported seeds from Laotian

people. In reality, the Government of Vietnam agencies in charge of seed supplies could do nothing with upland rice seeds. For lowland rices, seeds are partly provided by the Provincial Seed Company and partly produced by farmers. As growers produce seeds by themselves, IR 64 quality is deteriorating and acreage is reducing, so consumers tend to prefer Tam Thom and Te Thom. The later has been introduced some years ago by the research centers who provide breeders' seeds to the Provincial Seed Company for multiplication in Dien Bien.

Box 1 Sam Mun - A typical Rice Producing Commune in Dien Bien Valley

Sam Mun has 35 villages with Kinh, Thai, Muong and Hmong ethnies. Commune is located in Dien Bien valley with 2100 households, 28.2 percent of which are poor (old criteria). Population is 9700. Thai people have habit to consume more sticky rice than ordinary one, so they sell almost the whole volume of ordinary rice they produce.

Table 44 Land Uses for Rice in Sam Mun Commune, Dien Bien Valley

| | Ha | IR 64 | Aromatic rices | Others |
|--------------------|-----|-----------|----------------|--------|
| Winter-Spring rice | 429 | 260 (60%) | (30%) | (10%) |
| Summer-Autumn rice | 520 | 312 (60%) | (30%) | (10%) |
| Upland rice | 10 | | | |

Notes: Aromatic rice include Huong Thom, Bac Thom and Te Thom. Others mean Khang Dan, CR 203, and Sticky IR 352.

Winter-Spring rice is 429 ha of which 50 – 60 percent is IR 64. Summer-Autumn rice is 520 ha of which 60 percent is IR 64; Bac Thom, Te Thom and Huong Thom account for 30 percent; and sticky IR 352, ordinary CR 203, and Khang Dan, account for 10 percent. Hybrid rice is no longer grown because of low profit.

Upland rice is only 10 ha. No land is available for expanding the area to irrigated rice production. Rice is produced in private small holdings each cultivates 1 500 - 2000 m² (varying from 0.1 ha to 1.0 ha). Land for rice has been allocated on basis of person number per family, each given 450 m². New couple was allocated 900 m². At present, this kind of land is exhausted. Depending on level of intensive cultivation, IR 64 yield is around 7.5 tonnes but ranges between 5.5 tonnes to 9.0 tonnes/ha/crop. Lower yield occurred with poor households and ethnic families, because: lower dose of FYM, chemical fertilizers and poor pest control. Water supply is good with complete canal system and water use groups. Running water is coming from the reservoir 12 km far. Fee paid for Nam Rom State Irrigation Company is VND 550 000/ha/crop of which 10 percent is for the cooperative. An agriculture service cooperative was founded in 2004 to provide services in water use, seeds, fertilizers and pesticides. No extension club or interest groups exist.

No household have to buy rice from outside the district. There are 12 processing points all operated by Kinh people. Each of them has one milling machine with value of VND 15-20 m and capacity of 2 – 5 tonnes/day. These households do growing, processing and trading rice at the same time. They play a role of rice collectors. Farmers bring paddies to processing points for milling with a fee of VND 4 000-5 000 per 100 kg. White rice and bran is used for self-consumption. White rice of IR 64 may be sold to processors at VND 5 200/kg who will sell outside the commune at VND 5 400/kg.

Further details are contained in the annexure.

Source: Study Team Interviews

305. The province has a policy to promote rice development in accordance with the cropping systems and patterns recommended by the province through seed subsidies. A half of rice growing area is subsidized at different rates. In Zone I (less difficult), the rate is 20 percent of seed expense, Zone II (difficult) 50 percent and Zone III (very difficult) 100 percent. In Zone I, thanks to the extension activities, growers have known appropriate techniques and therefore, previous subsidy for seed (20 percent) has been moved from 2006 while seed subsidies for Zone II and Zone III remain the same.

306. In terms of cultivation techniques, the most pronounced weak points observed in household level are low or no fertilizer application and abuse of pesticides. Upland rices

are neither manured nor fertilized. Lowland rices are commonly applied with little or no organic manures. The better-off households, especially the Kinh people, used larger organic manures (FYM, crop residues, green manures) while the poor, particularly the ethnic groups have no habit to use them. Chemical fertilization, if any, is not balanced with strong emphasis on nitrogen and neglecting phosphorus and potassium.

307. In summary on Dien Bien rice industry, it is remarked that:

1. Dien Bien has climate conditions favorable for growing a variety of rice commodities. Rice growing is first of all for self-consumption, with the surplus amount not so large. In the lowlands, particularly in Dien Bien valley, rice is grown in an intensive manner and ordinary rice yields are fairly high and competitive with those in the Red river delta (Nam Dinh and Thai Binh, for example).
2. In contrast, upland rice is grown in an extensive manner, including shifting cultivation with slash-and-burn practices. Rice yields are extremely low and soil degradation obvious. Rice farming on the uplands strongly reflects subsistence manner of livelihoods. In many communes, rice per capita is fairly high, but farmers remain poor because family expenditure is based on the sale of their surplus rice with paddy having to be sold at any time when cash need is urgent.
3. In terms of acreage and output volume, rice production of Dien Bien province occupies a fairly modest place in Vietnam's rice production. However, this sub-sector plays an important role in socio-economic development and poverty reduction of the province.
4. Dien Bien has a diverse variety of rice some of which are well known in the country market. The market economy has exerted a pronounced influence on rice production and marketing of the province. Beside the traditional varieties (USRs and IR 64), certain number of new varieties have emerged and acknowledged by difficult consumers such as aromatic Tam Thom, Te Thom, Te Thailand. Larger volume, standardization and better market information is to be done for validating these commercial commodities.

C.1.3 Constraints and Potentials for Domestic Consumption and Export of Upland and Lowland Rice Commodities in Dien Bien

C.1.3.1 Ordinary Rices and IR 64

Table 45 Main Ordinary Rices Commonly Found in Dien Bien Markets

| Ordinary rices | Retail / supermarket price (VND/kg) | Localities | Notes |
|---|-------------------------------------|--------------------------------------|---|
| Lowland Ordinary Rices (LOR) | | | |
| IR 64 | 6000 | Dien Bien | Dien Bien market |
| Tam Dien Bien aromatic (Tam Thom; Bac Huong) | 7000 9600 7900 8700 | Dien Bien Hanoi Hanoi Hanoi | Dien Bien market Intimex - Hanoi Metro - Hanoi Big C - Hanoi |
| Ordinary aromatic rice (Te Thom; Huong Thom No 1) | 6000 | Dien Bien | |
| Bao Thai | 4600 | Dien Bien | For noodle, cakes |
| CR 203 | 4600 | Dien Bien | For noodle, cakes |
| Upland Ordinary Rice (UOR) | | | |
| Ordinary Thailand (Te Thailand), non-aromatic | 6000 11400 | Dien Bien Hanoi | Dien Bien market Intimex - Hanoi |

308. Dien Bien has a diverse range of rice varieties. The following focuses on the most well-known in the markets.

C.1.3.1.1 IR 64

309. Ordinary rice IR 64 a conventional variety of the IRRI provenance. It has been introduced to Dien Bien by decades ago, first in the Dien Bien State Farm and nowadays it becomes one of principal ordinary rice grown in two seasons in the lowlands. Although this variety is grown widely in Vietnam, it is commonly acknowledged that IR 64 grown in Dien Bien province, and more specifically in Dien Bien valley, is most appreciated. That why IR 64 has nickname “Dien Bien rice”. It shared from 30 to 60 percent of rice area in the lowland. In Winter-Spring 2005-06, DARD advices the lowland districts (Dien Bien and Tuan Giao) allocate average 40 – 45 percent area for IR 64. Depending on level of intensive cultivation, IR 64 yield is around average 7.0 – 7.5 tonnes ranging largely between 5.5 to 9.0 tonnes/ha/crop. Lower yield occurred with poor households and ethnic families, because: lower dose of FYM, chemical fertilizers and poor pest control.

310. Although the steamed rice is not aromatic and relatively less soft, IR 64 was and still remains one of main ordinary rice in production, circulation and consumption in the province. It is due to:

1. High resistant to dangerous diseases and pests (planthopper and leaf blast and leaf folder);
2. High potential and actual yield in both two crop seasons;
3. Medium requirement in fertilizer investment;
4. Adapted to soil and climate of Dien Bien, particularly the Dien Bien valley;
5. Although non-aromatic, this rice eating taste is highly preferred by majority consumers;
6. IR 64 accounts for significant share of the total provincial sale in local market and the Northwest region;

7. Real IR 64 rice is accepted by local consumers by quality and price; and
8. Price of IR 64 is affordable for medium and poor growers and consumers.

Table 46 Main Features of the Most Common Lowland Ordinary Rices in Dien Bien

| | IR 64 | Tam Thom (Bac Thom 7) | Te Thom (Huong Thom 1) |
|----------------------------|--|---|---|
| Area in the valley | 20% area | 33% area | 13% area |
| Average yield (tonnes/ha) | High, sustainable | Low, unsustainable | High, unsustainable |
| Winter-Spring | 6.5 | 6.0 | 7.0 |
| Summer-Autumn | 6.0 | 6.0 | 6.3 |
| Production (tonnes) | | | |
| Growth duration (day) | longer | shorter | shortest |
| Winter-Spring | 130 | 130 | 110 |
| Summer-Autumn | 120 | 115 | 100 |
| Crop season | Two crops/yr | Two crops/yr | Two crops/yr |
| Winter-Spring | Broadcast | Broadcast | Broadcast |
| Summer-Autumn | broadcast | broadcast | broadcast |
| Diseases resistance | Very high, few diseases, no or low chemicals. | Very low. In 2002 loss because leaf-blast. Need control | Low resistance, easy to be lost if no chemicals. |
| Fertilization | Medium | Medium | Medium |
| Eating quality | Soft, no aromatic | Aromatic, soft | Aromatic, soft |
| Perspective | Sustained | Gradually promoted | Gradually promoted |

Table 47 Comparison of IR 64 & Hybrid Rice per Crop

| Variety | Yield (kg paddy/ha/crop) | Price (VND/kg) | Return (VND/ha) | Notes |
|-------------|--------------------------|----------------|-----------------|--------------|
| IR 64 | 6 000-8 000 | 3 200 | 2 560 000 | High quality |
| Hybrid rice | 8 000-9 000 | 2 300 | 2 070 000 | Low quality |

C.1.3.1.2 Tam Thom Dien Bien

311. Precise name “Bac Thom No 7”. It can be grown in both two crops in lowlands. In term of growth duration, input requirements and potential yield, it is very similar to IR 64, however is aromatic and highly attractive to pests and diseases, particularly plant hopper and leaf blast. It needs strict control by chemicals, otherwise, the crop is risky to heavy loss (for instance, in Summer 2002). The rice is highly adapted to acidic soil and cold and hot climate.

312. Tam Thom has very good eating quality: soft, non-sticky and aromatic. Its aroma is highly appreciated by consumers, including those in Hanoi who have access to many rice types. That’s why the traders give it the commercial name “Tam Thom Dien Bien” (quality aromatic rice from Dien Bien).

C.1.3.1.3 Te Thom Dien Bien

313. Precise name “Huong Thom No 1”. It can be grown in two crops in lowlands. Its main advantages are dwarf (100 cm tall), short growth duration suitable for cropping system arrangement; resistance to soil acidity and cold. Its potential yield is high. However, it is sensitive to phytophthora, leaf blast and planthopper, and risky to be lost if pest control is not duly done. Thanks to special taste and aroma, it is known by consumers in Dien Bien and outside of the province. .

C.1.3.1.4 Te Thailand

314. This is probably originated from Thailand, but produced in uplands of Northwest Vietnam.. It is one of few upland ordinary well-known rice varieties. The rice is sown in rain-fed systems by Hmong people. The Thailand sold in Dien Bien city market is brought from truckers who in cooperation with Thai collectors to buy from the highlands, such as Xi Pa Phin, Muong Lay, Muong Nhe or Muong Cha (100-300 km). It is included into high quality rice group and can be seen in every local markets, including the urban centers. The rice is consumed daily by Hanoi people and Dien Bien urban people. The local medium families buy this rice in small amount in special occasions, such as in wedding, holidays and New Year.

C.1.3.2 Sticky Rices

C.1.3.2.1 Upland sticky rice (USR)

315. Upland rice is cultivated only one Summer-Autumn crop with predominant upland sticky rice (USRs). The best quality of sticky rice varieties are grown on the uplands. These cultivars are grown rain-fed and no fertilizer is applied, therefore USR yield quite low varying much on rainfall fluctuation. USR tends to decrease in terms of area, yield and production. In 2005, the area under sticky rice reduced by 276 ha compared with 2004 (DARD). Upland rice is damaged by a number of pests and diseases such as root and tiller borers, and phytophthora.

316. SRs are grown in both lowlands and uplands of Dien Bien. However, upland varieties are more diverse and many of them are well known with high eating quality. Less problem occur with upland rainfed rice varieties as farmers produce seeds by themselves using traditional standardization, selection and storage in each family. Sometimes, seeds are imported from Laos among the relatives. No fertilizer application is reported. In fact, upland rice farming relies completely on soil fertility. Upland rice yield therefore is heavily dependent on soil natural fertility and rainfall regime. In the year of uneven rainfall distribution, rice is partly or entirely lost. In function of soil fertility reduction, upland sticky rice varieties must be changed to match with the fertility level. It was reported the following sequence of USRs in declining fertility:

Kha Luong Phuong -> Nep Cam ->Nep Nuong Thom (big grain)-> Kha Pe, Nep Nuong Thom (small grain) -> Kha Tan Nuong -> Nep Nuong thuong.

317. Upland rain-fed rice growing in general is not promoted; it is only accepted where irrigated rice is impossible. In fact, upland rice is gradually reducing as this kind of land is used for forest re-generated. The province authorities encourage farmers to convert rice dry farming into terraces by subsidy of VND 2.5 m for making one ha of dry terraces or VND 5.0 m for transforming sloping lands into irrigated terraces. For addressing disadvantages of upland rice, alley cropping, mulching, and contour farming is encouraged. Farmers are very interest in alley cropping and intercropping. Rice straw is left on field for naturally decomposed.

318. Among the USRs, only USR aromatic and big grain is emerging as the best quality sticky rice that can compete with similar types produced in the Red river delta (i.e. Nep Cai Hoa Vang or Nep Hai Hau). The competitive advantages of aromatic upland sticky rice are:

1. It is especially aromatic, extremely soft and sticky.

2. When steamed, it retains aroma and sticky quality for long time, not becoming hard and dried when cooled. These features are highly suitable for special uses such as holiday foods, religious uses, wedding ceremonies, and making traditional cakes.
3. Its genetic quality is stable being least deteriorated; farmers can sufficiently produce seeds by themselves.
4. Aromatic USR always has stable and highest price compared with other USRs.
5. Aromatic USR is always highly demanded in the region and has no market problems in the North West.

Table 48 Some Sticky Rice Commonly Sold in Dien Bien Markets

| Sticky rices | Price (VND/kg, milled rice) | Market locality | Notes |
|--|-----------------------------|-----------------------------|----------------------------|
| USR aromatic (Nep Nuong Thom); big grain | 8500 9000 13500 | Dien Bien Hanoi Hanoi | Hang Dau street Intimex |
| USR aromatic (Nep Nuong Thom); small grain | 8500 | Dien Bien | Dien Bien market |
| USR black (Nep Cam) | 7000 | Dien Bien | |
| USR Nep nuong thuong hat nho | 6500 | Dien Bien | |
| Nep nuong thuong hat to, tron | 7500 | Dien Bien | |
| Khau Tan nuong | 7000 | Dien Bien | |
| Khau Pe nuong (trang/do) | 5000 | Dien Bien | For alcohol, cakes |

319. The main constraints for promoting of aromatic USR and other kinds of USRs are many:

1. The rice can be grown only in one crop and on uplands with high fertility.
2. Extending uplands for growing this rice is impossible.
3. Its yield is extremely low, being around one tonnes per ha. With time, the soil fertility is decline and aromatic USR ought to be replaced with lower quality rices.
4. Similarly to other kinds of upland rice, aromatic USR is never applied with organic manures or chemical fertilizers.

C.1.3.2.2 Lowland sticky rices (LSR)

320. Sticky rice are also grown in lowlands, however their eating quality is lower and hence price is lower than USR. Lowland sticky rice is grown by Kinh, Thai and Kho Mu groups. A variety of lowland sticky rice varieties are found, however the most commonly seen in the markets are lowland Khau Tan, Nep Can Bo, C 97, IR 352, Nep Xoi thuong. Their quality and price is comparative with almost all USRs, except the aromatic USR. The room for expanding lowland sticky rices and improving their yield is much larger than that for the upland rices. In addition, it is well known that under submergence conditions of irrigated lands, soil degradation is much reduced and soil erosion is can be avoided.

Table 49 Some LSRs Sold in Dien Bien Markets

| Variety | Price (VND/kg, milled rice) | Market locality | Notes |
|-----------------------------|------------------------------|-----------------|-------------------|
| LSR common (Nep xoi thuong) | 5300 | Dien Bien | |
| LSRNep ruong (Nep can bo) | 4300 | Dien Bien | For alcohol/cakes |
| LSR Khau Tan Ruong | 7000 | Dien Bien | |

321. Potential for domestic consumption and export of rice commodities in Dien Bien can be summarized as follows:

322. Rice production of Dien Bien varies around 120 000 tonnes of paddies per year or 84 000 tonnes of milled rice (assuming the milled rice: paddies of 70 percent). With a population of 430 000 people consuming an average of 13 kg per person per month, the annual need in milled rice for self-consumption is about 67 080 tonnes. The volume of surplus milled rice is quite modest, only around 7 000 tonnes per year. There is no large room for expanding upland rain-fed rice areas, while increasing sowing areas can be enlarged by converting gentle sloping lands into terraces where water is available and large gaps between actual and potential yields of upland rices offer opportunities to improve yields through hedgerow farming, mulching, manuring, etc..

323. It is mentioned that apart from the local habitants, there are a number of enterprises, companies and government agencies located in the provincial area. Also, certain number of big construction sites is developed in the province. These residents are potential consumers of rice locally produced. Therefore, potential for export of rice out of the province is not much. In this regard, validation of rice should be realized through developing varieties well-known in the markets, such as USRs, Tam Thom, Te Thom, and Te Thailand. .

324. Although at provincial level per capita paddies (in average 280 kgs/year) is rather high, however at village level food security is not fairly ensured. This happens particularly in the remote upland areas with the ethnic groups (Hmong, Kho Mu and others) who have little opportunity to have lands suitable for rice growing. For this class of consumers, rice needed is of predominant sticky rice and partly ordinary rice.

325. Both the poor and better-off families have needs to sell and to buy rice because all of them need cash for covering their essential expenses. Farmers sell also the quality and expensive paddies (like USRs and/or aromatic rices) to buy cheaper ones. So, the circulation of rice in local markets is flowing all year around. However, the most intensive period of paddies sale by farmers occurs in June right after harvesting Spring rice and October after harvesting Summer rice. The most intensive period of milled rice purchase by farmers is in February to April and August.

326. The most critical time for food security is in the period of March – April and August-September when reserve of paddies in households is exhausted and transportation is impeded by rainy season. In these periods of time, certain amounts of rice are transported from outside places to the province.

327. Poor families, especially the ethnic minorities living in remote areas, have to sell their paddies at any time they face with cash need. There are the cases rice was sold in the paddy form when it was still immature. They received a very low price of VND 1500-1800/kg instead of VND 2500-3000/kg if they had sold it later). Enlargement of irrigated rice terraces, improved upland rice yield, well-developed rural credit system developed to commune level and linkage farmers in interest groups or cooperatives can help them to gain better share from the rice added value.

C.1.4 Rice Added Value Chain and its Potential Enhancement at the Provincial Level

C.1.4.1 Main Actors in the Rice Value Chain

C.1.4.1.1 Growers

328. Rice is produced in private small holdings with areas varying between 500 m² to 10,000 m² in the lowlands and in the uplands from 1000 m² to 2 ha and in few cases up to 10 ha. In Dien Bien valley, land for rice has been allocated on basis of person number per family. In Am Mun commune, for example, each person was given 450 m² and a new couple was allocated only 900 m². At present, reserve for this kind of land is exhausted. It seems that in a poorly commercialized agriculture of the province, healthy of farmer household livelihoods is strongly dependent on availability of irrigated rice areas they possess. Thanks to larger land per capita for rice and better water supply, farmers in Dien Bien valley showed much better-off than those living outside the valley. Outside Nam Rom irrigation system where water is poorly ensured, households having larger rice lowlands have better opportunities than those having limited lowlands. It is clearly observed the uplanders and highlanders with extremely limited irrigated lands are always poor.

329. Because of limited access to extension services, poor households, especially those from ethnic minorities, managed poorly their rice fields and therefore rice quality is always low leading to lower added value.

330. Estimation by Sam Mun cooperative showed that of total investment for rice, 50 percent are for the expense for material inputs and the price of material inputs is more and more expensive.

Table 50 Differences between Poor and Better-off in Rice Growing

| | Poor households | Better-off households |
|------------------------|--|--|
| Rice land availability | Limited, esp. lowlands | Enough or more |
| Land preparation | Manually and/or rent | Self-doing by machine |
| Varieties grown | Common rice | High quality, aromatic rice |
| Seed quality | Poor purity and type-off | Better seed quality and lower type-off |
| Labor input | Almost entirely labor input | Less labor input |
| Organic manures | Little or nil | Large amounts |
| Chemical fertilizers | Little or nil. Mainly urea | Sufficient and balance |
| Pest control | Poor and delay | Good and in time, incl. IPM |
| Selling | Right after harvest, even before harvest | Store, waiting higher price |
| Processing | At village | At home or village |
| Marketing | Poor skill | Better but still poor. |

Box 2 An Upland Rice Grower in Dien Bien

Ms Xu & Mr Hom, Poor household, Kho Mu minority. Co Cuom village, Muong Phang commune, Dien Bien district.

The couple is illiterate having 4 small children. They have 1,100 m² upland, 2,000 m² lowland and some hundreds m² garden without tree.

In the upland, of total 1,100 m², 600 m² is for sticky Khau Pe and 500 m² sticky Thoc Do. Three years ago, Khau Luong Phuong and Thoc Do (lower yield, high quality, good soil) was grown, now these have been replaced with Khau Pe (high yield, medium quality, adapted to medium soil). Rice is broadcasted when rain falls (May) and harvested in October-November. If rainfall is enough, crop is good, otherwise yield is reduced, even to none. Upland sticky rice is never fertilized. Yield is declining as soil become poorer and poorer. In the village, some plots have been replaced by cassava or abandoned for fallow. Forest is protected, new land can not be opened. 600 m² Khau Pe gave 6 bags (x 40 kg) and 500 m² Thoc Do gave 10 bags (x 40 kg), totaling 640 kg per year. Seeds are selected from each panicle and dried above kitchen, no problem with quality. Their most concern is land limitation and declined soil fertility.

In the lowland, 2000 m² is for transplanting one crop of ordinary rice Bao Thai (long term) and left fallow in Winter as no water is available. If water comes, she could have one crop more.

Source: Study Team Interviews

Box 3 A Lowland Better-off Rice Grower in Dien Bien

Ms. Inh, Better-off household, Thai people. Che Can village, Muong Phang commune, Dien Bien district.

Wood house of 200 m², TV, motorcycle, processing machine. Family has 5,000 m² lowland and 2,000 m² cassava hill land. 7 persons of which 2 laborers. Seasonal rent labor is used. Her family cultivates 5,000 m² irrigated lowland of which 3,000 m² for two crops and 2,000 m² for one Autumn crop.

Winter-Spring crop encompasses: IR 64 1000 m² produce 550kg; Huong Thom 1 000 m²: 500 kg; and Bac Thom 1,000 m²: 450 kg totaling 1 500 kg/crop. Two crops give 3 tonnes/year. In Autumn, Bao Thai 3,000 m² in lowland give 1.05 tonnes (350 kg/1 000 m²); and 2 000 m² sticky Nep Khau Tan produce 1 tonnes. In total, she harvests 3.55 tonnes of paddies/year. IR 64 and Bac Thom is sold at VND 2,500/kg at early harvest and VND 3,200 at late harvest (now); while price of Tam Thom (the best eating quality) is VND 2,700 and 3,400/kg, respectively. However, Tam Thom is sensitive to diseases, especially plant hopper, causing control expenses and loss. Among the constraints, seed quality is most serious. Thanks to good livestock husbandry (5 buffaloes, 10 cows, 10 pigs, 5 goats), large amount of FYM is applied.

She has a machine for doing services of husking with fee of VND 800/10kg paddies.

Further details are contained in the annexure.

Source: Study Team Interviews

Box 4 A Poor Lowland Rice Grower in Dien Bien

Ms Yeu, Poor household, Thai people. Che Can village, Muong Phang commune, Dien Bien district. Five persons including 3 small children. Family raises only 2 water buffaloes, no pig because of diseases. She has 4,000 m² land of which 4,000 m² for Autumn cropping; but only 1,500 m² grown in Winter-Spring, remaining 2,500 m² left for fallow because of drought.

In Winter-Spring, 1,500 m² IR 64 produce 520 kg; 300 m² Sticky 97 give 120 kg and 200 m² Bao Thai give 40 kg, totaling this crop 680 kg. Inputs for IR 64 include (per 1500 m²) 320 kg FYM; one bag NPK and 50 kg fused phosphate per crop. In Autumn, for 4,000 m² Bao Thai applied 300 kg green manure; and one bag NPK, give 800 kg paddies. In total, she harvests 1,480 kg/year. In addition, cassava from 2,000 m² is used for alcohol making and raising fish, giving VND 2,000,000/year. Nevertheless, she has to sell rice to cover life expenses. In urgent cases, she had to sell at very low price. Immature rice still on field is sold at VND 1,000 – 1,500/kg; in mid-season at VND 2,000 – 2,400/kg when paddies were not well dried and cleaned. She hope water available for growing 2 crops of IR 64 per year and attend some training.

Source: Study Team Interviews

C.1.4.1.2 Processors

331. In common, rice panicles with straws are cut and brought home, leaving stubbles on the field for burning or incorporation into soil. The poor normally thresh rice manually while the better-off households doing by machine.

332. In reality, for rice business it is impossible to distinguish clearly processors, collectors, transporters, re-sellers or traders as they do all these operations. There are a number of small private processing cum trading households forming a network of rice business down to villages and households. In each village, there are 1-3 milling machines run by electricity or gas-oil serving paddies milling at fee of VND 40-50/kg. Farmers mill paddies at their hamlets when they need rice, that's why no or little milled rice was sold in village or commune markets. In each of communes visited, there are 4-6 bigger collectors who do at the same time storing, milling, and re-selling paddies or white rice upon the

client's request. Rice is traded in both two forms of brown paddies and/or milled rice from communes to district centers as paddies are easier to be stored than husked rice. Sometimes, small re-sellers carry milled rice from 10-15 km far to district markets, each bicycle can bring up to 150-200 kg and they can get VND 100-150 /kg more. From district and/or big urban centers to provincial centers, only milled rice is transported. A fee of about VND 100 to 200/kg for 100 km of transportation depending on one-way or two-way loading trucks.

C.1.4.1.3 Collectors cum Storer

333. In fact, in each village there are some 2-3 better-off farmers who have buy paddies at low price, store them and re-sell when price raises up. These collectors are small as their resources (available cash and storing space) are not so large. However, in any case they can take advantage to employ differences in price. They buy paddy right after harvest (June and October) and sell them at right time and get higher price (February to May and December). Their partners are bigger collectors (processors and truckers cum traders) coming mainly from district or provincial centers. Due to milled rice can not be kept for long time, only paddies are stored at village, commune and district level. Once rice is needed for sale, paddies are immediately processed and milled rice is sold. The provincial companies usually send their big trucks to district "processing points" for buying paddies and/or buying from small collectors who transport paddies/milled rice to the companies by small pick-ups. In any case, it is the buyers who offer the price.

Box 5 An Upland Village Collector/Storer

Mr Pe, Farmer-collector, Hmong people. Cu De village, Phu Nhi commune, Dien Bien Dong district.

He buys and stores paddies from villagers about 20-25 tonnes/crop. Paddies are bought after or before harvest, but majority is before harvest as immature ones are much cheaper. He sell first to his traditional client (from Phu Nhi); the surplus quantity for truckers. He can collect for truckers in urgent moments, but price is higher (100-300/kg) and quality is not ensured.

Source: Study Team Interviews

Box 6 An Upland District Collector/Trader

Mr Tinh & Thu, Collector, Phi Nhu village, Dien Bien Dong district, Dien Bien.

In Phi Nhu there are 3 milling points each has a small machine. Rice is grown only one crop by Hmong, while Thai do not do upland. In March, farmers slash and burn field, sowing rice in April-May and harvest in September.

Mr Tinh only buys and sells paddies; if from < 10 km rice is brought home; if far (30 km) is stored in place, then sold to buyers. Transport fee is about VND 50/kg (cheap because truck transport other goods). He has 9 smaller collectors who are farmers cooperating with him for 10 years (very trust and sustainable). Cooperators are advanced money and they buy rice from villagers right since paddies are still immature at low price (<VND 2000/kg). He bought 100-200 tonnes ordinary and 25-30 tonnes sticky rice. Quality is ensured, if not, cooperators are excluded from the play; however it never happened. Criteria: purity (not type-off); but three ordinary rice Thai, Trang & Rau can be mixed because they are the same. Cleanness; weight and moisture: always perfect. He sells to any buyers without commitment (more independent), but commonly to processors from Dien Bien and Son La city. Rice of 50-70 kg/bag loaded on 7-10 tonne trucks. Once he tried to bring to Dien Bien, but rent truck for two lines was too expensive (VND 1.2m).

Further details are contained in the annexure.

Source: Study Team Interviews

Box 7 A Collector/Processor

Mr. Thanh, Collector/Processor. Kinh, Brigade 5, Pom Lot village, Sam Mun commune. His family has 4 persons of which two children going to school. He and his wife has 5 000 m² grown with IR 64 using rent laborer (paid VND 30 000/labor day). They have a machine of VND 17 m for processing rice, maize and cassava. Business registration is VND 300 000/year and business tax is VND 100 000/month; around VND 1 m paid is for electricity.

He works with machine processing 4.2 tonnes paddies/day and collecting fee of VND 4 000 – 5 000/100 kg. He works all year round, except several holidays, selling from 3 to 30 trucks each of 3 - 7 tonnes of rice (50 – 100 tonnes/year).

Paddies of IR 64 purchased at earlier crop was VND 2700/kg, now VND 3500/kg (the best VND 3600/kg). White rice bought from villagers at VND 5300/kg and sold at VND 5500/kg. Before, paddy rice was cheaper: 2000/kg in 2000. If selling in small quantities, benefit is VND 100 – 200/kg, if in larger amounts, benefit is only less than VND 100/kg.

Criteria by visual method include: moisture, inclusions, type-off, filled grains, outside color. If type-off around 50 percent, IR 64 should be classified as “mix rice” and price is reduced to VND 2800-3000/kg since rice/paddies only 62-65 percent, instead of 70 percent for good IR 64. Paddies should not be dried on concretion ground for quick drying that may make rice too fragile and many broken grains.

Milled rice packaged in 70 kg sacs to sell to any client, but normally to those are from Dien Bien, Son La and Hanoi. Most of them are acquaintance. They order in advance and send trucks to collect at daily price. If there are large demands from many clients at the same time, he has to share for keep friendly relationship. If price rises up at consumption sites, the client inform him, otherwise, next time sale for them may be refused. Mr Thanh said he doesn't like to conclude long term contract with companies with fixed amounts and price (for 3 months).

Source: Study Team Interviews

334. In the province, there are some 6-7 big (SOE, private or joint-stock) companies influencing rice market, all are located in Dien Bien city. We visited three of them. These companies do simultaneously several activities of collecting, storing, milling and wholesaling. Their client addresses are reportedly Son La, Lao Cai and Hanoi.

Box 8 A Big Private Rice Trader in Dien Bien

Mr Thien Chin – Processor cum Re-seller. Ban Ten street, Dien Bien city.

This is the biggest rice collecting, milling and business enterprise in the city, possessing 12 service points located in the city. He was a war veteran and his family has 3 children one of them is disable. In the headquarter, he has one big machine (5 workers) and one small machine (2 workers) for milling various products (rice, maize, cassava). Six workers are rent for loading/unloading (wage VND 1 000 000/month). He has a truck (10 tonnes) with 3 workers purchasing paddy over the province down to village. He buys also from smaller collectors transporting paddy to his processing points. Within 100 km, transport fee is VND 250/kg, Business registration tax VND 300 000/year. Business tax is VND 120 000/month. He want to extend his business, but credit is limited (max. VND 500 m). He stated several ordinary rice varieties rapidly deteriorated, quality varying much. GoV should help to retain seed quality. Aromatic USR is best seller (from 6800 to 10000), in other provinces, up to VND 12000 – 14000/kg.

Further details are contained in the annexure.

Source: Study Team Interviews

Box 9 Agricultural Machinery & Construction Company

Company strategy is doing business of high quality rice with advanced technology and machine (Japanese processing machine of 8 tonnes per day). IR 64 paddies purchased are first drying (from around 20 percent humidity to 14 percent), then excluding inclusions and unfilled grains and milling. Non-standard rice grains and inclusions are then excluded followed by whitening all by machine. At this stage, rice may be sold or going further to detaching broken rice to 5 percent or 3 percent or further to polishing depending on client's request. The client uses this high quality rice for special cases such as holiday meal or for gift.

Paddies of IR 64 are bought from farmers at average VND 3000/kg (earlier crop: VND 2500 – 2800, mid-crop: 3000-3200 and later crop: 3500/kg). In late crop of 2005, from paddy purchased at VND 3500/kg, the company's price of grain after whitening is VND 6 000/kg and that with 5 percent broken rice is VND 6 800/kg. The benefit the company target is averaged 6 percent.

Since 1998, paddy volume enterprised is between 300 tonnes to 800 tonnes per year of which 65 percent was IR 64. The volume is decreasing to 300 tonnes in 2005 because the company failed in acquiring a trade mark and its reputation is abused by fake marks. The end products (of 5 percent or 3 percent broken grains or polished) price quite too high for common client. Only an operation of excluding broken rice may lead to an additional cost of VND 1 000 per kg of product. This is not persuading price without well-known trade mark with high reputation. The clients usually buy rice with 5 percent broken grain without polishing.

As high cost of transportation, the company does not open its shops in other cities. In Dien Bien, each sale is 10 – 20 tonnes equivalent to one – two truck capacity. Rice is also sold in bags each of 5; 10 or 20 kg with company's mark. Few common consumers buy quality rices not for eating, mainly for gift. In 2003, the company submitted a proposal of contracting with farmer households in three communes (Thanh An, Thanh Xuong and Noong Het) to Processing Section of DARD. However, no feedback is received so far. This kind of linkage may be unfeasible as rice sale responsibility may not be ensured from farmer side. Contracting system is risky to be broken.

Source: Study Team Interviews

Box 10 North-West Food Processing and Business Enterprise

(under Vietnam Northern Food Corporation)

Mr Nguyen, Director

The enterprise is a SOE established two years ago under Vietnam Northern Food Corporation. The company does processing and trading of every food products but first of all rice. The Company's processing point of 10 tonnes/day is located in Dien Bien city.

Ordinary rice IR 64 accounts for 150 tonnes/season (or 20 percent total volume). Demand on this rice remains always high, but its quality is declining (low purity, poor outside performance of grain). The enterprise once transported to Hanoi, but the sale was not profitable as consumers can not distinguish IR 64 from Thailand and Southern rice and therefore this business ceased.

Sticky rice accounts 150 tonnes (20 percent). The total volume of quality sticky rice farmers could sell only about 300 – 400 tonnes per crop and it is difficult to purchase more. The medium quality rice (Khau Pe) is sold in husked form (without whitening) for alcohol making, the better Khau Luong Phung or Red USR (Thoc Do) are for eating.

The enterprise usually buy paddies at the beginning of harvest and sell white rice in the period between two crop when rice price roses up. The profit is from VND 100 – 200/kg. The average target profit of the enterprise in this business is between 6 and 8 percent. In some cases, the enterprise has to sell products in loss. For example, maize was bought at VND 2300/kg, now the price goes down to VND 2000/kg.

The company collects rice from certain number of smaller private collectors who, by their own mean, transport rice from either district and/or commune collecting points. The company set up relations with 5 such points in Dien Bien valley. Fee will be large if the company collects rice directly from farmers. Between them there is no official contracting system, however the company is trying to set up a truly relationship. Parts of money for purchasing is advanced for partners and an award of VND 20; 30 or 50 is applied for one kg rice of the volume provided above the agreed volume. The company has a control team with some evaluation tools, however quality is assessed mainly by visual methods. Criteria include moisture (<15 percent), variety purity, inclusions, grain color and filling degree of paddies. Normally, paddies purchased are still more or less humid as farmers sell them right after threshing, especially in Spring. The company determines rice/paddies ratio for each purchased lot.

Product sold by the enterprise is rice after husking and whitening without polishing.

In the main market in Dien Bien and Son La, the enterprise's main client is worker and army units. The enterprise is including a joint venture with a private company in Hanoi in providing quality for hotels, restaurants and super markets there. The enterprise will provide milled rice and the partner will complete

further end operations (standardized, packaged, labeling and reselling in Hanoi. Estimated price differences are as follows:

| White rice | Max. price in Dien Bien | Expected price in Hanoi |
|--------------------|-------------------------|-------------------------|
| Best aromatic USR | 8 500 | 10 000 – 12 000 |
| Ordinary Bac Huong | 7 000 | 8 000 – 8 500 |
| IR 64 | 6 000 | 7 000 - 7 500 |

Source: Study Team Interviews

C.1.4.1.4 Transporters (truckers)

335. Rice is transported gradually in small distance from growers to consumers. Every means of transport are employed for short distance (cart, bicycle, motorcycle, pick-up, light lorry, mini truck). From communes to district centers mini trucks are used whereas for long distance (from remote districts to province center and further to other provinces) trucks of 10-20 tonne capacity are used. There are very few real truckers who deal only with transportation. Traders used to employ two-way transport means for economize transportation fee. Rent trucks carry paddies in one way and other loads (construction materials, ores or goods) in back way.

Box 11 A Rice Trucker cum Trader in Dien Bien City

Mr Su Tron & her son, Medium Trucker (0912 247 473), Dien Bien market.

She does business for 9 years. She buys milled rices from the processing points in Dien Bien and districts. Before she had 2 trucks of 35 tonnes to Son La and Hanoi; now has only one of 35 tonnes to Son La, because to Hanoi is not benefit. Some families also provide rice to army, mining, construction units up to Lao Cai. Among her sale, Te Thom is best (50 percent of amount, not enough for her buying); then aromatic USR and Tam Thom, mainly for rather rich families. IR 64 for common client (food shop/small restaurant), and lower quality for the poorer client. 90 percent Son La town people consume rice delivered by retailers bought from Dien Bien. In Son La she has 100 cooperators who receive rice first, then pay at the end of year. Apparent benefit: VND 100-150/kg; if large amount (> 5 tonnes) VND 50 kg. In critical days (in May-June, typhoon, flooding or continuous rain for weeks) benefit even rose up to VND 500-1000/kg, it happened during short time of 15-30 days in rainy season (she sold 5 to 10 trucks x 30 tonnes at high price). If she transports for others, fee: VND 180/kg. On request of big client, she transported paddies for them because milled rice can not be stored more than 10 days (risk of deteriorated). IR 64 is standard; if not good, it means someone fake (mixed with other rice).

Criteria: purity is first; cleanness: not so important (some paddy grain, stones are easily excluded by retailers); aroma: important (for expensive rice); moisture: less important; polishing: avoid. Sale is in 50-70 kg/bag. Because many sellers and buyers, the success remains dependent on relationship and trust; therefore price can not be decided alone. In this city, there are 3 households bringing rice to Son La, we agree together on price. Her son (Mr Toan) starting cooperation with a partners in Son La to sell his ordinary aromatic with label of "Tam Thom Dien Bien". He expects to extend his business to Hanoi.

Source: Study Team Interviews

C.1.4.1.5 Re-sellers (local markets, retailers and supermarkets)

336. As milling points are available in villages and communes, farmers can mill their paddies at any time they need. Therefore, little or no milled rice is sold in commune markets. Milled rice is found only in town or cities markets. These retailers buy milled rice either from small collectors or from "processing points" of commune or district or city level. Their clients are urban residents, government staff, workers, students and tourists as well. Normally, they sell 100 – 300 kg per day and gain a modest but stable benefit despite the price fluctuation. Some retailers in big Dien Bien city have relationship with Hanoi retailers can communicate by phone and sell rice by sending rice bags through regular bus or shuttles. Tourists used to bring small amounts (each 10-20 kg) of aromatic upland sticky

rice or ordinary Tam Thom Dien Bien to Hanoi by airplane. Hanoi consumers also use these commodities as a gift; this fact shows that Dien Bien rices have their reputation among the highly competitive and difficult markets.

337. In Hanoi, Dien Bien rices found in local and super markets include aromatic USRs (Nep Nuong and Nep Tan Dien Bien) and aromatic ordinary Tam Dien Bien. The local retailers (Long Bien market, for example) sell small amounts and get a modest benefit. In supermarkets (Intimex, Big C, Metro, Hanoi Start, Fipi Mart), these rices are sold in plastic bags of different sizes (2 kg, 5 kg and 10 kg) with company label and at much higher price.

Box 12 A Rice Retailer in Dien Bien City Market

Ms Diem – Rice retailer. Dien Bien city market.

She sells per day 100 – 150 kg. Purchased at market, making rice cleaner. Farmers bring milled rice to her; Tam Thom and Te Thom from Thanh Xuong (7 km). USRs from truckers brining from mountains. Sold for urban families in small quantities (5-10 kg each sale). Sometimes, 100-200 kg for collective units or tourist groups. Urban people prefer IR 64, Tam Thom and Te Thom; poor people and pri-urban people consume rice of lower quality and price such as Tap Giao (hybrids), Bao Thai, CR 203. The later are also used for the poods and making cakes, noodle, etc. Client: mainly local and partly to Hanoi tourists who buy only Tam Thom and/or USR aromatic.

Her comments on the marketing aspects of the different rices are as follows:

| Rice | Notes |
|-----------------------------|-------------------------|
| Nep Tan (lowland) Dien Bien | Most easily sold |
| Nep Cam Dien Bien | Medium |
| Nep nuong Dien Bien | Medium |
| Nep Hoa Vang | Most easily sold |
| Nep Cai trang | Most easily sold |
| Tam Thailand | Most easily sold |
| Tam Hai Hau | Most easily sold |
| Du Dau Hai Hau | Most easily sold |
| Tam Dien Bien | Medium |
| Du Huong Ha Dong | Medium |
| IR 61 | Medium |
| Bac Huong (or Q 8) | Most easily sold |
| Q 4 | Little, for cake making |
| CR 71 | Little sold |
| CR 203 | No more sold |
| Hybrid rices | No more sold |

Further details are contained in the annexure.

Source: Study Team Interviews

Box 13 Dong Bac Private Company

Mr Do Van Hiep, Director. 30 Hoang Van Thai, Hanoi.

“Clean”: no inclusions, stone, soil. Chemical fertilizers, pesticides were applied. Company has machine for cleaning first, the processing. Main factory in Yen My (30 km). Some rice kinds from the South are declared as “Tam Dien Bien”. We prefer Dien Bien rice grown in Dien Bien rather than Hai Hau rice. IR 64 is coming mainly from the South. Rice production of Dien Bien is too little. To us, only Tam Thom Dien Bien & Nep Dien Bien are known.

Company intend to cooperate with some NGO to establish trade mark (brands) for each region with certification of relevant control authorities. The company is willing to buy and offer higher price (by 5 percent) in supermarkets, but rice must be sold only for us, not for others.

We register our mark in the Department for Foodstuff Hygiene and Safety. The company is selling for ordinary customers (popular restaurants, schools), but strongly targeting to supermarkets (in future). We pay attention first on quality and price rather than sale volume and consistency. Quality means purity (not mix), moisture and qualitative symptoms (visual assessment). It is advisable to set up cooperative for rice sale in communes (as our partners) with which farmers can sell when price rises up. Commitment is important. Price may be negotiated and fixed for a week or a month. Some trucking bring rice from Dien Bien to Hanoi.

Demand is constant while supply is not constant (early or late season). It is stocking people who influence variation of price. Package in 5 and 10 kg done here, but in localities is better, company is ready to pay VND 50 000/labor day. Every operation should be completed in Dien Bien, here we only deliver.

Source: Study Team Interviews

C.1.4.2 Actors links, Their Benefit Sharing and Added Value Distribution

338. Our study permits the following remarks:

339. Within the province, a complete chain of rice circulation has been formed from growers, via collectors, processors and truckers to consumers.

340. Among them, collectors, processors and re-sellers have set up a network of rice delivery. Very often, one of them plays multiple roles realizing every operation at the same time. The private actors show decisive role and account for dominant share of rice market. A non-official but sustainable network has been established between them due to friendly and relative relationship.

341. Role of stockers and truckers seem the most influential on rice price. These actors have enough resources (cash and storage mean) for storing paddies for long time and providing at relevant moments. With small vehicles they can penetrate to villages and/or households and thanks to convenient communication means (including phone and mobile phone) they have market information.

342. In this chain, growers are in passive position in deciding time and price of paddies sale as well as purchase of milled rice needed and hence they are highly vulnerable to rice market fluctuation. They always suffer from imposed price in selling and buying as it is their partners who decide price.

343. Links between the provincial local traders and the outsiders seem to be occasional and unorganized. This may be attributed to several reasons, i.e. small and fluctuate rice sources; high transportation fee, and low and/or unfair competitiveness. Some big companies based in Dien Bien or Hanoi had attempt to do business with Dien Bien rice, but were unsuccessful. At present, some other companies are starting again this kind of business because of developments in the retail network.

344. The most successful cases belong to the middle persons (individuals and companies) who cover entirely the chain (store, processing, trucking and re-selling). By their function, storing and trucking actors have advantages in sharing largest benefits from rice trading. Local retailers gain a modest and stable benefit.

345. National and regional economic development offers a promising market opportunity for rice commodities of Dien Bien. Apart from Hanoi, the neighbor cities such as Lai Chau, Son La and Lao Cai and developing urban centers are expected big markets for Dien Bien rice commodities.

Table 51 Investment, Cost and Apparent Benefit of Rice in Sam Mun Commune

| | IR 64 | IR 64 | Khau Tan |
|-----------------------------------|-----------|-----------|-----------|
| Calculated by | Mr Tan | Ms Inh | Ms Inh |
| Input (materials+ Labor) | 1 148 550 | 678 000 | 920 000 |
| Output (kg/1 000 m ²) | 700 | 500 | 450 |
| Farm-gate price (VND/kg paddies) | 2500 | 2500 | 3500 |
| Revenue(VND/1000 m ²) | 1 750 000 | 1 250 000 | 1 575 000 |
| Cost of paddies (VND/kg) | 1 640 | 1 356 | 2 044 |
| Cost of milled rice (VND/kg) | 2 343 | 1 937 | 2 923 |
| Benefit (VND/1000m ²) | 641 445 | 572 000 | 655 000 |

1000m²

Note: Khau Tan is lowland sticky rice

C.1.5.2. Local Services for Rice Sub-sector and its Improvement Perspectives

C.1.5.1 Land for Rice

346. In general, land for rice is limited, especially irrigated lowlands. In the mountain and highlands, irrigated rice can be planted only on narrow terraces with running water. Each household in lowlands cultivate an area of from some hundreds m² to one thousands m² and in uplands cultivated area is ranging from some hundreds m² to some thousands m², and in rare cases up to some hectares with slash-and-burn techniques. Uplands and major parts of lowlands are grown only one crop per year because of water deficit. Expansion of rice land is main constraints for increasing rice production volume.

C.1.5.2 Water Supply

347. Although water resources are abundant, water supplies are available only in the lowlands, particularly in the Dien Bien valley. Outside the valley, water supplies are very poor. In the Dien Bien valley, Nam Rom Irrigation system serves a rather regular water supply; however the field canals are poorly developed leading to important water loss and a large land area was seen left for fallow in Winter-Spring season because of water deficit. Improvement of irrigation systems can double rice crops in this area. On the uplands, rice growing areas may be enlarged by transforming sloping land into small irrigated terraces wherever water sources are available.

C.1.5.3 Seed Supply and Quality

348. **USR seeds:** Less problem of genetical deterioration occur with upland rain-fed traditional rice varieties as farmers produce seeds by themselves using traditional standardization, selection and storage in each family. Sometimes, upland farmers also imported USR seeds from Laos through their relatives. However, serious problems happened with seed quality of conventional exotic rice varieties (low genetical purity, type-off, poor pest resistance).

349. Provincial system of seed supply provides mainly lowland ordinary rice seeds. Large parts of seeds provided are of hybrid rice seeds imported from China while. These kinds of

rice are no longer welcome by farmers in many places visited. Farmers in Sam Mun reported IR 64 seeds are rather pure and little type-off. Low yield, if happens, is due to high rate of unfilled grains caused by inappropriate techniques. Main reasons for reduced yields include cultivation techniques such as insufficient organic manuring, low or/and imbalance chemical fertilization, poor disease control and harvesting in rainy period in Winter-Spring (broken grains).

350. Provision of aromatic ordinary rice seeds is highly dependent on the Provincial Seed Company. Farmers visited complained on difficulties they faced in obtaining sufficient quantity of seeds they needed each crop.

C.1.5.4 Extension Network and Technical Transfer

351. An agricultural extension has been set up, however its activities are extended mainly to district level. In village and commune level, rice growers have little opportunity to access to extension services and training. PEAC and DAES train commune cadres (cooperative chairman, commune extension, Farmer Union, Women Union), who train village heads who in turn train farmers. This kind of training appeared not effective, as those directly involved in cultivation, women particularly, had no opportunity to attend. A number of shortcomings were defined in talking with rice growers. For example, in Sam Mun, some families applied up to 40 kg urea per 1 000 m² or about doubled dose recommended. Surplus and/or wrong use of pesticides was found in many households visited.

352. Recently, Dien Ban Pesticide Company in collaboration with District Plant Protection Sub-division is introducing new training method that farmers highly welcome. This is a kind of Farmer Field School which lasts the whole crop period from land preparation to harvesting. Extension agents come and show farmers how to do for each operation.

353. Shifting extension approach from supply-extension to farmer demand-driven can bring significant contribution to economizing material and labor inputs, improving rice yield and hence increasing rice added value.

C.1.5.5 Manuring

354. Organic manures include FYM and green manures (grasses, wild plant prunnings). FYM is depending on number of pig and buffaloes. Thai ethnic farmers use less organic manures than Kinh people. Commercial fertilizers are bought via the cooperative in early season and paid in late season. Chemical fertilizers used include: lime, urea, fused Mg phosphate and potassium chlorite. Fertilizer application is not balance leading to high rate of aborted paddies, unfilled grains and broken rice. For the upland rices, which were never applied with fertilizers, application of organic manures and/or chemical fertilizers, if any, will undoubtedly produce high effect as confirmed by previous research works.¹⁵ Another realistic alternatives include mulching with stubbles, rice straws and wild grasses, contour and hedgerow farming, intercropping. Certain better-off households visited are experience in these practices.

C.1.5.6 Pest control

¹⁵ Nguyen Tu Siem, 1999. *Uplands in Vietnam – Degradation and Rehabilitation*. Agriculture Publishing, Hanoi.

355. Chemicals are abused some farmers sprayed pesticides up to 8 times per crop. Knowledge on insecticides is very poor. Once rice plants are damaged, majority farmers go to pesticide retailers to buy what chemicals that the sellers advice them. In some cases, for sure farmers bought some chemicals special for some diseases, mixed together and sprayed even no diseases symptoms were seen (reported by farmers from Sam Mun commune).

C.1.5.7 Processing

356. Panicles with plant top parts are cut and brought home. An instrument for cutting rice bought from the South appeared not suitable as it was too heavy. Rice straw is left on field for incorporation into soil or burnt if dry. Threshing is done by own machine or rent machine coming to house. Drying is done only by sunshine. Post harvest loss on field is not much. There are 12 households using machine for processing rice, maize and partly cassava. Fee for husking and whitening is VND 40,000 per tonne milled rice. White rice/paddies rate is around 70 percent. As all families have enough rice, no rice is sold in commune market.

C.1.5.8 Rice Marketing

357. No household have to buy rice from outside. Thai people consume mainly sticky rice. In Sam Mun there are 12 processing points all operated by Kinh people. Each of them has one milling machine with value of VND 15-20 m and capacity of 2 – 5 tonnes/day. These households do growing, processing and trading rice at the same time. They play a role of rice collectors. Farmers bring paddies to processing points for milling with a fee of VND 4,000-5,000 per 100 kg. White rice and bran is used for self-consumption. White rice of IR 64 may be sold to processors at VND 5,200/kg who will sell outside the commune at VND 5,400/kg.

358. DoTT is developing a proposal of promoting principal agro-commodities including a special area of IR 64 in Dien Bien valley (by 1000 ha), but not completed. USRs are risky in reduced acreage and volume. Private enterprises cover up to 90 percent of rice commodities, leading to ungaranted quality. Three SOEs share only 10 percent (i.e. Tay Bac Food company, Provincial Agricultural Machinery & Construction Company and Trade Companies) with better facilities, their end products are better. Branding is essential for quality control. However, we have no trade mark, because: no focal point is assigned, quality standards are not established and production areas are fragmented. Province has a program for quality rice, but responsibilities are not clearly defined and policies are not comprehensive. It is important to mediate profit share between different stakeholders. Food surplus is not much, and food business is not highly profitable.

359. Development of commercial rice should go in direction of reducing upland rices, increasing lowland rice (double rice crops). In fact, IR 64 and USRs have no market problem.

360. Concerning local services for rice sub-sector and its improvement perspectives, following remarks can be mentioned:

1. Services for input investments have been done better than those for rice outputs circulation. There is no linkage between growers selling their products including

- rice. A form of cooperative or interest group may be an alternative to get farmers together for selling products.
2. Extension network in grass-root level is underdeveloped. Farmers have little access to extension services since extension methods are not farmer-driven. Organizing farmers into interest groups and/or new from cooperatives with well-defined extension mandates will be more realistic than increased number of extension staff. Farming training on rice production will be more effective if field farmer class is used instead of training courses.
 3. For promoting added value chain of rice, the efforts should be focused on opening land for irrigated rice growing, converting one-crop lowlands into lands for two-crop of rice per year and terracing sloping land wherever it is possible.
 4. Water supply with focus on irrigation for rice should be improved by consolidating the field canal networks of existing irrigation constructions and newly building small irrigation constructions.
 5. Seed provision improvement is quite realistic with seed production at commune level with organization of farmers seed producing groups to ensure sufficient seed supplies of standard quality and rational price.
 6. Technical transfer activities should focus on increased application of organic manures and balance use of chemical fertilizers as well as environment-friendly use of pest control alternatives.
 7. Links between the provincial local traders and the outsiders seems to be occasional and unorganized. This may be attributed to several reasons, i.e. small, fluctuate, seasonal rice sources; high transportation fee, low and/or unfair competitiveness and so on. Some big companies based in Dien Bien or Hanoi had attempt to do business with Dien Bien rice, but unsuccessfully. At present, some other companies are starting again this kind of business because with retail network recently developed and the gaps in rice price between Dien Bien and big cities becoming much larger.

Table 52 Prices per kg for IR64 at Different Stages along the Supply Chain

| | |
|---|-------------|
| Production cost | 1,900-2,000 |
| Milling charge (miller get from grower) | 50 |
| Grower (sell paddy to collector) | 3,200-3,500 |
| Miller (sell rice to consumer) | 5,400-5,500 |
| Miller/Collector (sell to bigger collector) | 3,700-3,800 |
| Collector/Miller (sell rice to retailer) | 5,400-5,500 |
| Retailer (DB market) (sell rice to consumer) | 5,900-6,000 |
| Collector/Miller/Trucker (sell rice to provinces) | 7,000-7,500 |
| Wholesaler (HN market) (sell rice to retailer) | 7,500-8,000 |
| Retailer (HN market) (sell rice to consumer) | 8,400-8,500 |

(yellow – paddy, blue – rice)

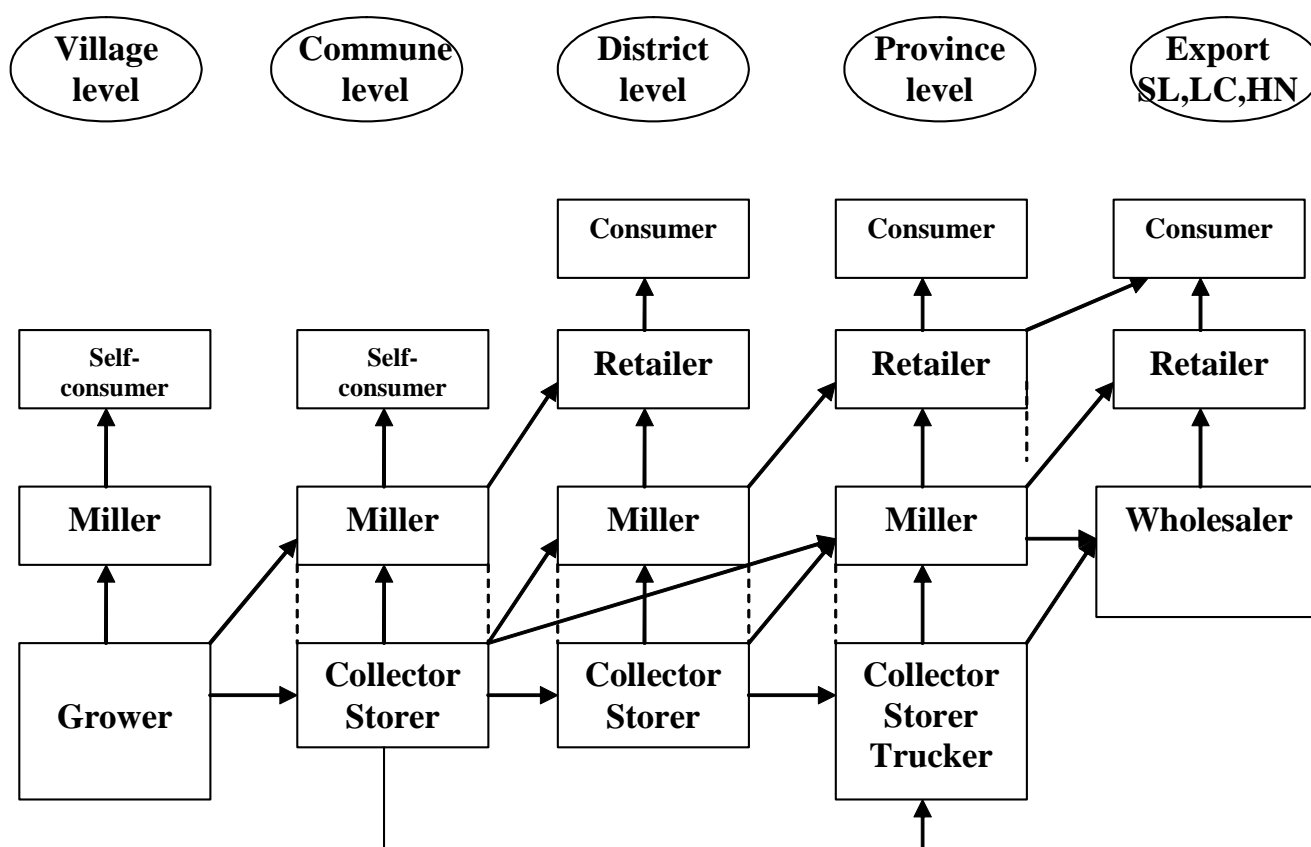


Figure 2 Rice Value Chain for Dien Bien

C.1.6 Concluding Remarks

361. In terms of acreage and output volume, rice production of Dien Bien province occupies a fairly modest place in Vietnam's rice production. Rice is produced first of all for self-consumption. Apart from the local habitants, there are a number of enterprises, companies, government agencies and big construction sites in the province. These residents are potential consumers of rice locally produced. Therefore, the surplus rice for export out of the province is not much. Apart from Hanoi, the neighbor cities such as Lai Chau, Son La and Lao Cai and developing urban centers in the Northwest region are expected big markets for Dien Bien rice commodities.

362. Although at provincial level per capita paddies (in average 280 kg/year) is rather high, however at village and household level food security is not fairly ensured. This happens particularly in the remote upland areas with the ethnic groups (Hmong, Kho Mu and others) who have little opportunity to have lands suitable for rice growing. For this class of consumers, rice needed is of predominant sticky rice and partly ordinary rice. In reality, certain sticky rices in the lowlands (Khau Tan, for example) are also comparative with the USRs. On the uplands, there are large gaps between actual yields (around 1 tonne per ha) and potential yields (2-3 tonnes per ha). Technical assistance can provide an effective tool for improving the situation.

363. Dien Bien has a diverse variety of rice, some of which are well known in the country market. The market economy has exerted a pronounced influence on rice production and marketing of the province. Beside the traditional varieties (USRs and IR 64), certain number of new varieties have emerged and acknowledged by difficult consumers such as

aromatic Tam Thom, Te Thom, Te Thailand. Their larger volume, standardization and labeling should be promoted beforehand, then forwarding branding which can be followed later on.

364. To protect and validate the quality rices, promotion activities should be started early from growing stage by involving farmers into value chain as early as possible. Efforts should be focussed on increasing outputs and quality of the rice varieties highly required by market demands to a sizable volume and relevant standard. In this stage, the possible opportunities for increasing returns to growers from rice production include, inter alia, transferring sloping lands into irrigated terraces whenever possible; increasing crop number in the lowlands (doubling crops with small and consolidated irrigation system); organizing quality seeds production in commune level in parallel with supplying breeders' seeds; better pest controlling; and friendly and balance fertilization.

365. Both the poor and better-off families have needs to sell and to buy rice because all of them need cash for covering their essential expenses. Farmers sell also the quality and expensive paddies (like aromatic USRs and/or ordinary rices) to buy cheaper ones. So, the circulation of rice in local markets is flowing all year around. However, the most intensive period of paddies sale by farmers occurs in June and October right after harvesting rice. The most intensive period of rice purchase by farmers is in March and April. In this critical time, rice is also transported from outsides to the province.

366. Within the province, a complete chain of rice circulation has been formed from growers, via collectors, processors and truckers to consumers. Among them, collectors, processors and re-sellers have set up a network of rice delivery. Very often, one of them plays multiple roles realizing every operation at the same time. The private actors show decisive role and account for dominant share of rice market. A non-official but sustainable network has been established between them due to friendly and truthful relationship.

367. Role of stockers and truckers seems the most influent on rice price. These actors have enough resources (cash and storage mean) for storing paddies for long time and providing at relevant moments. With small vehicles they can penetrate to villages and/or households and thanks to convenient communication means (including phone and mobile phone) they have market information.

368. In this chain, growers are in passive position in deciding time and price of paddies sale as well as purchase of milled rice needed and hence they are highly vulnerable to rice market fluctuation. They always suffer from imposed price in selling and buying as it is their partners who decide price.

369. The most successful cases belong to the middle persons (individuals and companies) who cover entirely the chain (store, processing, trucking and re-selling). By their function, storing and trucking actors have advantages in sharing largest benefits from rice trading. Local retailers gain a modest but stable income.

370. Linkage between rice local traders and urban retail network will activate rice added value chain. First efforts should be initiated with linking some big retail terminals in big cities (i.e. Son La, Lai Chau, Lao Cai and Hanoi) with Dien Bien rice trade companies including farmer trading groups and/or cooperatives.

C.1.7 Annex Tables

Table 53 Climate of Dien Bien Province

| Month | Temperature (oC) | Rainfall (mm/yr) | Air humidity (%) | Sunny hours per month |
|----------------|------------------|------------------|------------------|-----------------------|
| January | 16.4 | 79 | 80 | 130 |
| February | 18.7 | 43 | 80 | 178 |
| March | 20.6 | 89 | 76 | 175 |
| April | 24.4 | 173 | 78 | 240 |
| May | 25.5 | 150 | 81 | 214 |
| June | 26.1 | 301 | 84 | 120 |
| July | 26.0 | 299 | 82 | 182 |
| August | 26.2 | 325 | 84 | 162 |
| September | 25.1 | 179 | 82 | 171 |
| October | 23.8 | 21 | 81 | 150 |
| November | 20.4 | 0 | 79 | 199 |
| December | 17.1 | 1 | 77 | 171 |
| Annual average | 22.5 | 1 660 | 80 | 2 092 |

Dien Bien Meteo-station, 2003

Source: Agriculture Section, DARD of Dien Bien

Table 54 Distribution of Ethnic Minority by District

| District/Town | Ethnicity (%) | | | | | | | | |
|----------------|---------------|-------|------|--------|-----|-------|-----|--------|-------|
| | Thai | Hmong | Kinh | Kho Mu | Lao | Khang | Dao | Ha Nhi | Other |
| Total | 40.0 | 30.9 | 20.2 | 3.5 | 1.1 | 0.9 | 0.8 | 0.8 | 1.9 |
| Dien Bien city | 15.2 | 1.6 | 78.0 | 1.8 | 0.2 | 0 | 0.1 | 0.1 | 3.0 |
| Muong Lay town | 37.4 | 0.4 | 59.5 | 0 | 0 | 0 | 0 | 0.3 | 2.4 |
| Muong Nhe | 10.4 | 67.7 | 2.7 | 1.3 | 0 | 1.6 | 3.9 | 9.2 | 3.2 |
| Muong Cha | 36.5 | 48.5 | 6.3 | 4.7 | 0 | 1.7 | 0.1 | 0 | 2.2 |
| Tua Chua | 15.8 | 72.7 | 4.2 | 0.8 | 0 | 0 | 4.8 | 0 | 1.7 |
| Tuan Giao | 62.8 | 19.0 | 11.8 | 3.8 | 0 | 0 | 0 | 0 | 2.7 |
| Dien Bien | 53.5 | 8.5 | 28.1 | 5.0 | 3.2 | 0 | 0 | 0 | 1.7 |
| Dien Bien Dong | 32.4 | 54.2 | 2.5 | 5.0 | 2.7 | 0 | 0 | 0 | 3.2 |

Table 55 Land Uses in Dien Bien

| | Area (ha) | Percentage |
|----------------------|----------------|--------------|
| <i>Total</i> | <i>991,080</i> | <i>100.0</i> |
| Agricultural land | 108,158 | 10.9 |
| Forest land | 348,049 | 35.1 |
| Land for special use | 6,503 | 0.7 |
| Unused land | 528,370 | 53.3 |

Source: Dien Bien Department of Tourism, 2005

Table 56 Growing Area, Yield and Production of Rice Crops, Dien Bien

| Rice crop | Sowing area (ha) | | Yield (100 kg/ha/crop) | | Production (metric tonne paddy) | |
|--------------------|------------------|-------|------------------------|-------|---------------------------------|--------|
| | 2003 | 2004 | 2003 | 2004 | 2003 | 2004 |
| Province | 38004 | 39644 | 28.98 | 30.96 | 110146 | 122755 |
| Winter-Spring rice | 6648 | 7130 | 57.82 | 57.02 | 38438 | 40652 |
| Autumn rice | 11819 | 14137 | 41.08 | 42.20 | 48555 | 59665 |
| Upland rice | 19537 | 18378 | 11.85 | 12.21 | 23153 | 22438 |

Table 57 Average Paddy Yield in Dien Bien

| Varieties | Winter-Spring crop | Summer-Autumn crop |
|---------------------------|--------------------|--------------------|
| Overall provincial yields | 3.18 | |
| Provincial average | 5.81 | 4.20 |
| Upland rice | na | 1.28 |
| IR 64 | 6.50 | 6.00 |
| Te thom | 7.00 | 6.30 |
| Bac thom | 6.00 | 6.00 |
| Khang dan | 6.50 | 5.50 |
| Sticky C 97 | 5.00 | 5.00 |

Tonnes per hectare

Source: Agriculture Section, DARD of Dien Bien

Table 58 Rice Growing Area, Yield and Production per District, Dien Bien, 2004

| District/town | Sowing area (ha) | Yield (tonne//ha/crop) | Production (metric tonne paddy) |
|--------------------|------------------|------------------------|---------------------------------|
| Dien Bien Phu City | 1000 | | 5646 |
| Winter-Spring rice | 474 | 5.95 | 2821 |
| Summer-Autumn rice | 501 | 5.56 | 2785 |
| Upland rice | 25 | 1.60 | 40 |
| Lai Chau town | 203 | | 885 |
| Winter-Spring rice | 89 | 4.78 | 426 |
| Summer-Autumn rice | 89 | 4.79 | 429 |
| Upland rice | 25 | 1.20 | 30 |
| Muong Nhe | 4226 | | 7698 |
| Winter-Spring rice | 57 | 3.56 | 203 |
| Summer Autumn rice | 883 | 3.72 | 3289 |
| Upland rice | 3286 | 1.28 | 4206 |
| Muong Lay | 4433 | | 9840 |
| Winter-Spring rice | 315 | 4.07 | 1282 |
| Summer Autumn rice | 1568 | 3.47 | 5452 |
| Upland rice | 2550 | 1.21 | 3106 |
| Tua Chua | 4001 | | 8115 |
| Winter-Spring rice | 271 | 5.11 | 1387 |
| Summer-Autumn rice | 1530 | 2.60 | 3987 |
| Upland rice | 2200 | 1.25 | 2750 |
| Tuan Giao | 7281 | | 22967 |
| Winter-Spring rice | 1418 | 5.43 | 7701 |
| Summer-Autumn rice | 2521 | 4.62 | 11656 |
| Upland rice | 3342 | 1.08 | 3610 |
| Dien Bien | 12217 | | 56266 |
| Winter-Spring rice | 4048 | 6.24 | 25263 |
| Summer-Autumn rice | 5669 | 4.94 | 28003 |
| Upland rice | 2500 | 1.20 | 3000 |
| Dien Bien Dong | 6283 | | 11338 |
| Winter-Spring rice | 458 | 3.42 | 1569 |
| Summer-Autumn rice | 1376 | 2.96 | 4073 |
| Upland rice | 4450 | 1.28 | 5696 |

Source: Dien Bien Statistical Yearbook, 2004 & 2005

Table 59 Fertilizer Application for Lowland Ordinary Rices - Winter-Spring Crop

| Fertilizers | Kg/ha |
|--------------------|---------------|
| FYM | 3 000 – 5 000 |
| Lime | 400 – 500 |
| Urea | 250 – 250 |
| Fused phosphate | 300 – 400 |
| Potassium muretate | 120 - 200 |

Source: PAEC of Dien Bien

C.2 Muong Cha

C.2.1 Introduction

371. Dien Bien province has the largest hollow field in northwest region with an area of 150,000 ha fertile soil and control irrigation system is granary supplied food to population and a part market rice to bring income for farmer. In another area has small valleys was formed by high mountain chains, that laid in six districts are Dien Bien, Dien Bien Dong, Muong Cha (formerly called Muong Lay), Muong Nhe, Tua Chua, Tuan Giao, Muong Lay and two towns are Muong Lay and Dien Bien. The small valley also contributed to make a large food quantity to Dien Bien.

372. Natural condition as soil, climates is specially brought into Dien Bien advantages in rice production. Average temperature from 21- 23°C; rainfall: 1,700 – 2,500 mm; Air moisture: 83 - 85 percent. In hollow and valleys fields has fertile soil because it developed form cumulus soil thus rich humous and nutrient suitable growing rice and inducing high rice quality without other locals in Northern of Viet Nam so good condition. Dien Bien rice quality was renowned in recently year to consumers in Dien Bien, and to a lesser extent elsewhere in the country. This is a good opportunity to spread rice product, increased farmer's income and local economic development. But studies on rice value to increase more value, equability from rice quality product have not interesting.

C.2.2 Methodology

373. Desk research implemented on the data from reports of SNV, Hanoi Agricultural University, food and foodstuff Institue, DARD of Dien Bien, Muong Cha district, Dien Bien web-site

374. Survey method implemented in the field with producer, collector, trader in Dien Bien and Muong Cha district. Sample interview households representative for Thai, Kho Mu and H'Mong people, retailers at district and Dien Bien town market, Traders at district and province centre

375. Group discussion was carry out with commune include representative CPC, women, Farmer Association, extension worker

376. Economic analysis and viability assessment of rice production in Dien Bien focused there items are

1. Returns above variable costs (RAVC) = GR –TVC
2. Gross return = Yield x product price
3. Total Variable Cost = Quantity of variable Inputs x Input price

C.2.3 Some Main Findings

C.2.3.1 Dien Bien Natural and Socioeconomic Condition

377. Dien Bien province located in Northwest was created in the beginning of 2004 by a split of the former Lai Chau Province into two new provinces: The new Lai Chau and Dien Bien. Dien Bien province incorporates all areas south of the Black River; see Map 1. Administratively, Dien Bien is divided into the town Muong Lay, the city of Dien Bien Phu

and six districts: Dien Bien, Dien Bien Dong, Muong Cha (formerly called Muong Lay), Muong Nhe, Tua Chua, Tuan Giao.



Map 1 Dien Bien Province Map

378. The province covers an area of land (991,080 ha), of which 11 percent is used for agricultural production and 35 percent for forestry. The area that remains unused is large, which gives opportunities for the on-going land-reclaiming program. The total land is 991,080 ha, of which 108,158 ha of agricultural land, 348,049 forestry land, other is special use land and unused land. There are 18 ethnic groups whose population is more than 100 people and residence in their own community. Kho Mu, Xinh Mun, Khang, and Si La groups take of a high rate of poverty because of their residence in very remote areas and

backward production methods. In upland areas, shifting cultivation and self – sufficient life are common for ethnic groups.

C.2.3.2 Land and Rice Land in Dien Bien

379. Total of rice land in Dien Bien province just under 40,000 ha or 37 percent of agricultural land, rice land could be planting double crop per year is about 13,000 ha occupied 33 percent, one crop land 36.5 percent and upland is 45.2 percent. This data pointed out that upland is very important to farmer in Dien Bien, especially farmer living outside Dien Bien hollow.

380. Rice yield is quite difference between districts, in irrigated rice area get highest yield in Dien Bien Hollow area as Dien Bien city, Dien Bien district. Another districts rice yield is very low. Upland rice yield only get 10.9 to 13 quintal paddy / ha except Dien Bien city is 16 quintal paddy /ha but with area very small; see Table 60.

Table 60 Rice Yields in Dien Bien Province

| District | Rice yield (quintal paddy /ha) | |
|----------------|---------------------------------|-------------|
| | Irrigated rice | Upland rice |
| Dien Bien | 47.0 | 12.5 |
| Tuan Giao | 30.8 | 12.5 |
| Tua Chua | 21.8 | 12.5 |
| Muong Cha | 22.1 | 13.0 |
| Muong Nhe | 19.3 | 13.0 |
| Dien Bien Dong | 18.4 | 13.0 |
| Dien Bien city | 58.3 | 16.0 |
| Muong Lay town | 43.0 | 10.9 |

C.2.4 Rice Production Situation in Dien Bien

381. There are three kinds of rice land in Dien Bien are upland, rainfed upland and irrigated rice land. Each area has difference condition and characteristics, therefore farmer used rice variety adapting to really condition, they also gained rice yield and benefit from rice production very differently.

382. In irrigated rice land also divide into two area is Dien Bien Hollow area and other area is small valley or terrace field on mountain or hill side, where has water resource. The Dien Bien Hollow area has most favourable condition as control irrigation system, fertile soil, plane landscape, good infrastructure and most farmers are Kinh and Thai people. This area located focusing in Dien Bien City and Dien Bien district with total area is 6000 hectares. For this reason in Dien Bien hollow area farmers sown mainly is modern rice varieties as IR64, Bac thom, te thom, hybrid rice, sticky rice varieties are IR352 and C87. This is region got highest yield of rice production in Dien Bien province as Dien Bien city get 58.3 quintal paddy /ha, Dien Bien district is 47 quintal paddy /ha.

383. Irrigated rice land in small valleys and terrace fields located in Dien Bien Dong, Muong Cha, Muong Nhe, Tuan Giao and Tua Chua. In the district this area concentrated in some communes and villages. In this area farmer also applied modern and hybrid rice variety but lower rate. Average yield in this area is lower Dien Bien hollow but higher other rice land.

384. Rainfed rice land occupied quite large area in Dien Bien, this area have not irrigation system because have not water source or area is too small so unbeneficial if too high investment for irrigation. This area sowing one rice season per year (summer season) start rainy season is sowing at the end of March to Early of April and harvest when finished rainy season October. Rice varieties applied in this area tradition, modern varieties as Te Do, and Bao Thai.

385. Upland rice area is quite large in Dien Bien province occupied approximately 50 percent of area total of rice cultivation with main characteristics are soil unfertile, slop, area reducing. Rice varieties sowing in this area is tradition rice include normal rice and sticky rice. Farmer sowing upland rice is H'Mong, Kho Mu, Saphan. Rice variety is sowing in this area very diversity between locals and ethnic minority groups.

386. The main issues include:

1. Largest commercial rice production perhaps is focusing in the Dien Bien hollow area and some small valleys in six districts
2. Upland area with high significant to rice production in Dien Bien province in food security and income of farmer

C.2.5 Characteristics and Rice Production in Muong Cha District, Dien Bien Province

387. Muong Cha district located in Northwest of Dien Bien province and distance 45km from Dien Bien town to district central. The district has just changed name from Muong Lay into Muong Cha.

388. Total of natural land is 18000 km² and place living of 49,242 persons and 8000 households include 8 ethnic minority people, most of them is H,Mong and Thai people. H'Mong people occupied 48.5 percent and Thai people are 36.5 percent remain other people. Poverty rate of Muong Cha is 45 percent (new standard), high level

389. Rice land and food production:

1. Irrigated rice land: 1490ha
2. Land plant double rice/year occupied 300 ha (irrigated control);
3. One rice crop: 1190 ha (rainfed rice land)
4. Upland rice land : 2700 ha
5. Food productivity of district is 8686 tonne/year, of which: Spring season is 88 tonnes, summer season is 5234, and upland rice is 3364 tonnes
6. Maize area is 3300 ha; average yield is 17.5 tonnes/ha with productivity is 57000 tonnes/year
7. Average food/person is 320kg/person/year

390. The rice intensive cultivation in low level, farmer unused fertilizer so that district input supplier annual only sell 10 to 15 tonnes of urea (nitrogen) , 01 tonnes phosphorus and a few quintals of potassium fertilizer. Rice variety structure and yield of Muong Cha district as follow Table 61:

Table 61 Rice Varieties in Muong Cha District, Dien Bien Province

| Rice variety | Percent of total rice land (%) | Yield |
|--------------|--------------------------------|-------|
|--------------|--------------------------------|-------|

| | (quintal paddy / ha) | |
|-----------------------|----------------------|---------|
| <i>Irrigated rice</i> | | |
| IR64 | 20 | 40 – 45 |
| CR203 | 30 | - |
| Bac thom | 5 | 50-55 |
| Bao thai | 5 | 30 – 35 |
| Hybrid rice | 40 | 50 – 55 |
| <i>Upland rice</i> | | |
| Normal rice | 60 | 10 – 20 |
| Te do | 30 | 15 |
| Te rau | 30 | 15 |
| Sticky rice | 40 | 12 |
| Red Hull | 50 | |
| White Hull | 50 | |

C.2.6 Characteristics and Rice Production in Two Survey Communes in Muong Cha District, Dien Bien Province

391. Area and land kind planted in Dien Bien as above mentioned, but it is very different between districts, communes because diversity geography of northern west region. In deferent condition was had rice variety structure suit to that condition. In order to find out position of IR64 and sticky rice in farmer's production in a difficult district of Dien Bien , we was survey two communes in Muong Cha district are Muong Muon and Huoi Leng commune.

C.2.6.1 Muong Muon Commune

392. Muong Muon has 20 villages include 5 ethnic minority groups are H'Mong, Kho Mu, Thai, Khang and Kinh, of which 11 villages of H'Mong people. Total of household are 1031 with 60548 persons, Poverty rate occupied 30 percent (521 households)

1. Total land 24801 ha
2. Wet rice land is 190.27ha
3. Wet land rice plating double crop per year occupied 42.6ha and one crop per year (summer season) is 147.67 ha.
4. Upland rice land is 300ha
5. Cassava land is 300 ha
6. Peanut land is 18.8 ha
7. Bean crop land is 45 ha
8. Maize land is 401 ha

393. Yield and price of some crops in Muong Muon commune as Table 62 indicated that farmer's income from main crops are rice and maize with largest area. Wet rice occupied about 15 percent, upland rice occupied 24 percent and maize is 32 percent. Cassava product used make alcohol and feed to animal raising, peanut and soybean with small area.

Table 62 Crop Area and Yield in Muong Muon Commune Muong Cha District

| No. | Crop | Area (ha) | Yield (t paddy /ha) | Price (VND/kg) |
|-----|------------------------|-----------|---------------------|----------------|
| 1 | Wet rice (one crop) | 147 | 3.5 | 2500 |
| 2 | Wet rice (double crop) | 42 | 3.8 | 2500 |
| 3 | Upland rice | 300 | 1.2 | 3000 |

| | | | | |
|---|---------|------|-----|------|
| 4 | Cassava | 300 | 8 | 300 |
| 5 | Peanut | 18.8 | 0.8 | 5000 |
| 6 | Soybean | 40 | 0.1 | 5000 |
| 7 | Maize | 401 | 0.9 | 1800 |

394. Farmer used five rice varieties in irrigated rice land and largest area planted IR64 variety, Hybrid variety is demonstration on the 4 ha first times.

Table 63 Wet Rice Variety Structure in Muong Muon Commune

| TT | Variety | Area (ha) | Structure (%) | Yield(t paddy /ha) | |
|----|-------------|-----------|---------------|--------------------|---------------|
| | | | | Spring season | Summer season |
| 1 | IR64 | 57 | 30 | 3.8 | 4.0 |
| 2 | Bao Thai | 85 | 45 | | 3.5 |
| 3 | Khang dan | 35 | 20 | 3.8 | 3.8 |
| 4 | Hybrid rice | 8 | 4 | 4.2 | |
| 5 | Te thom | 3 | 1.5 | 3.8 | 3.7 |

395. We interviewed 10 Kho Mu households on the rice production and average data about area sown rice varieties as illustrated in Table 64. Muong Muon commune there are three kind of rice land that is irrigated rice land occupied 70 percent of rice land total, in this area farmer used two rice varieties are IR64 and Nhi Uu 838 (hybrid rice). Rainfed rice area occupied smaller area 1.6 percent only one crop cultivation per year farmer sown Bao Thai variety (an improved rice variety). The upland area occupied 27 percent of rice cultivation area total farmer sown sticky rice. Hybrid rice got highest yield, next IR 64 in condition of advantage water controlling so farmer sown double crop per year, yield of IR64 in spring season get higher summer season.

Table 64 Rice Cultivated Area in Muong Muon Commune of the Kho Mu Ethnic Group

| Kind of land | Rice variety | cultivated area (ha) | Rate (%) | Yield (t paddy /ha) |
|----------------|--------------|----------------------|----------|---------------------|
| Irrigated land | Normal rice | | | |
| | IR64 | 4.62 | 35.7 | 3.6 |
| | Hybrid rice | 4.62 | 35.7 | 3.8 |
| | Bao thai | 0.21 | 1.6 | 3.0 |
| Upland | Normal rice | | | |
| | Sticky rice | 3.5 | 27.0 | 2.0 |
| | | 12.95 | 100.0 | |

396. Rice production by Thai people has the advantage condition of having a larger area of irrigated rice land, so that upland area is mainly for maize and cassava cultivation. For the same reason yields by the Thai are higher that that of the H'Mong and Kho Mu; see Table 65.

Table 65 Rice Cultivated Area in Muong Muon Commune of the Thai Ethnic Group

| Kind of land | Rice variety | cultivated area (ha) | Rate (%) | Yield (t paddy /ha) |
|----------------------------|-------------------------------|----------------------|----------|---------------------|
| <i>Irrigated rice land</i> | <i>Normal rice</i> | | | |
| | IR64 | 8,600.0 | 43.4 | 3.9 |
| | Bao thai | 8,400.0 | 42.4 | 3.4 |
| | Hybrid | 1,400.0 | 7.1 | 3.8 |
| | <i>Sticky rice (wet rice)</i> | | | |
| | IR 352 | 1,400.0 | 7.1 | 3.7 |
| | | 19,800.0 | 100.0 | |

C.2.6.2 Huoi Leng Commune

397. Huoi Leng commune has 17 villages of which 15 villages of H'Mong people, 2 villages of Sa Phan people. Total household is 823 households with 5300 persons

1. Total land is 23616.79 ha
2. Agricultural land is 19,081.68 ha
3. Forestry land is 21,000 ha
4. Wet rice land is 230 ha (one crop per year)
5. Upland rice land is 250 ha
6. Maize land is 380 ha
7. Tea land is 20 ha
8. Soybean land is 40 ha
9. Cardamom land is 25 ha
10. Groundnut land is 4 ha

398. Yield and price of some crops in Huoi Leng commune as data in Table 66

Table 66 Crop Area and Yield in Huoi Leng Commune Muong Cha District

| No. | Crop | Area (ha) | Yield (t paddy /ha) | Price (VND/kg) |
|-----|---------------------------------|-----------|---------------------|----------------|
| 1 | Wet rice (one crop) | | | |
| | IR64 | 115 | 4.0 | 2000 |
| | CR203 | 69 | 4.0 | 2000 |
| | Lieng xi (traditional variety) | 46 | 3.0 | 2000 |
| 2 | Upland rice | 300 | 1.2 | 3000 |
| | Normal rice | 165 | 2.0 | 2200 |
| | Sticky rice | 85 | 2.0 | 2600 |

399. The normal rice varieties growing on the upland include: Ta Hong Cu, Ple sua, Ple hua chua. Sticky rice on the upland is white sticky rice with big grain was sowing large area in commune.

400. There is some bartering as paddy for frozen sea fish with 1 kg of frozen sea fish for 1 kg paddy, worth around 2000 VND. Farmer sell paddy when they need cash for daily expenditures, they sell in commune central.

401. In order to illustrative on the rice production in Huoi Leng commune, we interviewed 10 H'Mong households. Survey data analysis showed that there area two kind of rice land is rainfed rice land and upland rice land with rice varieties structure as data in Table 67. Data showed that in rainfed rice land farmer sown main IR64 rice variety occupied 13.8 percent of rice area total and 56.4 percent of rainfed rice land area. In upland area farmer sown main is normal rice with Mong xi variety which traditional variety occupied 67.9 percent of rice area total and 90 percent of upland rice land area.

Table 67 Rice Cultivated Area in Huoi Leng Commune of the H'Mong Ethnic Group

| Kind of land | Rice variety | cultivated area (ha) | Rate (%) | Yield (t paddy/ha) |
|----------------------------|----------------------------|----------------------|----------|--------------------|
| <i>Irrigated rice land</i> | <i>Normal rice</i> IR64 | 11.0 | 13.8 | 2.8 |

| | | | | |
|------------------|--------------|------|-------|-----|
| Upland rice land | CR203 | 4.5 | 5.7 | 5.5 |
| | CH5 | 4.0 | 5.0 | 3.7 |
| | Sticky rice | | | |
| | Normal rice | | | |
| | Mong xi | 54.0 | 67.9 | 2.3 |
| | Sticky rice | | | |
| | Lau Ple lang | 6.0 | 7.5 | 1.7 |
| | | 79.5 | 100.0 | |

C.2.6.3 Issues

1. IR64 rice sowing concentrated in irrigated rice land in Dien Bien hollow and some small valleys, IR64 yield gained over 35 quintal/ha
2. Sticky rice sowing on the upland with high poverty level of traditional variety
3. Commercial rice production area is not large, mainly concentrated in Dien Bien hollow and some small valleys with productivity total about 64,000 tonne/year, of which market paddy about 10,000 tonne.
4. In upland area, where ethnic minority people living with many challenges as soil degradation by erosion and rice yield lower with passing day.
5. Difference Ethnic Minority people gathered rice yield, benefit is differently because investment input as fertilizer, pesticide, water control and fertile soil

C.2.7 Rice Value Chain

402. The rice consumes and production chain identified through survey, starting producer is farmer to collector, agencies, and retailer and come to consumer at the end chain. Each stage has some characteristics difference of production; sell modality, income and benefit as in the production bring to income, benefit very difference with kind of land, people and rice varieties. Trading stage included collector, agencies and retailer, the collector play small role in rice value chain because agencies and retailer can buy direct from producers. Consumer is existing domestic and other province as Hanoi city.

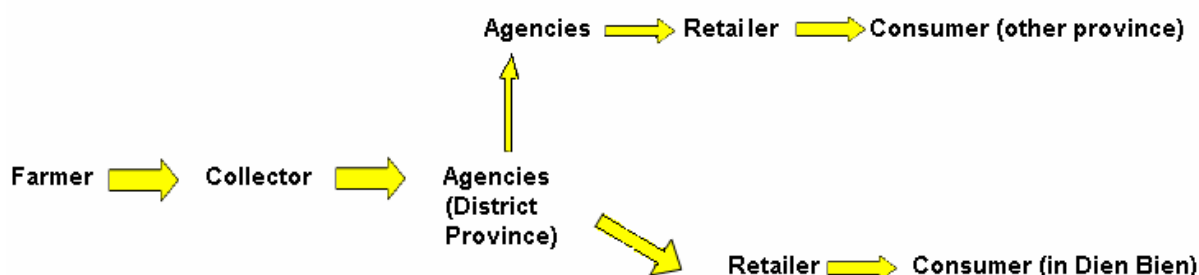


Figure 3 Market flow of Dien Bien rice

C.2.7.1 Rice Value at Producer Stage

C.2.7.1.1 Rice Varieties and Cultivation Technologies of Farmer in Muong Cha

403. Different rice varieties was sown in different conditions, normal rice varieties are IR 64 , CR203 and hybrid variety sown in area that has irrigation system quite good and farmer have capacity to invest rice intensively in Dien Bien hollow but in Muong Cha intensive technologies is lower. Annual whole Muong Cha district only sells about 15 tonnes Nitrogen, 01 tonnes of phosphorus and several quintal of potassium fertilizer. These fertilizer applications for irrigated rice field with several quintal of manure fertilizer. Most of farmer used herbicide and pesticide in irrigated rice cultivation. The sticky rice also planted beside normal rice, but sticky rice in irrigated rice land include traditional sticky rice is tan but larger area is modern sticky rice variety as IR 352 with higher yield potential.

404. In the rainfed rice land, farmer used some rice varieties as bao thai, CH5 and some traditional rice varieties. The bao thai planted in rainfed area in summer season because this is short photosensitive variety, could be growth in unfertile soil condition and low investment some households used drought tolerance variety is CH5 get quit high yield.

405. In upland area farmer used traditional rice varieties inclusive normal rice and sticky rice, The rice varieties in upland is very diversity but normal rice is mong xi (te rau) variety and sticky rice is Lau ple lang (non-fragment occupied high rate), it has normal quality but can sowing on upland with unfertile soil, sticky rice with high quality sown on the very small area because it requires fertile soil as new slash burn land. Upland rice invests at very low level, most have not fertilizer because poor farmer and field too far from farmer's household. This is very big problems to sloping land farming.

C.2.7.1.2 Gross Return, Cost and Return above Variable Cost of Rice Producer

406. The gross return, total variable cost and return above variable cost is difference between rice varieties. IR64 and sticky rice has selling price higher other varieties from 300 – 600 VND/kg, but yield of sticky rice too low so that RAVC higher is negligible. Yield of IR 64 in household was survey gaining 2.8 to 4 t/ha, selling price from 2500 VND to 2900 VND/kg. Yield of IR 64 higher bao thai but lower CR203, CH5 and hybrid varieties. RAVC from IR64 higher other variety except CR203 is issue need interesting.

407. Sticky rice sowing include three varieties are normal sticky rice and two fragment sticky rice are tan and lau ple lang, tan variety sown in wet land and lau ple land on the sloping land. RAVC from sticky rice on sloping land received lower normal rice, reason sticky rice gained too low yield in sloping land cultivation as lau ple lang.

Table 68 Benefit from Rice production of Kho Mu People in Muong Muon Commune

| Ecological condition | Rice variety | Yield (kg paddy /ha) | Price (VND) | GR (VND/ha) | TVC (VND/ha) | RAVC (VND/ha) |
|----------------------|---------------------------|----------------------|-------------|-------------|--------------|---------------|
| Irrigated land | <i>IR64</i> | 3,366.7 | 2,600.0 | 8,753,333.3 | 4,795,723.2 | 3,957,610.2 |
| | Bao Thai | 3,333.3 | 2,200.0 | 7,333,333.3 | 4,929,600.0 | 2,403,733.3 |
| | Hybrid rice | 3,900.0 | 2,000.0 | 7,800,000.0 | 6,022,621.5 | 1,777,378.5 |
| Upland | <i>Normal sticky rice</i> | 2,250.0 | 2,500.0 | 5,625,000.0 | 4,520,000.0 | 1,105,000.0 |

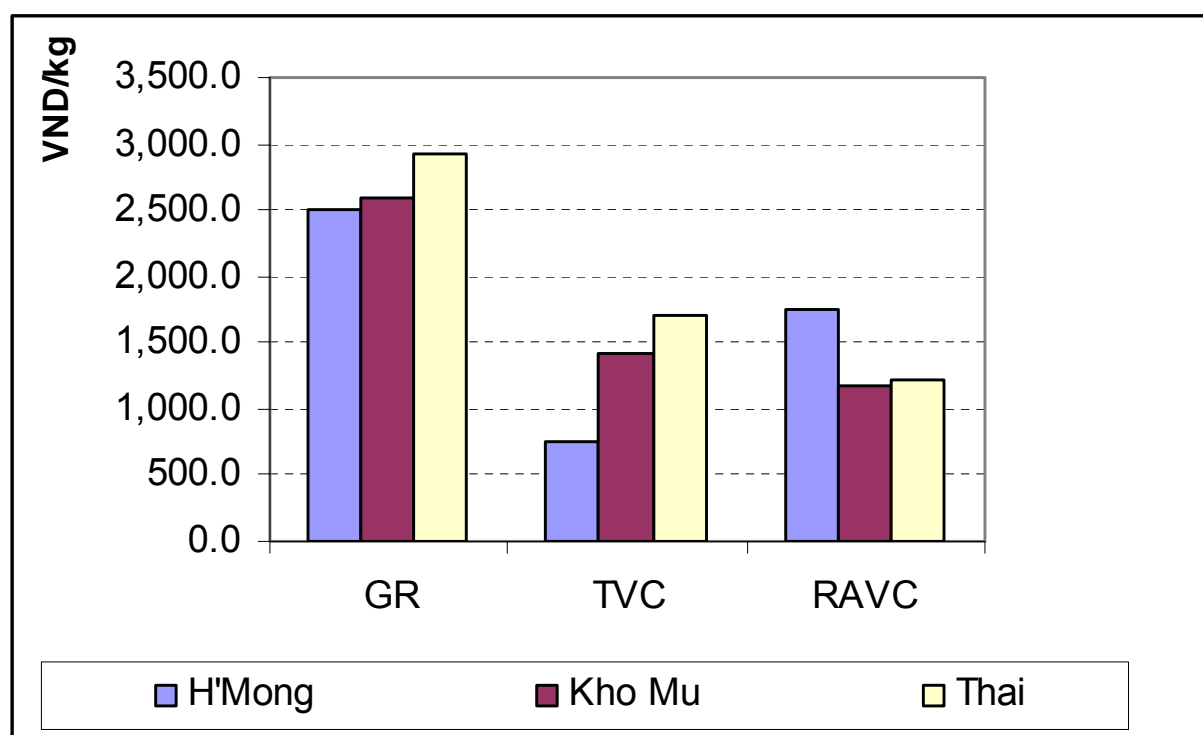


Figure 4 Rice value for Different Ethnic Minority People

Table 69 Benefit from Rice Production of H'Mong People in Huoi Leng Commune

| Rice land | Rice variety | Yield (kg paddy/ha) | Price (VND) | GR (VND/ha) | TVC (VND/ha) | RAVC (VND/ha) |
|---------------------|--------------------|---------------------|-------------|--------------|--------------|---------------|
| Irrigated rice land | <i>Normal rice</i> | | | | | |
| | IR64 | 2,803.6 | 2,500.0 | 7,008,928.6 | 2,122,273.2 | 4,886,655.4 |
| | CR203 | 5,500.0 | 2,000.0 | 11,000,000.0 | 4,942,377.6 | 6,057,622.4 |
| | CH5 | 3,750.0 | 2,000.0 | 7,500,000.0 | 3,190,975.0 | 4,309,025.0 |
| Upland rice land | <i>Normal rice</i> | | | | | |
| | Mong xi | 2,388.9 | 2,233.3 | 5,325,000.0 | 3,727,112.2 | 1,597,887.8 |
| | <i>Sticky rice</i> | | | | | |
| | Lau Ple lang | 1,750.0 | 3,000.0 | 5,250,000.0 | 3,823,681.3 | 1,426,318.8 |

Table 70 Benefit from Rice Production of Thai People in Muong Muon Commune

| Rice variety | Yield (kg paddy/ha) | Price (VND) | GR (VND/ha) | TVC (VND/ha) | RAVC (VND/ha) |
|--------------------|---------------------|-------------|--------------|--------------|---------------|
| <i>Normal rice</i> | | | | | |
| IR64 | 3,997.0 | 2,925.0 | 11,702,575.8 | 6,797,446.5 | 4,905,129.3 |
| Bao thai | 3,497.1 | 2,500.0 | 8,742,690.1 | 5,830,309.4 | 2,912,380.7 |
| Hybrid | 3,833.3 | 2,500.0 | 9,583,333.3 | 7,014,176.0 | 2,569,157.3 |
| <i>Sticky rice</i> | | | | | |
| Tan | 3,714.3 | 3,000.0 | 11,142,857.1 | 7,686,930.6 | 3,455,926.6 |

C.2.7.1.3 Rice Value at Production Stage

408. Farmer in Dien Bien hollow and small valley with large area of irrigated rice land can food security and a part of redundant food to sell. They sell when good price so they received quit high benefit. In Sa long village Mr. Giang So Linh sell normal rice (mong xi) with price 2500 VND/kg paddy whereas other people sell 2000 to 2200 VND/kg paddy.

Information from all traders indicated that rice price varied between month in year by rule is lowest price from October to December because this time just finished harvesting, farmer need cash to prepare for tradition tet day. The time has highest price from February to June because cash needs reduced, many farmer have no more rice to sell, even must buy food for their family.

409. Poor farmer in area with difficult condition has redundant food quantity is limited, but they still sell rice in some special cases as:

1. To expend for family essential needs every days as buying salt, sauce, petrol...
2. Build up new house
3. Marriage
4. Ailing
5. Funeral

410. Group farmer and commune and village managers estimated each household sell about 200 to 300 kg/year for every day expenditures and when big events as build up new house, marriage, ailing and funeral they have to sell 1000 to several thousand kilogram of rice. Poor farmer sell rice when they need cash such often they got low price. Outside sell for cash some bartered goods also occurred to poor farmer as they exchanged rice to dried fish, noodle and salt.

411. Most farmer sell paddy product, if they husk paddy into rice selling to sell would be get higher price furthermore got bran to pig raising. Trader bought paddy from farmer implement husking to sell rice received benefit higher through sell rice and bran. Farmer sell paddy with price is 2500 VND if they pays for husk 100 VND get 0.7 kg rice would be get 3500 VND and 0.13 kg bran with price 1700VND/kg more income 221 VND such total they get 3721 VND/kg. For example Ms Tap Thi Pan bough 10 tonnes paddy with price 3300 VND/kg (through collector at village), after husked she get 7 tonnes rice with average price is 5500 VND/kg have net benefit 2,615,000 VND from sell rice plus more 2,210,000 VND from bran. Mr. Nguyen Duc Giap trade 180 tonnes paddy per year gained profit from sell bran is 18 million VND. Ms Lo Thi Phinh trades in rice every year is 50 tonnes paddy gained profit from bran is 9 million VND.

Box 14 Returns from Selling Paddy

To sell paddy before harvest is a big disadvantage of rice poor farmer in upland region

Ms. Lo Thi My shown that Some hungry farmers in Co Dua village, Muong Cha district, Dien Bien province has to sell paddy in the compelled situation, because they lacking food for daily but have not money to by food must borrow paddy on interest from collectors in village. The modality the poor farmer get too low price or must pay too high interest, example if they borrowed by rice 10 kg in June to October must pay 15 kg rice. In the Sa Long 1 village Huoi Leng commune have similar situation, Mr. Sung said that poor farmer need loan money come to village 36 (village of workers retired from State Farm and most of them is Kinh people) borrow money and pay by paddy when harvest, at borrow time they account price of paddy is 1500VND/kg so if farmer borrow 150,000 VND equal 100kg paddy, but when pay really value tat the payment time is 250.000 VND/100kg.

Sell rice at the time with lowest price is also occurring in the rice poor farmer.

Poor farmer always get low price because must sell paddy immediately after harvest, Mr. Lo Van Uong is poor farmer said. Last time he must sell paddy with price 2500VND/kg, now (after 2 months) price 3500 VND/kg. When ask why you keep your paddy until price grow up to sell in order get income higher, he said because must sell to pay borrow money.

Barter modality is still quite popular in upland area in Muong Cha district.

Ms Giang Thi Kim is Kinh people retired from Sate Farm, nowadays she living and is a small groceries seller

in Sa Long village, Huoi Leng commune, Muong Cha district informed she bartered goods for rice about 300kg rice per year. Often farmer bartered rice for noodle and dried fish, barter rate is 10 kg rice for 1.2 kg dried fish (price of 1kg dried fish is 25000VND and 01 kg rice is 3000VND) and 1 kg rice for 2 of noodle packets (price of 1 packet noodle 1500VND)

Source: Study Team Interviews

412. Farmer lacking knowledge and skills on the post harvest processing as dried and clean so standard reduced and sell low price, some farmer after harvest rice on the field piled up without timely extract and drying, sometime grain moisture over conservation moisture also lessen rice quality. All farmer give information about place sell rice at village or commune for collectors, often price lower 100 VND compare take rice to agencies, but numerous collectors are little thus price and standard constrain situation with producer could be occurring

413. At rice producer stage shown cost and selling price and benefit per one kilogram of rice is very different between rice varieties and people. H'Mong people product one kilogram IR 64 spend 757 VND and selling price 2500 VND got benefit 1743 VND higher benefit from other varieties as CR203, CH5 despite CR203 and CH5 get higher yield. In upland value of sticky rice got benefit higher than normal rice; see Table 71.

Table 71 Rice Value at Producer Stage of H'Mong People

| | Variety | Cost price (VND/kg paddy) | Selling price (VND/kg paddy) | Benefit (VND/kg paddy) |
|---------------------|--------------------|------------------------------|---------------------------------|---------------------------|
| Irrigated rice land | <i>Normal rice</i> | | | |
| | IR64 | 757.0 | 2,500.0 | 1,743.0 |
| | CR203 | 898.6 | 2,000.0 | 1,101.4 |
| | CH5 | 850.9 | 2,000.0 | 1,149.1 |
| Upland rice land | <i>Normal rice</i> | | | |
| | Mong xi | 1,560.2 | 2,233.3 | 668.9 |
| | <i>Sticky rice</i> | | | |
| | Lau Ple lang | 2,185.0 | 3,000.0 | 815.0 |

414. Kho Mu people produced IR64, bao thai and hybrid rice in irrigated rice land, IR 64 has highest value are cost price with IR64 is 1424.5 VND, selling price is 2600 VND and got benefit 1175.5 VND/kg whereas bao thai only 721.1 VND/kg, hybrid rice 455.7 VND/kg and sticky rice at lowest value of benefit is 455.7 VND/ha; see Table 72.

Table 72 Rice Value at Producer Stage of Kho Mu People

| | Variety | Cost price (VND/kg paddy) | Selling price (VND/kg paddy) | Benefit (VND/kg paddy) |
|---------------------|--------------------|------------------------------|---------------------------------|---------------------------|
| Irrigated rice land | <i>Normal rice</i> | | | |
| | IR64 | 1,424.5 | 2,600.0 | 1,175.5 |
| | Bao Thai | 1,478.9 | 2,200.0 | 721.1 |
| | Hybrid rice | 1,544.3 | 2,000.0 | 455.7 |
| Upland rice land | <i>Sticky rice</i> | 2008.89 | 2,500.0 | 491.11 |

415. Thai people in Muong Muon 2, Muong Muon commune, Muong Cha district planted wet rice, on the slopping land they planted maize and cassava. Normal rice varieties are IR64, Bao Thai and hybrid rice. Average data of 10 household interviewed pointed out IR 64 attained highest value per kg, benefit is 1,227.2 VND/kg, hybrid rice has lowest value although it gave highest yield; see Table 73.

Table 73 Rice Value at Producer Stage of Thai People

| | Variety | Cost price (VND/kg paddy) | Selling price (VND/kg paddy) | Benefit (VND/kg paddy) |
|----------------|--------------------|------------------------------|---------------------------------|---------------------------|
| Irrigated land | <i>Normal rice</i> | | | |
| | IR64 | 1,700.6 | 2,925.0 | 1,227.2 |
| | Bao thai | 1,667.2 | 2,500.0 | 832.8 |
| | Hybrid | 1,829.8 | 2,500.0 | 670.2 |
| | <i>Sticky rice</i> | | | |
| | Tan | 2,069.6 | 3,000.0 | 930.4 |

C.2.7.1.4 Rice Value at Collector Stage

416. The collector is Thai and Kinh people who living in central villages lying beside national or province road. Collector come to village some time at the field to buy then take it by motorbike to agencies at district centre to sell.

417. We interviewed 2 collectors in Na Pheo village on the quantity and kind of paddy collects every month as data in Table 74.

Table 74 Value of Paddy at the Collector's Stage

| Rice kinds | Quantity (kg/year) | Buying price (VND/kg paddy) | Sell price (VND/kg paddy) | Marginal price (VND/kg paddy) | Total income (VND) | Total cost (VND) | Benefit (VND/month) |
|-------------------------------|-----------------------|--------------------------------------|------------------------------------|--|--------------------------|---------------------|------------------------|
| Normal rice (Te Rau) | 1000 | 3000 | 3300 | 300 | 3,300,000.0 | 3,150,000.0 | 150,000.0 |
| IR64 | 300 | 2500 | 3000 | 500 | 900,000.0 | 795,000.0 | 105,000.0 |
| Sticky rice (non-fragment) | 100 | 3300 | 3500 | 200 | 350,000.0 | 330,000.0 | 20,000.0 |
| Total benefit/month | | | | | | | 170,000.0 |

C.2.7.1.5 Rice Value at Trader Stage

C.2.7.1.5.1 Trader in Muong Cha District Centre

418. Rice retailer in the district market in Muong Cha district is very small, there are 3 retailers with quantity every day about 60 kg rice/day/retailer. Consumers are employee and staff are living and working in district non agricultural production as teachers, government staff. Retailer got benefit from 200 to 300 VND/kg of rice. So that retailer in Muong Cha market sells about 6 tonnes of rice/year equal 10 tonnes of paddy, too small quantity; see Table 75.

Table 75 Quantity and Benefit of Rice Retailer in Muong Cha Market

| Rice kind | Quantity (kg rice /day) | Buying price (VND/kg rice) | Selling price (VND/kg rice) | Total income (VND) | Total cost (VND) | Benefit (VND/day) |
|---------------|-------------------------------|-------------------------------------|--------------------------------------|--------------------------|---------------------|----------------------|
| Te Rau | 30 | 5,100 | 5,300 | 159,000 | 153,000 | 6,000 |
| IR 64 | 30 | 5,200 | 5,500 | 165,000 | 156,000 | 9,000 |
| Total per day | 60 | 10,300 | 10,800 | 324,000 | 309,000 | 15,000 |

419. In District Centre have 7 traders on the rice, most of them private sector only one public company is Northern Food Company (NFC) placed a branch in Muong Cha town. NFC has 3 three staffs' assignment buying paddy then transfer to their Headquarter in Son La. Other traders buy paddy then processing to sell rice. They buy paddy direct farmer or collectors, if buy at the village spend to transportation about 100 VND/kg. Normal paddy kind was bought highest quantity is te rau and te do and te nuong (traditional rice variety) planted on the upland. Sticky rice with long and short grain was bought equal quantity (long grain kind has fragment and short grain non-fragment)

420. Each trader has a husking enterprise from 4 – 6 huskers and two trader hires labor for their business.

Table 76 Quantity of Rice kind was Bought by Traders in Muong Cha District Centre

| Trader | | Tap Thi Phan | Nguyen Duc Giap | Lo Thi Phinh | Northern Food Company | Total |
|-------------|--------------------|--------------|-----------------|--------------|-----------------------|-------|
| Quantity | (tonnes rice/year) | 11 | 100 | 50 | 200 | 361.2 |
| Normal rice | IR64 | 1 | | 3 | | 4.2 |
| | Te rau | 10 | 50 | 18 | | 78 |
| | Bao thai | | | 3 | | 3 |
| | Tam thom | | | 2 | | 2 |
| | Te nuong | | | | 100 | 100 |
| | Te do | | 30 | 4 | 60 | 94 |
| Sticky rice | Long grain | | 10 | 12 | 20 | 42 |
| | Short grain | | 10 | 8 | 20 | 38 |

Table 77 Quantity of Rice Bought by NFC in Muong Cha District Centre

| Variety | Quant. (kg rice/year) | Selling price (VND) | Total income (VND) | Total cost (VND) | Total benefit (VND) | Benefit/kg (VND/kg rice) |
|-----------|-----------------------|---------------------|--------------------|------------------|---------------------|--------------------------|
| Te do | 40,000 | 4,200 | 168,000,000 | 125,400,000 | 42,600,000 | 1,065 |
| Te nuong | 100,000 | 5,200 | 520,000,000 | 376,200,000 | 143,800,000 | 1,438 |
| Nep nuong | 40,000 | 5,200 | 208,000,000 | 150,480,000 | 57,520,000 | 1,438 |

Table 78 Quantity, Price and Benefit of Tap Thi Pan Trader in Muong Cha Centre

| Variety | Kind of product | | Selling price (VND) | Total income (VND) | Total cost (VND) | Total benefit (VND) | Benefit /kg (VND/kg) |
|---------|-----------------|-------|---------------------|--------------------|------------------|---------------------|----------------------|
| | Paddy | Rice | | | | | |
| Te rau | 10,000 | 7,000 | 5,500 | 38,500,000 | 35,885,000 | 2,615,000 | 261.5 |
| IR64 | | 1,200 | 5,000 | 6,000,000 | 5,643,000 | 357,000 | 297.5 |
| Bran | | 1,300 | 1,700 | 2,210,000 | | 2,210,000 | |

Table 79 Quantity, Price and Benefit of Nguyen Duc Giap Trader in Muong Cha Centre

| Kind of rice | | Normal rice | Te rau | Te do | Sticky rice | Bran | Total |
|--------------------------|-------------|---------------------------|-------------|------------|-------------|------------|---------|
| Paddy | | | 50,000 | 30,000 | 20,000 | | 100,000 |
| Rice | Sell retail | (tonnes/year) (VND/kg) | 17000 | 20400 | 14000 | 12000 | 63.4 |
| | Wholesale | (tonnes/year) (VND/kg) | 5000 | 4500 | 5500 | 1500 | |
| | | | 18000 | | | | 18 |
| | | | 4800 | | | | 4,800 |
| Total Income ('000 VND) | | | 171,400,000 | 91,800,000 | 77,000,000 | 18,000,000 | 358,200 |
| Total Cost ('000 VND) | | | 165,250,000 | 84,810,000 | 75,350,000 | | 325,410 |
| Total benefit ('000 VND) | | | 6,150,000 | 6,990,000 | 1,650,000 | 18,000,000 | 32,790 |
| Benefit /Kg (VND/kg) | | | 123 | 233 | 83 | | 439 |

Table 80 Quantity, Price and Benefit of Lo Thi Phinh Trader in Muong Cha Centre

| Kind of rice | Paddy | Rice | | Total income ('000VND) | Total cost ('000VND) | Total benefit ('000VND) | Benefit /kg (VND/kg) |
|--------------|--------|-------------------------------------|-----------------------------------|------------------------|----------------------|-------------------------|----------------------|
| | | Sell retail (tonnes/ year) (VND/kg) | Wholesale (tonnes/ year) (VND/kg) | | | | |
| Normal rice | 30,000 | 12,600 | 9,100 | 115,360 | 97,519 | 17,842 | 595 |
| Te rau | 18,000 | 5,600 | 7,000 | 70,420 | 60,831 | 9,589 | 533 |
| Bao Thai | 3,000 | 2,100 | 2,100 | 8,820 | 8,571 | 249 | 83 |
| IR64 | 3,000 | | 2,100 | 11,760 | 9,512 | 2,249 | 750 |
| Tam thom | 2,000 | 2,100 | | 12,600 | 7,177 | 5,423 | 2,712 |
| Te do | 4,000 | 2,800 | | 11,760 | 11,428 | 332 | 83 |
| Sticky rice | 20,000 | 4,000 | 10,000 | 80,200 | 68,426 | 11,774 | 589 |
| Long grain | 12,000 | 2,400 | 6,000 | 49,800 | 43,062 | 6,738 | 562 |
| Short grain | 8,000 | 1,600 | 4,000 | 30,400 | 25,364 | 5,036 | 630 |
| Bran | | 6,000 | 1,500 | 9,000 | | 9,000 | |

C.2.7.1.5.2 Trader in Dien Bien Town

421. Market in Dien Bien town central having 20 rice retailers, they bought rice from farmer or rice agencies about 30 percent from farmer and 70 percent from rice agencies in Dien Bien, buying price of rice from rice agencies higher 100 VND/kg.

422. Re-processing by hand as sift and winnow to clean, they stored with little quantity

423. Rice kinds buying is very different but focusing some kinds as IR64, Tam (normal rice), fragrant upland glutinous. Consumers is local people and tourist

Table 81 Quantity and Benefit of Rice Retailers in Dien Bien Town Market

| Rice kind | Quantity (kg /month/retailer) | Quantity rice (kg /month) | Buying price (VND/kg) | Selling price (VND/kg) | Benefit (VND/kg) |
|---------------------------|-------------------------------|---------------------------|-----------------------|------------------------|------------------|
| <i>Normal rice</i> | | | | | |
| IR64 | 800 | 16,000 | 5,600 | 6,000 | 400.0 |
| Tam Thom | 200 | 4,000 | 6,550 | 7,000 | 450.0 |
| Te thom | 300 | 6,000 | 5,800 | 6,000 | 200.0 |
| Te Thai Lan | 200 | 4,000 | 5,400 | 5,800 | 400.0 |
| Bai Thai | 200 | 4,000 | 4,300 | 4,500 | 200.0 |
| Te nuong | 100 | 2,000 | 5,300 | 5,700 | 400.0 |
| <i>Sticky rice</i> | | | | | |
| Sticky rice(fragrant) | 600 | 12,000 | 8,500 | 9,000 | 500.0 |
| Sticky rice(non fragrant) | 200 | 4,000 | 6,000 | 6,500 | 500.0 |
| Sticky rice (tan) | 300 | 6,000 | 7,000 | 7,500 | 500.0 |

424. In Dien Bien town has some sectors trading rice are public and private sector, private sector has two levels that is small trader and big trader. Small traders have some huskers (2 – 4 huskers) buys several tens tonne of paddy per year. After processing they sell retail for consumer in Dien Bien or wholesale, capacity to collect and store up is limited. Bigger traders has strong potential, fully worked out processing system, buying several hundreds tonnes of paddy per year.

Table 82 Quantity and Benefit of Trader in Dien Bien Town

| | Quant. (kg paddy /year) | Quant. Rice (kg/year) | Selling price (VND/kg) | Total income (1000VND) | Total cost (1000VND) | Total benefit (1000VND) | Benefit (VND/kg) |
|------------|----------------------------|--------------------------|---------------------------|---------------------------|-------------------------|----------------------------|---------------------|
| Te Thom | 40,000 | 28,000 | 5800 | 162,400.0 | 156,300.0 | 6,100.0 | 153 |
| Tam Thom | 50,000 | 35,000 | 6600 | 231,000.0 | 221,500.0 | 9,500.0 | 190 |
| IR64 | 10,000 | 7,000 | 6000 | 42,000.0 | 39,075.0 | 2,925.0 | 293 |
| Nep Thom | 30,000 | 21,000 | 8000 | 168,000.0 | 148,575.0 | 19,425.0 | 648 |
| Nep Thuong | 50,000 | 35,000 | 7000 | 245,000.0 | 231,950.0 | 13,050.0 | 261 |

C.2.7.1.5.3 Intermediary Trader (IT) from Dien Bien City to Hanoi City

425. Ms Dung in Dien Bien town buys rice from big trader in Dien Bien to transport to sell in Hanoi city. Every month she bought about 10,300 kg of rice to wholesale to Hanoi. Rice value in this stage as presented in Table 83. She said transport cost from Dien Bien to Hanoi city is 350 VND/kg with professional traders.

Table 83 Quantity, Price and Benefit Trading of Rice in Dien Bien

| Variety | IR64 | Sticky Rice |
|------------------------|-------------|-------------|
| Quantity (kg rice) | 10,000 | 300 |
| Buying price (VND/kg) | 6,500 | 8,000 |
| Selling price (VND/kg) | 7,500 | 9,500 |
| GR (NVD) | 75,000,000 | 2,850,000 |
| Cost (VND) | Total | 68,600,000 |
| | Buying cost | 2,508,000 |
| | Carry cost | 65,000,000 |
| | Transport | 100,000 |
| | | 3,000 |
| | | 3,500,000 |
| Benefit(VND) | 6,400,000 | 105,000 |
| | | 342,000 |

426. The estimated benefit from the above transactions is 640 VND/kg of IR64 variety and 1140 VND/kg of fragrant sticky rice. However, the sticky rice really only sells during the Tet period.

C.2.8 Rice Value Chain of IR64 and Sticky Rice

427. Table 84 follows the movement of prices for IR64 from the producers in Muong Cha to retailers in Hanoi.

Table 84 IR64 Price Chain

| | Cost price (VND/kg of paddy) | Buying price VND /kg rice | Selling price VND / kg rice |
|-----------------------|---------------------------------|------------------------------|--------------------------------|
| Producer | | | |
| - H'Mong | 757.0 | | 2,500.0 |
| - Thai | 1,700.6 | | 2,925.0 |
| - Kho Mu | 1,424.5 | | 2,600.0 |
| Collector | | 2,500.0 | 3,000.0 |
| Trader | | 3,500.0 | 4,200.0 |
| | | 3,000.0 | 3,920.0 |
| Retailer in Dien Bien | | 3,800.0 | 4,200.0 |
| IT | | 4,450.0 | 5,250.0 |
| Retailer in Ha Noi | | 5,800.0 | 6,500.0 |

428. Table 85 follows the movement of prices for sticky rice from the producers in Muong Cha to retailers in Hanoi.

Table 85 Sticky Rice Price Chain

| | Cost price (VND / kg paddy) | Buying price (VND / kg rice) | Selling price (VND / kg rice) |
|-----------------------|--------------------------------|---------------------------------|----------------------------------|
| Producer | | | |
| - H'Mong | 2185.0 | | 3000.0 |
| - Thai | 2069.5 | | 3000.0 |
| - Kho Mu | 2008.9 | | 2500.0 |
| Collector | | 3300.0 | 3500.0 |
| Trader | | 3500.0 | 3850.0 |
| | | 4200.0 | 4800.0 |
| | | 3600.0 | 4200.0 |
| | | 4500.0 | 5600.0 |
| | | 4200.0 | 4900.0 |
| Retailer in Dien Bien | | 5900.0 | 6500.0 |
| | | 4900.0 | 5200.0 |
| | | 5200.0 | 4500.0 |
| IT | | 5600.0 | 6600.0 |
| Retailer in Ha Noi | | 7000.0 | 8500.0 |

C.2.9 Recommendations

429. The trade name incorporating the term “Dien Bien” is considered necessary to increase value because nowadays many kind of rice are selling on the market. This way the consumer can identify high quality Dien Bien rice. Trade names for some reputable rice varieties are

1. Normal rice is IR64, Tam in irrigated land and Te Rau and Te Do on upland
2. Sticky rice is long and short grain rice

430. Strengthen the access of farmer to market information, trade names, post harvest processing technology, and packaging technology. In order to help all farmers, including poor farmers to access this information there should be “rice production farmer groups”. Other activities rice production farmer groups could do is share information on production, processing and packaging, and jointly negotiate with traders.

431. Support credit to poor farmer by fertilizer bank to help them increase rice yield. Poor farmer get very low prices and therefore can afford only low levels of inputs for their irrigated rice.

432. Trail improvement slopping land technologies to increase upland rice yield. Most households indicated that upland rice yield is declining due to soil degradation. It is for this reason that farmers have low income from upland rice farming, despite their receiving the highest price. Models should be suggested for upland farming that have crop rotation crops between upland rice with legume crops or planted contour line by legume crop to prevent erosion

433. Training for farmer on seed rice production technologies will supports good seed production themselves to enhance quality for both traditional and modern varieties.

434. Training and guide for farmer on the production management with selected rice varieties that suit their soil, economic condition, and responds with market requirement

435. Training for farmer on the post harvest processing technologies to increase rice quality as drying, cleaning and storing

436. Contract farming is onw way to reduce risk to rice farmers as experience shows that farmers lose when rice prices go down. If there are contracts are established at the beginning of the season in terms of the kind of rice, price, and quantity, farmers would feel more secure in investing in measures to increase yield.

C.2.10 Annex 1: List People Provided Information

Table 86 List of People Interviewed

| | Name | Organization | Position | Ethnic minority |
|----|------------------|--|-----------------|-----------------|
| 1 | Dinh Thi Thu Ha | Provincial Agricultural Extension Centre (PAEC) | Deputy director | |
| 2 | Lo Xuan Tan | Staff of PAEC | | |
| 3 | Nguyen Thi Dung | Rice seller in Dien Bien Phu Market | | |
| 4 | Tran Thi Lan | Rice seller in Dien Bien Phu Market | | |
| 5 | Nguyen Thi Tuyet | Husker in Dien Bien city | | |
| 6 | Nguyen Toan | Husker and trader in Dien Bien Phu | | |
| 7 | Lo Thi Son | Mung Cha Farmer Asscistion | | |
| 8 | Dao Trong Hai | Economic Division of Muong Cha district | Header | |
| 9 | Bui The Anh | Muong Cha twonlet | Husker | |
| 10 | Tran Thi Phe | Muong Cha Market | seller | |
| 11 | Nguyen Van Doan | Northwet Food Company | Staff | |
| 12 | Lo Van Doi | Muong Muon Commune People's Committee | Deputy chairman | |
| 13 | Lo Thi My | Women Union of Muong Muon commune | | |
| 14 | Luong Van Kiem | Extension worker | | |
| 15 | Quang Van Sun | Farmer Association | | |
| 16 | Mua A Trang | Commune people's council | Deputy chairman | |
| 17 | Hang A Dua | Huoi Leng Commune People's Committee | | |
| 18 | Giang Vang Sung | Commune agricultural staff | | |
| 19 | Tran Thi Hung | Co Dua village, Muong Muon commune | Husker | Kinh |
| 20 | Lo Thi My | Co Dua village, Muong Muon commune | Farmer | Kho Mu |
| 21 | Lo Van Uong | Co Dua village, Muong Muon commune | Farmer | Kho Mu |
| 22 | Quang Van Sun | Co Dua village, Muong Muon commune | Farmer | Kho Mu |
| 23 | Thang Quang Sang | Huoi Leng village, Huoi Leng Commune | Farmer | Sa Phang |
| 24 | Lo Phu Lung | Huoi Leng village, Huoi Leng Commune | Farmer | Sa Phang |
| 25 | Giang Xa Ho | Huoi Tum 1 village, Huoi Leng commune | Farmer | H'Mong |
| 26 | Giang So Linh | Huoi Tum 1 village, Huoi Leng commune | Farmer | H'Mong |
| 27 | Giang Va Dinh | Huoi Tum 1 village, Huoi Leng commune | Farmer | H'Mong |

C.2.11 References

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Appendix D Field Work Interviews

Study on Rice Value Chain Analysis in Dien Bien province

January 2 – 8, 2006 & January 15-18, 2006

By Nguyen Tu Siem & Pham Quang Trung

2 January 2006

Table 87 Ms Diem – Rice retailer. Dien Bien city market.

| Milled rice | Buying VND/kg | Selling VND/kg | Difference | Sale opportunity |
|------------------------------------|-------------------|-------------------|---------------|--|
| Ordinary rice | White rice | White rice | | |
| IR 64 | 5600 | 5900 6000 | - 300-400 | Best seller |
| Te thom | 5700 | 6100 6200 | - 400-500 | Best seller |
| Tam thom | 6500 | 6800 7000 | - 200-500 | Not much for sale |
| Gao tap (Hybrids, CR203, Bao thai) | 4200 | 4500 | 300 | Medium for sale. Partly for eating, mainly for making cake, noodle,... |
| Upland sticky rice | | | | |
| Nep nuong thom (hat to) | 8000 | 8500 9000 | - 500-1000 | Best seller |
| Nep nuong thom (hat nho) | 5800 | 6500 7000 | - 700-1200 | Medium to best seller |
| Nep cam | 5800 | 6500 7000 | - 700-1200 | Only for special use (anchhol) |
| Nep tan nuong | 6500 | 7000 | 500 | Best seller |
| Nep ruong (nep Can bo, IR 352) | | | | Mainly for making cake, ice cream, ancohol |
| Nep xoi (nep thuong) | 4800 | 5200 5300 | - 400-500 | For cake making |
| Bran | 2200 | 2500 | 300 | For pig |
| Maize powder | 2300 | 2600 | 300 | For pig |

Box 15 Ms Tuyet – Rice Retailer No 27, Nguyen Chi Thanh, Dien Bien City

Buying unsorted husked rices or paddies from collectors. If buying paddies, she converts to rice equivalent price at time being. Family has small milling machine (valued VND 20 m) to mill and sell rice for small consumption for urban people, about 100 kg/day of which 40 percent is IR64, 20 percent is USR and 40 percent is of other kinds. Fee for milling is VND 50,000/tonne for those keeping bran and selling rice for her.

| Milled rice | Buying price VND/kg | Selling price VND/kg | Differences | Sale opportunity |
|---------------------------------|---------------------|----------------------|--------------|---------------------------|
| Ordinary rice | White rice | White rice | | |
| IR 64 This year: (Last year) | 3500 (2800) | 3800 (3000) | 300 (200) | Best seller |
| Te thom (Last year) | 5700 (3700) | 6100 (4400) | 400 (700) | Best seller |
| Tam thom (Last year) | 6500 (3700) | 7000 (4300) | 500 (600) | Poor for sale |
| Gao tap | na | na | na | No for sale as few buyers |
| Upland sticky rice | | | | |
| Nep nuong thom (hat to) | 8000 | 8500 – 9000 | 750 | Best quality |
| Nep cam | 5800 | 6500 | 700 | Sold in small quantity |
| Nep tan | 6500 | 7000 | 500 | Best quality |
| Nep nuong thom (hat nho) | 6000 | 6500 - 7000 | | |
| Nep ruong (Last year) | 3600 (2800) | 4300 (3600) | 700 (800) | Medium quality and sale |

Source: Study Team Interviews

Table 88 Mr Thien Chin – Processor cum Retailer. Ban Ten Street, Dien Bien City

| Varieties | Rice/ paddies (%) | Price of paddies bought VND/kg | Price of rice sold VND/kg | Differen- cies | Sale oppor- tunity |
|----------------------|-------------------------|--------------------------------------|---------------------------------|-------------------|----------------------------|
| Ordinary rice | | Paddies | White rice | | |
| IR 64 (Last year) | 65 -66 | 3700 (3500) | 5400 (4800) | 1 700 (300) | Best seller |
| Te thom | 65 | 3800 | 5500 | 1 700 | Best seller |
| Tam thom | 60 - 64 | 4300 | 6300 | 2 000 | Best seller |
| 203 | 65 | 2900 | 4300 | 1 400 | |
| Bao thai | 60 | 2900 | 4300 | 1 400 | |
| Te Thailand | 67 | 3500 | 4800 | 1 300 | |
| Te Laos | 67 | 3500 | 4900 | 1 400 | |
| Te do (Red ordinary) | 70 | 2800 | 3900 | 1 100 | only for ethnic minorities |
| Hybrid rice | n/a | n/a | 4000 | | ethnic minority consumers) |
| Bran | | | 1500 | | |
| Broken rice | | | 2400 | | |
| Husk (charge free) | | | | | |
| Upland sticky rice | | | | | |
| Nep nuong thom | 70 | 5000 | 7500 | 2 500 | |
| Nep Tan thom | 68 | 3900 | 6200 | 2 300 | Best seller |
| Nep Mai phung | 70 | 4000 | 6200 | 2 200 | |
| Nep xoi (hat dai) | 68 | 3500 | 5200 | 1 700 | |
| Nep Khau pe | 66 | 3000 | 4500 | 1 500 | |
| Nep Khau chien | 67 | 3500 | 5000 | 1 500 | |

3 January 2006

**Dien Bien Department of Trade and Tourism
Mr Tuong, Director**

DoTT is developing a proposal of promoting principal agro-commodities including a special area of IR 64 in Dien Bien valley (by 1000 ha), but not completed. USRs are risky in reduced acreage and volume. Private enterprises cover up to 90 percent of rice commodities, leading to unwarranted quality. Three SOEs share only 10 percent (i.e. Tay Bac Food company, Provincial Agricultural Machinery & Construction company and Trade company) with better facilities, their end products are better. Branding is essential for quality control. However, we have no trade mark, because: no focal point is assigned, quality standards are not established and production areas are fragmented. Province has a program for quality rice, but responsibilities are not clearly defined and policies are not comprehensive. It is important to mediate profit share between different stakeholders. Food surplus is not much, and food business is not highly profitable.

Development of commercial rice should go in direction of reducing upland rices, increasing lowland rice (double rice crops). IR 64 and USRs have no market problem.

**Provincial Agricultural Extension Center
Ms Dinh Thi Thu Ha, Dty Director
Mr Vu Dinh Tan, in charge of Agriculture
Ms Tuoi, in charge of crop production**

Total provincial rice area is 40 041 ha of which irrigated rice 21 940 ha (one winter-spring crop 7324 ha plus autumn rice 14 616 ha) and upland rainfed rice 18 102 ha.

Dien Bien quality rice is grown concentratedly in Dien Bien valley on 6000 ha, irrigated by Nam Rom system with a complete cannal network. Rice is directly sown with 100 kg seed per ha (between 80 and 120 kg). Of total valley area, ordinary rice varieties of vanilla quality share 65 percent of which IR 64 accounting 30 percent, Te thom (Huong thom No 1) 40 percent, Bac thom 30 percent (reducing because of leaf blast disease). The remaining 35 percent include conventional ordinary Khang dan and sticky rices of Nep nuoc, C 97, 352. Hybrid rice once was popular, nowadays disappear. Seed quality is the weakest point. As growers produce seeds by themselves, IR 64 quality is deteriorating and acreage is reducing, so consumers tend to prefer Te thom, Bac thom and No 4 and No 7. As 64 is not aromatic, consumers used to mixed with aromatic ones, and therefore 64 lost reputation. Some 3-4 years ago, IR 64 was predominant and well known with introduction of aromatic rices, it became secondary requirement. Traders change names for real aromatic rices for attracting buyers.

Sequence: Tap giao (8-10 tonnes/ha; 80 percent) – Bao Thai & 61 (6 tonnes/ha) – CR 203 (6-7 tonnes) – Aromatic Huong Thom & Bac Thom (traders give the names of Te Thom & Tam Thom). Two kinds, i.e. 61 and AIT 77, have lower quality (harder) and higher yield (max 10 tonnes/ha), but grain outside is very similar to 64, so seller used cheat consumers. IR 64 can not be excluded because for self-consumation, particularly for medium and poorer households, less diseases and high resistant to dangerous plant hopper and leafblast.

In Zone I (rather favorable), thanks to extension, growers know appropriate techniques and previous subsidy for seed (20 percent) has been moved from 2006 while seed subsidies (50 percent for Zone II and 100 percent for Zone III) remain the same.

Less problem occur with upland rainfed rice varieties as farmers produce seeds by themselves using traditional standardization, selection and storage in each family. Sometimes imported seeds from Laos among the relatives.

Table 89 Comparison between some Lowland Ordinary Rices

| | IR 64 | Tam Thom (Bac Thom 7) | Te Thom (Huong Thom 1) |
|--------------------------|---|---|--|
| Area in the valley | 20% area | 33% area | 13% area |
| Average yield (tonne/ha) | High, sustainable 6.5 | Low, unsustainable 6.0 | High, unsustainable 7.0 |
| Winter-Spring | 6.0 | 6.0 | 6.3 |
| Summer-Autumn | | | |
| Production (tonne) | | | |
| Growth duration (day) | longer 130 | shorter 115 | shortest 110 |
| Winter-Spring | 120 | 100 | 100 |
| Summer-Autumn | | | |
| Crop season | Two crops/yr | Two crops/yr | Two crops/yr |
| Winter-Spring | Broadcast | Broadcast | Broadcast |
| Summer-Autumn | broadcast | broadcast | broadcast |
| Diseases resistance | Very high, few diseases, no or low chemicals. | Very low. In 2002 loss because leaf-blast. Need control | Low resistance, easy to be lost if no chemicals. |
| Fertilization | Medium | Medium | Medium |
| Eating quality | Soft, no aromatic | Aromatic, soft | Aromatic, soft |
| Perspective | Sustained | Gradually promoted | Gradually promoted |

Upland rainfed rices are not promoted, only accepted where irrigated rice is impossible. In fact, upland rice is reducing as this kind of land is used for forest regenerated. Province encourages to convert rice dry farming into terraces by subsidy of VND 2.5 m for one ha of dry terrace or 5.0 m for irrigated terrace. For addressing disadvantages of upland rice, alley cropping, mulching, contour farming. Farmers are very interest in alley cropping, but refused weed control by chemicals recently tested as they caused harmful to skin. Only bran is used for feed, straw and husk are for animal shed litter or burnt on field.

In the province, there are some 6 big (SOE, private and joint-stock) companies influencing rice market. Beside, there are a number of small private processing cum trading households forming a network of rice business down to villages and households.

Table 90 Average Paddy Yield

| Varieties | Winter-Spring crop | Autumn crop |
|---------------------------|--------------------|-------------|
| Overall provincial yields | 3.18 | |
| Provincial average | 5.81 | 4.20 |
| Upland rice | 1.28 | na |
| IR 64 | 6.50 | 6.00 |
| Te thom | 7.00 | 6.30 |
| Bac thom | 6.00 | 6.00 |
| Khang dan | 6.50 | 5.50 |
| Sticky C 97 (lowland) | 5.00 | 5.00 |

Tonnes per hectare

Table 91 Rice Yield per District

| District | Irrigated rice | Rainfed rice | Notes |
|--------------------|----------------|--------------|---|
| Provincial average | 3.18 | 1.20 | |
| Dien Bien city | 5.88 | 1.60 | |
| Muong Lay town | 4.30 | 1.09 | |
| Dien Bien | 4.70 | 1.30 | |
| Tuan Giao | 3.08 | Na | |
| Tua Chua | 2.18 | Na | |
| Muong Cha | 2.21 | 1.30 | Growing predominantly one crop rainfed, little irrigated rice |
| Muong Nhe | 1.93 | 1.30 | 80% is rainfed |
| Dien Bien Dong | 1.84 | 1.30 | Almost all is rainfed |

Tonne of Paddy per hectare

Dien Bien district**Mr Tran Thi Tuyet, Chief, Agriculture Section**

Dien Bien valley cover 10 of 19 communes of Dien Bien district producing averaged yield of 66 tonne/ha paddies per crop. The district has potential and attempt to extend IR 64 and other quality ordinary rices (Bac Thom, Huong Thom) up to 80 percent of rice area. Potential is Muong Nha, Sai Luong, Na Pen, each commune 100 ha more and Nam Co Hu 60 ha more. Water source is available but water cannal systems should be solidated. A provincial project for cannal upgrading is initiated and expected to be completed in 3 years. Water use is well operational with water use groups since 2001 collecting fee of VND 200 kg paddies/ha in 2004 and 550 000 kg/ha in 2005. Inter-village group of Muong Pon, for instance, has a saving of VND 30 000 000 per year and rice yield averaged 5.0 tonne/ha/crop.

4 January 2006

**Agricultural Machinery & Construction Company
(Rice business)**

Details provided in text

Mr Nguyen Quoc Nhiem, Director

**North-West Food Processing and Business Enterprise
(under Vietnam Northern Food Corporation)**

Details provided in text

Sam Mun commune

Mr Hac, Commune Chairman

Mr Tan, Chairman of Agriculture Service Cooperative

Mr Vang, Commune Extension Worker

Sam Mun has 35 villages with Kinh, Thai, Muong and Hmong ethnies. Commune is a highland commune with 2100 households, 28.2 percent of which are poor (old criteria). Population is 9700, per capita is 730 kg/year. Thai people have habit to consum more sticky rice than ordinary one, so they sell almost the whole volume of ordinary rice they produce.

Rice production:

Rice land in Sam Mun:

Table 92 Land Use for Rice of Sam Mun Commune

| | Ha | IR 64 | Aromatic rices | Others |
|--------------------|-----|-----------|----------------|--------|
| Winter-Spring rice | 429 | 260 (60%) | (30%) | (10%) |
| Summer-Autumn rice | 520 | 312 (60%) | (30%) | (10%) |
| Upland rice | 10 | | | |

Aromatic rices include Huong Thom, Bac Thom and Te Thom. Others mean Khang Dan, CR 203, and Sticky 352.

Winter-Spring rice is 429 ha of which 50 – 60 percent is IR 64. Autumn rice is 520 ha of which 60 percent is IR 64; Bac Thom, Te Thom and Huong Thom account for 30 percent; and CR 203, sticky 352, Khang Dan, account for 10 percent. Hybrid rice is no longer grown because of low profit.

Table 93 Comparison of IR 64 & Hybrid Rice per Crop

| Variety | Yield (kg/ha/crop) | Price (VND/kg) | Return (VND/ha) | Notes |
|-------------|----------------------|----------------|-----------------|--------------|
| IR 64 | 8 000 (max. 9000) | 3 200 | 2 560 000 | High quality |
| Hybrid rice | 9 000 | 2 300 | 2 070 000 | Low quality |

Upland rice is only 10 ha. No more land potential is for expanding irrigated rice.

Rice is produced in private small holdings each cultivates 1 500 - 2000 m² (varying from 0.1 ha to 1.0 ha). Land for rice has been allocated on basis of person number per family, each given 450 m². New couple was allocated 900 m². At present, this kind of land is exhausted.

Depending on level of intensive cultivation, IR 64 yield is around average 7.0 – 7.5 tonnes ranging largely between 5.5 tonnes to 9.0 tonnes/ha/crop. Lower yield occurred with poor

households and ethnic families, because: lower dose of FYM, chemical fertilizers and poor pest control.

Table 94 Comparison of Poor and Better-off Households in Sam Mun Commune

| | Poor households | Better-off households |
|------------------------|--|------------------------------|
| Rice land availability | Limited, esp. lowlands | Enough or more |
| Land preparation | Manually and/or rent | Self-doing by machine |
| Varieties grown | Common rices | High quality, aromatic rices |
| Labor input | Almost entirely labor input | Less labor input |
| Organic manures | Little or nil | Large amounts |
| Chemical fertilizers | Little or nil. Mainly urea | Sufficient and balance |
| Pest control | Poor and delay | Good and in time, incl. IPM |
| Harvesting | | |
| Selling | Right after harvest, even before harvest | Store, waiting higher price |
| Processing | At village | At home or village |
| Marketing | Poor skill | |

Water supply:

Water supply is good with complete canal system and water use groups. Running water is coming from the reservoir 12 km far. Fee paid for Nam Rom State Irrigation Company is VND 550 000/ha/crop of which 10 percent is for the cooperative.

Input supply:

An agriculture service cooperative was founded in 2004 to provide services in water use, seeds, fertilizers and pesticides. No extension club, interest group.

Table 95 Inputs Required for Cultivation of One Hectare of IR64

| Input kinds | Quantity | Price (VND) | Input value (VND) |
|-----------------------------|----------------------|-------------|-------------------|
| Irrigation fee | Lumpsum | 550 000 | 550 000 |
| Ploughing by machine (rent) | Lumpsum | | 700 000 |
| Levelling (rent) | Lumpsum | | 700 000 |
| Harrowing (rent) | Lumpsum | | 300 000 |
| Seed | 100 kg | 4 800 | 480 000 |
| FYM (mainly self produced) | 10 tonnes | 240 000/t | 2 400 000 |
| Fused phosphate (kg) | 250 kg | 10 000 | 2 500 000 |
| Urea (kg) | 70 kg | 24 000 | 1 680 000 |
| Potassium chlorite (kg) | 75 kg | 24 000 | 1 800 000 |
| Lime (kg) | 300 kg | 500 | 150 000 |
| Herbicide (kg) | 1.5 kg | 250 000 | 375 000 |
| Pesticide (2 times) | 1.5 kg | 12 000 | 18 000 |
| Sowing | 0.5 day | 25 000/day | 12 500 |
| Weeding & replacing | 10 days | 25 000/day | 250 000 |
| Harvesting | 50 days | 25 000 /day | 1 250 000 |
| Transportation (rent) | Lumpsum | | 800 000 |
| Threshing (rent) | Lumpsum | | 350 000 |
| Total | | | 11 485 500 |
| Output (paddies) | 7000 kg | | |
| Revenue: | 7000 kg x VND 2500 | | 17 500 000 |
| Benefit | | | 6 015 000 |
| Cost of 1 kg paddies | | | VND 1640/kg |
| Cost of 1 kg rice | (Rice/paddies = 70%) | | VND 2343/kg |

(Estimation by Mr Tan, the Cooperative)

Calculation showed that for IR 64, the benefit is about VND 13.5 millions and cost for production is about VND 2300/kg rice. It is clear that

Cultivation techniques:

Rice in Sam Mun and Dien Bien valley in general is grown by direct sowing. Thanks to training, farmers know well how to cultivate rice. PEAC and DAES train commune cadres (cooperative chairman, commune extension, Farmer Union, Women Union), who train village heads who in turn train farmers. This kind of training appeared not effective, as those directly involving in cultivation, women particularly, had no opportunity to attend. Recently, Dien Ban Pesticide Company in collaboration with District Plant Protection Sub-division is introducing new training method that farmers highly welcome. This is a kind of Farmer Field School which lasts the whole crop period from land preparation to harvesting. Extension agents come and teach farmers how to do for each operation.

Seed quality: IR 64 rather pure, little type-off. Low yield, if happens, is due to high rate of unfilled grains causing by inappropriate techniques.

Main reasons for reduced yields include cultivation techniques such as insufficient organic manuring, low or/and imbalance chemical fertilization, poor disease control; harvesting in rainy period in Winter-Spring (broken grains).

Manuring: Organic manures include FYM and green manures (grasses, wild plant prunnings). FYM is depending on number of pig and buffaloes. Thai ethnic farmers use less organic manures than Kinh people. Commercial fertilizers are bought via the cooperative in early season and paid in late season. Chemical fertilizers used include: lime, urea, fused Mg phosphate and potassium chlorite. Fertilizer application is not balance. Some families applied up to 40 kg urea per 1,000 m².

Pest control: Chemicals are abused. others sprayed pesticides 8 times per crop. Knowledge on insecticides is very poor. Once rice plants are damaged, majority farmers go to pesticide retailers to buy what chemicals that the sellers advice. In some cases, for sure farmers bought some chemicals special for some diseases, mixed together and sprayed even no diseases symptoms were seen (Personnel communication from Ms Thang, Pom Lot village). Herbicies were tested but farmers didn't accept because they are corressive hurting human skin.

Table 96 Prevaling diseases of Rice in Sam Mun Commune

| Pests/Diseases | Winter-Spring | Autumn |
|-----------------------|---------------|--------|
| Panicle borer | X | X |
| Leal roller | - | X |
| Plant hopfer | X | X |
| Leaf blast disease | X | X |
| Phytophthora | - | X |
| Shoot rotting disease | - | X |
| Dieback ?"Kho van" | X | - |

Winter-Spring rice crop: Sowing on Jan 5 - 10 and harvesting on May 20 – 30. Growth duration is 130 days. Water is sufficient, diseases are limited giving high yield (7.0 – 7.5 tonnes/ha). However, harvest is in rainy days and paddies are humide.

Autumn rice crop: Sowing on June 20 and harvesting on September 20 – 30 after a duration of 120 days. Water deficit and diseases more prevailing make crop yield lower than in the Winter-Spring rice. Harvest is practiced in dry days and price is higher.

Post harvest handling:

Panicles with plant top parts are cut and brought home. An instrument for cutting rice bought from the South appeared not suitable as it was too heavy. Rice straw is left on field for incorporation into soil or burnt if dry. Threshing is done by own machine or rent machine coming to house. Drying is done only by sunshine. Post harvest loss on field is not much. There are 12 households using machine for processing rice, maize and partly cassava. Fee for husking and whitening is VND 40.000 per tonne. White rice/paddies rate is around 70 percent. As all families have enough rice, no rice is sold in commune market.

Rice marketing

No household have to buy rice from outside. Thai people consum mainly sticky rice. In Sam Mun there are 12 processing points all operated by Kinh people. Each of them has one milling machine with value of VND 15-20 m and capacity of 2 – 5 tonnes/day. These households do growing, processing and trading rice at the same time. They play a role of rice collectors. Farmers bring paddies to processing points for milling with a fee of VND 4,000-5,000 per 100 kg. White rice and bran is used for self-consumation. White rice of IR 64 may be sold to processors at VND 5,200/kg who will sell outside the commune at VND 5,400/kg.

Box 16 Ms Bien. Better-off household – Sam Mun Commune

Ms Bien. Better-off household. Thai people. Pom Lot village, Sam Mun commune, Dien Bien district

Wood house of 100 m², 1 TV, 1 motorcycle, 4 bykes, 1 pumping, 1 machine. Eight persons of which 3 main laborers cultivate 3 500 m² wetland rice in two crops; 500 m² maize; 300 m² garden and 400 m² vegetables. In the past, only sticky rice was grown; later on someone grew hybrid rices, but now is no longer. Paddy production: 2 000 m² IR 64: 2 400 kg (2 crops x 600 kg/1000 m²/crop); Te Thom 1000 m²: 1 200 kg (2 crops x 600 kg/1000 m²/crop); sticky rice 500 kg (2 crops x 500 kg/1000 m²/crop).

She has mini-machine for land preparation and transport (also for services). Threshing fee VND 30 000 per 1000 m² and husking fee VND 5 000/100 kg. Inputs for IR 64 include: FYM 1 800 kg/1000 m²/crop; urea 15 kg/1000 m²/crop (if higher, rice falls down); fused phosphate 300 kg/1000 m²/crop; potassium chlorite 50 kg/1000 m²/crop; lime if poor rice 60 kg/1000 m²/year. Many diseases in Summer-Autumn: panicle borer; leaf blast and roller; phytophthora; planthopper; dieback; while in Winter-Spring it is less serious (panicle borer; leaf blast; planthopper). Poor control of diseases caused serious loss, so she buy at village whatever pesticides the retailer advices. Family members are never trained in rice growing, only learnt from neighbors. Kinh people commonly applied more organic manure including green manures, leaves, etc. and control diseases more strictly than Thai. Spring-Winter sowing: January 5; harvesting May 20-30. Autumn sowing in June 20 and harvesting in September 20-30. Problem is IR 64 seed type-off when though machine; she can keep purity for two years. In the village, paddy yield varies largely from 3 tonnes/ha (poor family) to the record of 9 tonnes/ha/crop. Average yield is 6 8 tonnes/ha/crop. She eargely want to have pure seeds and to be trained in seed selection. If so, she can produce seeds for sale. Output of IR 64 will be larger if every families know how to grow to get the same high yield level. Straw is for cattle, bran for pig and husks for fuel. Each 100 kg paddies give 70 kg white rice and 15 kg bran. She can sell 3 tonnes/year.

In late season (now), IR 64 is paddies are sold at VND 5 300/kg (in mid-season VND 4000); Tam Thom from 4200 to 5 400/kg and lowland sticky (“Nep Can bo”) VND 4 500-5 000/kg. The latter (for cake, ancohol) price is less varying. If IR 64 not pure, price is only VND 3 500/kg.

Source; Study Team Interviews

Box 17 Mr. Thanh, Collector/Processor, Sam Mun Commune

Mr. Thanh, Collector/Processor. Kinh, Brigade 5, Pom Lot village, Sam Mun commune.

His family has 4 persons of which two children going to school. He and his wife has 5 000 m² grown with IR 64 using rent laborer (paid VND 30 000/labor day). They have a machine of VND 17 m for processing rice, maize and cassava. Business registration is VND 300 000/year and business tax is VND 100 000/month; around VND 1 m paid is for electricity.

He works with machine processing 4.2 tonnes paddies/day and collecting fee of VND 4 000 – 5 000/100 kg. He works all year round, except several holidays, selling from 3 to 30 trucks each of 3 - 7 tonnes of rice (50 – 100 tonnes/year).

Paddies of IR 64 purchased at earlier crop was VND 2700/kg, now VND 3500/kg (the best VND 3600/kg). White rice bought from villagers at VND 5300/kg and sold at VND 5500/kg. Before, paddy rice was cheaper: 2000/kg in 2000. If selling in small quantities, benefit is VND 100 – 200/kg, if in larger amounts, benefit is only less than VND 100/kg.

Criteria by visual method include: moisture, inclusions, type-off, filled grains, outside color. If type-off around 50 percent, IR 64 should be classified as “mix rice” and price is reduced to VND 2800-3000/kg since rice/paddies only 62-65 percent, instead of 70 percent for good IR 64. Paddies should not be dried on concretion ground for quick drying that may make rice too fragile and many broken grains.

Milled rice packaged in 70 kg sacs to sell to any client, but normally to those are from Dien Bien, Son La and Hanoi. Most of them are acquaintance. They order in advance and send trucks to collect at daily price. If there are large demands from many clients at the same time, he has to share for keep friendly relationship. If price rises up at consumption sites, the client inform him, otherwise, next time sale for them may be refused. Mr Thanh said he doesn't like to conclude long term contract with companies with fixed amounts and price (for 3 months).

Source: Study Team Interviews

Box 18 Mr. Tan, Better-off farmer, Sam Mun Commune

Mr. Tan, Better-off farmer. Thai ethnic, Na Vai village, Sam Mun commune.

In average, the villagers have 1 000 – 3000 m² lowland, some families have up to one hectare of rice land. Young couples have only 900 m² (each person was allocated 450 m², now no more land available). Mr Tan's family has seven people of which 4 are laborers. No labor is rent. Rice land is 4 800 m² of which 4 300 m² for growing two crops of IR 64 and 500 m² for irrigated sticky rice. 4 000 m² land for two maize crops and 3 000 m² garden. Ten cattle are raised for producing 4 calves/year. Each calf of one year gives VND 2 m. One buffalo is for harrowing. Pig live-weight of 500 kg is sold per year. Two crops of maize produce 6 tonnes/year. In W-S wet season, 3 tonnes are sold at VND 1800/kg and in Autumn dry season, 3 tonnes are sold at VND 2300/kg. Winter-Spring IR 64 produces 4 tonnes paddies, while Autumn IR 64 gives 3.4 tonnes. Family has one machine for land preparation and harrowing is done by buffalo. He prepares land and transport also for others, but has to rent threshing rice.

For IR 64, following inputs are for 1000 m²: seeds 480 000 (100 kg x 4 800); FYM 700 kg; urea 30 kg; fused phosphate 40 kg and potassium chlorite 20 kg. Herbicide for Winter-Spring crop 150 g and for Summer-Autumn crop 100g. Herbicide costs VND 18 000/ 100g. Pesticide 100 g prices VND 6000/100g. Labor input (VND) for each operation comprises: ploughing 70 000; second ploughing 70 000 (35 000 x 2 times); harrowing 30 000; sowing 17 500 (0.5 days x 35 000); Weeding & tending 300 000 (5 days x 2 times x 30 000); transport home 80 000 (2 mini-trucks x 40 000); and threshing 35 000. Except rent threshing the family laborers do everything.

Source: Study Team Interviews

Box 19 Ms. Toan, Medium household, Sam Mun Commune

Ms. Toan, Medium household, Kinh. Brigade 7, Pom Lot village, Sam Mun commune, Dien Bien district. Villagers have from 450 m² to max 5 000 m² rice land. Her family has 2000 m² grown two crops with IR 64 at a whole. IR 64 is stable while Bac Thom and Tam Thom are poor cold resistant in Winter and diseases. Bao Thai maximum yielded only 5 tonnes/ha. Hybrid rice has no buyer. So she insists in IR 64. For 1000 m², inputs include: 10 kg urea; 2 bags NPK; or 1 bag NPK plus 1 tonne FYM; 10 kg potassium chlorite; lime 30 kg; no herbicide; little pesticide if needed; otherwise manual weeding. In Winter-Spring crop, 1000 m² yield is 650 – 750 kg; in Autumn 600 kg.

She complains before only some cadres were trained. Some farmers sprayed pesticides up to 8 times; for sure they mixed several chemicals. Others applied as much as 40 kg urea/1000 m², but yield was no better than hers while she applied only 10 kg (yield was 550 and 750 kg, respectively). This season, Plant Protection Station and Dien Ban Pesticide Company jointly organizing a field school to which every farmers could attend. Class is going on over the rice crop, teachers guide participants in each stage of rice growth. Using color charts for identifying nutrient needs (IRRI Leaf Color Chart) and pests/diseases. . Seeds price VND 5 200/kg, subsidy is moved. She will keep seed purity by herself and produce seeds if some families do together. She believes able to do even better than Seed Station does.

Source; Study Team Interviews

Box 20 Mr. Lo Van Hinh, Medium household, Sam Mun Commune

Mr. Lo Van Hinh, Thai people, Medium household, in Na Thin village, Sam Mun commune, Dien Bien district.

He started rice farming from 1986. Since the introduction of IR64 by extension in 2002, he started farming IR64. He has 2,400 m² of rice field, of which 2,000 m² is for IR 64 and the rest for sticky rice C 97. Productivity of IR64 on his land is about 600 kg/1000m². Sticky rice is for self consumption only. In 2005, beside his own land, he contracted 4,000 m² from those who are not using their land for rice farming. In the Winter-spring crop, he harvested 154 bags, 40-50 kg each, which was sold for 3,200 VND/kg. In the Autumn crop, he harvested 140 bags, which is still stored at his house. He estimated that he gets some profit from rice farming.

IR64 seeds were supplied by District seed company with subsidy of 40 percent. In the first crop, rice quality is not very good. In the second, he keeps the seed by himself and quality is better as it is adaptive to the soil and climate condition on his land. However, it is dependent on seed quality. If it is not good for the next season, he will buy new seeds from the company.

IR64 proves advantage over other varieties. Its productivity is not less than other varieties, it is strong and does not require much care. IR64 rice price is high, just less than aromatic Te Thom variety.

After harvested, paddy was transported to his house and threshed. His production is mainly for his family consumption. When he has surplus, he will sell to the private processors (millers). After crops, those processors often come to households to buy paddy, then selling to bigger collectors. However, he often stores his paddy and wait until the price increases. When he or his children need money, he will bring paddy to processors and have it milled. He will sell white rice for processors and keeps bran for his pigs and fish. Beside rice farming which accounts for 55-60 percent of his income, he has 2 ponds for fish raising.

From his view, IR64 will be the leading varieties due to its advantage over other varieties. If possible, he will contract more land for rice farming. He will also sell rice to processors. The decisive factor impacting the rice quality is the proper fertilizer usage, which make it stronger, resistant to diseases and productive.

Source; Study Team Interviews

5 January 2006**Muong Phang commune**

Mr Luong Van Ua, Chairman

Mr Lo Van Bien, Party Secretary

Mr Lo Van La, extensionist

Mr Quang Van Hau, in charge of Agriculture

Mr Luong Thi Hoi, Women Union

Muong Phang is a difficult and poor commune. Poverty rate is 24.2 percent (357 hh) by old criteria and 51 percent (745 hh). Commune has 33 villages, 1461 households, 7940 persons. Per capita food is 430 kg/year. Livestock: water buffaloes 2498; Cattle 572; pig 5550. Of total 33 villages, 9 villages of Kho Mu and 4 Hmong are classified as poor villages. Muong Phang has one extension worker, one plant protection agent and one paravet. Neither service cooperative nor extension club is established. There are 20 interest groups for crop and livestock husbandry set up in 10 villages by Action-Aid.

Muong Phang is located outside Nam Rom Irrigation system. Water is deficit and large areas are grown only one crop. In Spring, rice is broadcasted and in Autumn, rice is replanted. Seed can be procured through District Seed Station: provides good seeds of IR 64, Khang Dan, CR 203, Te Thom, Sticky 352; while seeds produced by farmers are of poor quality. Farmers order seed quantities at early crop and pay the Station at the end of crop. However, in certain cases seeds provided were not enough. Most villages are classified as poor villages, so seed price is subsidized from 60 percent (Zone II) to 100 percent (Zone III).

Table 97 Cropping Patterns in Muong Phang Commune

| Land/crops | Area (ha) | Yield (t/ha) | Production (t) |
|----------------------|-----------|--------------|----------------|
| Natural area | 9 270 | | |
| Sowing area of which | 1 089 | | |
| Winter-Spring rice | 240 | 5.2 | 1 248.0 |
| Summer-Autumn rice | 227 | 3.6 | 807.2 |
| Upland rice | 20.6 | 1.7 | 35.0 |
| Maize | 130 | 3.5 | 456 |
| Cassava | 180 | 8.55 | 1539 |
| Soybean | 17.5 | 1.05 | 16.5 |
| Peanut | 25.7 | 1.2 | 30.8 |

Winter-Spring crop: In the past only one crop was grown with sticky rice (90 percent) and ordinary Tran Chau Lun. Since 1998, two crops are practiced with Spring rices of which about 50 percent are sticky rice. Rice is transplanted. Each household cultivates about 2,000 m² irrigated low land (ranging from 1,500 m² to 5,000 m²) and some upland (from 0 m² to 1,500 m²). Little land can be opened more, especially upland rainfed rice. However, if running water is led to field, about 100 ha will be converted into two crops land.

Farmers are very interested with IR 64. Its average yield is 4.0 - 4.5 tonnes/ha. Gaps in yields are very large from lowest 2.5 tonnes to 6.5 tonnes/ha/crop, highly depending on technical and investment level. IR 64 has problems of cold, water deficit, poor seed supply, low technique level, and low investment capacity. When cold damages, farmers have to sow again. Seed self produced has low quality while provided by State company is better but not enough. No or low organic manures are applied. Chemical fertilization is either low or/and imbalance. N is emphasised, even surplus, P & K is neglected. Rice is strongly

damaged by mouse and leaf blast. Training was very seldom and only for village heads. Kho Mu and Hmong do not know how to plant IR 64.

Table 98 Rice Area Share in Muong Phang Commune

| Winter-Spring rices | % | Summer-Autumn rices | % |
|---|----|---------------------------------------|-----|
| Irrigated rices | | | |
| IR 64 | 30 | Bao Thai | 50 |
| Khang Dan | 20 | Sticky Khau Tan | 15 |
| Bac Thom | 15 | Sticky Khau Chien | 15 |
| Huong Thom | 15 | Sticky Khau Lanh | 10 |
| New sticky rice | 10 | Sticky Khau Lom | 10 |
| Hybrid rice | 10 | IR 64 | 0 |
| Upland rice: mainly by Kho Mu and Hmong ethnies | | | |
| Not grown | | Sticky rice of which | 95% |
| Not grown | | Khau Pe, Khau Lanh, Khau Lon, Thoc Do | 70 |
| Not grown | | Khau Ti Lau | 10 |
| Not grown | | Khau Luong Phung & others | 15 |

Autumn crop: In lowland, about 50 percent is ordinary conventional Bao Thai, a long term variety, 50 percent is grown with sticky rice. In upland, only Kho Mu and Hmong people cultivate rices and all are sticky varieties. There is a processing point in the commune center and milling machines in each village, including in the remote villages.

Box 21 Ms. Inh, Better-off household, Muong Phang Commune

Ms. Inh, Better-off household, Thai people. Che Can village, Muong Phang commune, Dien Bien district.

Details provided in text

Source: Study Team Interviews

Table 99 Production Cost of IR64 in Muong Phang Commune

| Inputs | Quantity | VND |
|---|------------------------------|-----------|
| Seed | 12 kg x VND 2200 | 26 400 |
| FYM | 300 kg x (VND 240/kg) | (72 000) |
| Urea | 20 kg x VND 4 800/kg | 96 000 |
| Fused phosphate | 30 kg x VND 1 000/kg | 30 000 |
| Potassium chlorite | 10 kg x VND 3 500/kg | 35 000 |
| Pesticide | | 37 500 |
| Herbicide | 1 bottle x VND 18 500/bottle | 18 500 |
| Ploughing (self) | | (70 000) |
| Levelling (rent) | VND 50 000 | 50 000 |
| Harrowing (self) | | (30 000) |
| Sowing (rent) | 0.5 day x VND 20 000/day | 10 000 |
| Weeding (rent) | 5 days x VND 20 000/day | 100 000 |
| Spraying pesticides (rent) | 5 days x VND 20 000/day | 100 000 |
| Harvest+transport home+threshing (rent) | 8 days x VND 20 000/days | 160 000 |
| Total | | 678 000 |
| Paddy output/1000m ² | 500 kg | |
| Farmgate price | VND 2 500/kg | |
| Revenue in VND | 500 kg x VND 2500/kg | 1 250 000 |
| Cost of paddies(VND/kg) | 678 000: 500 | 1356 |
| Cost of rice(VND/kg) | 678 000:350 | 1937 |
| Benefit per 1000 m ² | VND1 250 000 - 678 000 | 572 000 |

1000m² Calculated by Ms Inh and Mr La

Notes: In parenthesis is estimated.

Table 100 Production Cost of Khau Tan in Muong Phang Commune

| Inputs | Quantity | VND |
|---|------------------------------|-----------|
| Seed | 15 kg x VND 3000/kg | 45 000 |
| FYM | 300 kg x (VND 500/kg) | 72 000 |
| Urea | 15 kg x VND 4 800/kg | 72 000 |
| Fused phosphate | 30 kg x VND 1 000/kg | 30 000 |
| Potassium chlorite | 10 kg x VND 3 500/kg | 35 000 |
| Pesticide | | (37 500) |
| Herbicide | 1 bottle x VND 18 500/bottle | 18 500 |
| Ploughing (self) | | (70 000) |
| Levelling (rent) | VND 50 000 | 50 000 |
| Harrowing (self) | | (30 000) |
| Seedling+replanting (rent) | 5 day x VND 20 000/day | 100 000 |
| Weeding (rent) | 5 days x VND 20 000/day | 100 000 |
| Spraying pesticides (rent) | 5 days x VND 20 000/day | 100 000 |
| Harvest+transport home+threshing (rent) | 8 days x VND 20 000/days | 160 000 |
| Total | | 920 000 |
| Paddy output | 450 kg | |
| Farm gate price of paddies | VND 3 500/kg | |
| Revenue per 1000 m2 | 450 kg x VND 3500/kg | 1 575 000 |
| Cost of paddies (VND/kg) | 920 000:450 | 2044 |
| Cost of rice (VND/kg) | 920 000:315 | 2923 |
| Benefit per 1000 m2 | 1 575 000-920 000 | 645 000 |

1000m2 Calculated by Ms Inh and Mr La

Notes: In parenthesis is estimated.

Box 22 Ms Yeu, Poor Household, Muong Phang Commune

Ms Yeu, Poor household, Thai people. Che Can village, Muong Phang commune, Dien Bien district.

Details provided in text

Source; Study Team Interviews

Box 23 Ms Lien, Mr Vuong, Processor cum Trader, Muong Phang Commune

Ms Lien, Mr Vuong, Processor cum trader. Muong Phang commune, Dien Bien district.

They have a machine processing rice, maize and cassava of 5 – 6 tonnes/day. However, in mid-season this year each day they processed only 5 – 6 bags of 40 45 kg (or 200 – 250 kg/day). Fee for rice husking is VND 3 000/bag (or VND 70/kg). They buy rice in mid-season at low price and sell whenever the price rose up to supposedly maximal. In wet Wither-Spring, paddies are usually sold right after threshing, even still humid, so price is VND 2 200 – 2 300/kg. After drying, paddies are husked and rice/paddies ration is between 58 – 60 – 62 percent depending the quality of paddies purchased. The best IR 64 can reach 70 percent. Bao Thai price is VND 2 500/kg and rice/paddy ratio is 60 percent. Paddies are bought and stored (40 -50 tonnes per crop. By March – April pddies are processed and sold. A profit of about VND 200/kg is received not including bran (VND 1 600/kg). Upland sticky rice is more and more rare because of nurning forest is forbidden. Collectors from somewhere come to buy without contract.

Source; Study Team Interviews

6 January 2006

Box 24 Ms Xu and Mr Hom, Poor Household, Muong Phang Commune

Ms Xu & Mr Hom, Poor household, Kho Mu minority. Co Cuom village, Muong Phang commune, Dien Bien district.

Details provided in text

Source; Study Team Interviews

Box 25 Mr. Cu A Di, Poor Household, Muong Phang Commune

Mr. Cu A Di, H'Mong people, Poor household in Co Cuom village, Muong Phang commune, Dien Bien district.

He has no irrigated lowland, only 1,000 m² upland for maize farming and 1,000 m² upland for rice farming, of which 600 m² is for ordinary Khau Lanh rice and the rest for sticky Khau Lanh (Thoc Do) rice. All rice produced is kept for family consumption only. He sells maize and keeps some for pigs. In 2005, he produced about 350 kg of ordinary rice and 200-250 kg of sticky rice.

Khau Lanh is traditional variety. After harvest, seeds are kept on smoking shelf for the next crop. He does not use new varieties supplied by the government because they require fertilizers but he does not have money. His traditional varieties do not require fertilizers. He uses herbicide only. In some crops, his rice has some pest damage (borer), but he didn't use insecticide, just picking them by hand.

Income from rice farming is his only income. He and his wife do all farming work. Because he does not have buffalo, he has to hoe field by himself. He raises some pigs for self consumption in special occasions. Every year, his family is lack of food for 2 months, so he has to borrow from neighbors or relatives for survival. When he has harvested his crop, he repays his debt with paddy and maize. He wants to borrow some money from the Social Policy Bank to buy some buffaloes, cows or goats. He tried several times but he can't. Some traders come to buy rice but he does not sell. He stores only small quantity of rice due to limited rice land and rice is cultivated only one crop per year.

From his view, rice land can't be increased, but he wants to have new varieties introduced by the extension for higher productivity. He also wants to use fertilizers and insecticide to protect his crop for getting higher yield.

Source; Study Team Interviews

13 January 2006**Table 101 Prices of Rice In Hanoi market & Supermarkets**

| Rice | Selling price (VND/kg milled and polished) | Notes |
|-----------------------------|--|-------------------------|
| Tam Thailand | 8 000 | Most easily sold |
| Tam Hai Hau | 7 800 | Most easily sold |
| Du dau Hai Hau | 7 800 | Most easily sold |
| Tam Dien Bien | 7 500 | Medium |
| Du huong Ha Dong | 5 600 | Medium |
| IR 61 | 5 400 | Medium |
| Bac Huong (or Q 8) | 3 900 | Most easily sold |
| Q 4 | 4 200 | Little, for cake making |
| CR 71 | 4 200 | Little sold |
| CR 203 | - | No more sold |
| Hybrid rices | - | No more sold |
| Nep Tan (lowland) Dien Bien | 9 800 | Most easily sold |
| Nep Cam Dien Bien | 9 000 | Medium |
| Nep nuong Dien Bien | 9 000 | Medium |
| Nep cai Hoa Vang | 9 500 | Most easily sold |
| Nep Cai trang | 8 000 | Most easily sold |

Table 102 Rice Price in INTIMEX, 27 Huynh Thuc Khang, Hanoi

| Rice | Bag | Price | VND/kg milled and polished | Notes |
|-------------------------------------|-----|--------|----------------------------|--------|
| Tam Dien Bien | 5 | 48 000 | | Yamaha |
| Tam ap be Xuan Dai | 2 | 20 000 | | Yamaha |
| Gao Thai | 5 | 57 000 | | Yamaha |
| Gao Thailand (in Thailand language) | 2 | 23 000 | | Yamaha |
| Tam Xoan | 5 | 48 000 | | |
| Gao dac san vung cao mien Bac | 2 | 20 500 | | Yamaha |
| Nang Thom, Bay Nui, An Giang | 5 | 54 000 | | Yamaha |
| Gao lut dac san mien Bac | 1 | 12 000 | | Yamaha |

17 January 2006**Box 26 Dong Bac Company****Dong Bac Company, Mr Do Van Hiep, Director. 30 Hoang Van Thai, Hanoi.***Details provided in text*

Source; Study Team Interviews

Field notes in Dien Bien, January 15 – 23, 2006
By Nguyen Tu Siem
15 January 2006

Box 27 Mr Thuy, Retailer, Dien Bien Market

Mr Thuy, Retailer, Dien Bien market.

She buys either paddies or husked rice if farmers retain bran for them from commune processing points or directly acquaintance farmers. Purchased amount varies between some hundreds to one tonne as space for stockage is limited. Purchase in early harvest seasons (May-June and September-October) when paddies are cheap. She sells for the city consumers from 5 to 20 kg each time, totalling by 150 – 200 kg/day. Rice is sold also for tourists in group (order in advance some hundreds kg) or Hanoi people by phone calls. Rice to Hanoi via car/truck drivers who bring rice and collect money for her. Some low quality rices (Bao Thai or CR 203) used for making noodle/cakes, is sold at home upon order, in large amounts.

| Kinds of rice | Buying (VND/kg) | Selling (VND/kg) | Differences (VND/kg) | Notes |
|---------------|-----------------|------------------|----------------------|--|
| CR 203 | 4 300 | 4 300 | | Sale at home; on request; for cake; large amount |
| Bao Thai | 4 000 | 4 300 | 300 | ditto |
| Tam Thom | 6 600 | 7 000 | 400 | Hanoi buyers |
| 64 | 5 600 | 6 000 | 400 | Most requested, New Year |
| Te thom | 5 800 | 6 500 | 700 | Most requested, New Year |
| Te nuong | 5 700 | 6 200 | 500 | |
| Nep Cam | 6 600 | 7 000 | 4 00 | For liquor making |

Source; Study Team Interviews

Box 28 Ms Sinh, Retailer, Dien Bien Market

Ms Sinh, Retailer, Dien Bien market.

Her client: local and tourists from Hanoi. Local people buy IR 64, while Tam Thom and aromatic SR only in holidays & Tet. They pay attention on aroma, soft, purity, provenance and lastly price. IR 64 lowest VND/kg: 5600, highest 6000; Tam Thom 6500 and 7000; aromatic USR average 7500 with large variation from 1000-10000/kg.

Source; Study Team Interviews

Box 29 Ms Tot, Retailer, Dien Bien Market

Ms Tot, Retailer, Dien Bien Market

She buys upland rice from Thai people traders who bring by motorcycle from mountain Hmong people, then husking and selling to her. She bought this shop place (1998), and has to pay business registration fee VND 50 000/yr; VND 30 000/month for market administration; and VND 40 000 for market cleaning and byke keeping. She sells to Hanoi from 100 to 1 000 kg each time. She keep at the shop from several hundreds to one tonne of rice. She buys largest amounts in May and September.

| Kinds of rice | Buying (VND/kg) | Selling (VND/kg) | Differences (VND/kg) | Notes |
|------------------------------|-----------------|------------------|----------------------|--------------------------|
| Nep nuong thom | 8 500 | 9 000 | 500 | Most requested, New Year |
| Nep nuong thuong | 7 600 | 8 000 | 400 | |
| Nep nuong thuong, hat nho | 6 100 | 6 500 | 400 | |
| Nep nuong thuong, hat to hon | 6 600 | 7 500 | 900 | |
| Ordinary Hmong paddies | 3 300 | 3 500 | 200 | For chicken |
| Bran | 2 300 | 2 500 | 200 | For pig |

Source; Study Team Interviews

16 January 2006: Meeting with DoTT

Mr Nguyen Van Tuong, DoTT Director
 Mr Hoang Van Du, Chief, Trade Promotion Center
 Mr Lo Ngoc Minh, Dty Chief, Trade Promotion Center

There is a conflict in interest between stakeholders; with market economic mechanism, only rice circulators gain benefit. So, harmonization of interest is important. Communist Party Organization doesn't encourage upland rice but promote converting uplands into irrigated terraces. Upland sticky rice is not aromatic, no superior than lowland sticky rice, whether it is due to deterioration. For promotion added value, it is imperative to do in a comprehensive manner. It is not effective if we interfere into only one ring on the whole chain. Dien Bien is well known with IR 64, it is very good, but its reputation is abused as apparently its grain outside is very familiar to that of the inferior rices. We want to establish Dien Bien label and trade mark. IR 64 sold in markets is not real IR 64, it is mixed with analogues. Consumers who get used with it can not leave it. In the exhibition/faire in Da Nang, at first little was sold. Some bought IR 64 for testing, after they tried, rice became highly demanded and no rice was not enough for sale.

17 January 2006**Revisit Extension Center & Agriculture Section of DARD****Revisit Dien Bien city market****18 January, 2006****Box 30 Mr Toan Retailer, Dien Bien****Mr Toan & wife, Retailer, May 7 Road, Dien Bien.**

They do business on roadside, buying from farmers who bring by bikes from 12 km far, each bike carries 150 kg. They sell 200-500 kg/day with pick at Tet eve. Two periods: Jan-Feb and Jun-Jul are busiest. On request of collective units, they sold 500 kg to several tonnes (up to Ninh Binh). IR 64 sale is larger than Tam Thom as IR 64 fits for consumers' money pocket. Benefit: average VND 200/kg for ordinary rices and 300/kg for sticky rices; if > 500 kg they accept a reduction of VND 50/kg. National Food Reservation sells in March-April and August-September at VND 2400/kg while in markets 2800/kg or 400/kg difference.

Source: Study Team Interviews

Box 31 Mr Phuong, Retailer, Dien Bien City**Mr Phuong, Retailer, Ban Phu market, Dien Bien city.**

In Ban Phu market there are 4-5 small shops selling rice mainly for people around. IR 64 is in first place for sale, high eating taste, but not aromatic, largest in consumption quantity. Normal families eat IR 64; medium families: mix IR 64 with either Tam Thom or Te Thom; noble families: Tam Thom. Traders (not honest) usually mix IR 64 with 61 and sell as IR64. IR 64 grain: longer, slender, yellowish, a blackish line while 61 grain: shorter, fatter, cheaper. IR 64 accounts for 70 percent of her daily total sale (100 kg). In Tet, consumers add some aromatic rice to IR 64 (by 0.7:0.3). IR 64 is losing its reputation because: low purity and mal-practice. Even Tam Thom may be mixed with Khang Dan by traders, but consumers can not know. Dien Bien & Son La people mainly consume IR 64. It is expected larger sale with new construction (Ta Bu, army units, etc.). She sells from each sale of several kg to tens kg. National Food Reservation dumps in February-March when food deficiency is acute. They ought to support people in critical period and refresh their stores. Of rice qualities, noble buyers pay attention on aroma; normal buyers on soft, easy cooking, soft; cake/noodle makers: low price, not sticky; every buyers: purity and cleanness. She buys IR 64 and ordinary rices at Ban Phu. In November, she buys max 10 tonnes for reserve. USR are bought from truckers who

bring from remote areas: Muong Luon, Muong Nhe, Muong Loi, Muong Cha (100-200 km; transport fee about VND 100-150/kg). They buy paddies, husking here and sell white rice and bran. Usually, traders advance money for farmers and take paddies in harvest.

| Kinds of rice | Buying (VND/kg) | Selling (VND/kg) | Differences (VND/kg) | Notes |
|----------------------------------|-----------------|------------------|----------------------|--------------------------------------|
| USR, long biggest grain aromatic | 7500 | 8500 | 1000 | Best |
| USR, large grain, no aromatic | 6000 | 6700 | 700 | |
| USR, long grain, aromatic | 6500 | 7000 | 500 | |
| Lowland SR "Can bo" or SR 352 | 4500 | 5000 | 500 | Introduced by GOV staff ("can bo") |
| USR Khau Pe white | 4700 | 5000 | 300 | |
| USR Khau Pe red | 4700 | 5000 | 300 | For ancohol, cakes |
| USR Khau Tan | 6700 | 7000 | 300 | Second Best, both upland & lowland |
| Tam Thom | 6300 | 7000 | 700 | >10 kg-> 6800 |
| IR 64 | 5300 | 5800 | 500 | Best seller, not for noodle or cakes |
| Te Thom | 5600 | 6000 | 400 | |
| Hybrids and lower quality rices | 4300 | 4700 | 400 | For noodle, cakes |

Source: Study Team Interviews

Box 32 Ms Hoan and Mr Khuong, Processor, Dien Bien City

Ms Hoan & Mr Khuong, Processor, Ban Phu, Dien Bien city.

She does business only one crop (Summer-Autumn) with a truck of 2.5 tonne capacity and a mill of 6 tonnes/day. She buys paddies (100 tonnes/crop) and sells rice. She does not buy rice because rice can not be stored for long time. Paddies are bought from the valley and from less than 150 km far (transport fee: Muong Nhe 80 km VND 200/kg; Muong To 200 km VND 250/kg). Money is advanced for friendly and trusted farmers and paddies (USRs, Te Do & Te Thai) are taken at harvest (brotherhood). Purchase from 2-3 families is enough, without advance we failure. National Food Reservation buys in W-S and sells in S-A season. She does milling for 3 months; remaining 9 months uses truck for transport. Fee for milling VND 400-500/kg. Harvest is very short (15-20 days).

| Kinds of rice | Buying (VND/kg) | Selling (VND/kg) | Differences (VND/kg) | Notes |
|-----------------------------------|-----------------|------------------|----------------------|------------------------------------|
| USR, long biggest grain aromatic. | Paddies | Rice | | Best. Rice/paddy 68% |
| Early harvest: | 4500 | 6700 | | |
| Mid harvest: | 4700 | 7200 | | |
| USR, normal, aromatic | | | | Rice/paddy 68% |
| Early harvest: | 3800 | 6000 | | |
| Mid harvest: | 3600 | 5500 | | |
| USR, normal/Khau Pe | 2900 | 4500 | | Rice/paddy 63% |
| Ordinary Thailand | 3300 | 4000 | | 65%. Loss, because decreased price |

Source: Study Team Interviews

Box 33 Ms Su Tron, Medium Trucker Dien Bien Market

Ms Su Tron, medium trucker (0912 247 473), Dien Bien market.

Details provided in text

Source: Study Team Interviews

19 January, 2006
Visit Dien Bien Dong district

Box 34 Mr Tinh and Thu, Collector, Dien Bien Dong District

Mr Tinh & Thu, Collector, Phi Nhu village, Dien Bien Dong district, Dien Bien.

Some details provided in text.

| Kinds of rice | Buying (VND/kg) | | Selling (VND/kg) | | Differences (VND/kg) | Notes |
|-----------------------------------|-----------------|---------|------------------|---------|----------------------|-----------------------------------|
| | Sep-Dec | Dec-Feb | Dec-Feb | Sep-Dec | | |
| USR, long biggest grain aromatic. | Paddies | Paddies | | | | Best. Rice/paddy 70% |
| Early harvest: | 2700 | 5000 | 2300 | | | |
| Mid harvest: | 3200 | | 1800 | | | |
| USR, normal, aromatic | | | | | | Rice/paddy 68% |
| Early harvest: | 2800 | 3100 | 300 | | | |
| Mid harvest: | 2900 | | 200 | | | |
| USR, red/Khau Pe | | | | | | Rice/paddy 63% |
| Early harvest: | 2500 | 2900 | 400 | | | |
| Mid harvest: | 2700 | | 200 | | | |
| Nep Cam | | | | | | |
| Early harvest: | 2700 | 3000 | 300 | | | |
| Mid harvest: | 2800 | | 200 | | | |
| Nep Ta Bong | | | | | | |
| Early harvest: | 2900 | 3100 | 200 | | | |
| Mid harvest: | 2900 | | 200 | | | |
| Nep Thai Lan | | | | | | Largest amount. |
| Early harvest: | 3800 | 4500 | 700 | | | |
| Mid harvest: | 4000 | | 500 | | | |
| Nep Tan | | | | | | |
| Early harvest: | 3000 | 3300 | 300 | | | |
| Mid harvest: | 3000 | | 300 | | | |
| Nep Thai Lan | | | | | | |
| Early harvest: | 3800 | 4500 | 700 | | | |
| Mid harvest: | 4000 | | 500 | | | |
| Ordinary Thai | | | | | | He lost, because decreased price. |
| Early harvest: | 3100 | 3300 | 200 | | | |
| Mid harvest: | 3200 | | 100 | | | |
| Te trang | | | | | | |
| Early harvest: | 3000 | 3400 | 400 | | | |
| Mid harvest: | 3200 | | 200 | | | |
| Te rau (Te de) | | | | | | |
| Early harvest: | 3000 | 3300 | 300 | | | |
| Mid harvest: | 3200 | | 100 | | | |
| Te do | | | | | | For ancohol making |
| Early harvest: | 2400 | 2600 | 200 | | | |
| Mid harvest: | 2500 | | 100 | | | |

Source; Study Team Interviews

Box 35 Mr Po, Farmer-Collector, Dien Bien Dong District

Mr Po, Farmer-collector, Hmong people. Cu De village, Phu Nhi commune, Dien Bien Dong district.

He buys and stores paddies from villagers about 20-25 tonnes/crop. Paddies are bought after or before harvest, but majority is before harvest as immature ones are much cheaper. He sell first to his traditional client (from Phu Nhi); the surplus quantity for truckers. He can collect for truckers in urgent moments, but price is higher (100-300/kg) and quality is not ensured.

| Kinds of rice | Buying (VND/kg) | Selling (VND/kg) | Differences (VND/kg) | Notes |
|--|-------------------------|-------------------------|----------------------|--|
| USR, long biggest grain aromatic. Immature At harvest | Paddies 2000 2500 | Paddies 2700 2700 | 700 200 | For his traditional client; if for truckers: 2900-3000/kg with lower quality |
| USR, normal, aromatic | | | | |
| USR, red/Khau Pe Immature At harvest | 1700 2300 | 2500 2500 | 500 200 | If for truckers: 2600-2700 and quality is lower |
| Ordinary Thai Immature At harvest | 1500 2400 | 2500 2500 | 1000 100 | Last year, price was sometimes low. |

Source; Study Team Interviews

Box 36 Mr Hung, Village Processor, Dien Bien Dong District

Mr Hung, Village Processor, Suoi Lu village, Dien Bien Dong district.

He has been processing for 10 years with a machine 1 tonne/hr, fee VND 500/kg. In village each or several families have 1 machine, so now he process only 100kg/day of which 80 percent is sticky rice. Villagers do shifting cultivation: 1-2 first years: USR & Te Thailand, followed by 2 years of USR Nep Tron and three years of Khau Pe or Te Do. Te Thai (very tall) and USR aromatic need high fertility while Khau Pe needs lower fertility (otherwise, fall ddown). Each family has 1 to 10 ha uplands. Hmong villagers eat Te Thailand (grown here) and IR 64 from Dien Bien (80 percent), and 20 percent USR. Hmong people keep rice enough for them, abd sell the surplus amount. Price of paddies now: Best USR: VND 4500/kg; Lowland SR Khau Tan: 3500; and Te Thailand: 3500.

Source; Study Team Interviews

20 January, 2006 (Thursday): AM: Debriefing in DoTT.

Present are Mr Hoang Van Du, Chief, Dp't of Personnel; Messrs Minh, Tuan and Hung, staff.

After debriefing by Mr Grant Vinning and additional opinions by Mr Siem; Mr Du and Mr Tuan gave some comments:

- Study Team was friendly and cooperative, highly devoted to field work, thoroughly scrutinizing the issues with a scientific working methods. At the same time, the Team helped the DoTT staff to better understand added value chain as well as how to deal with it to validate provincial agricultural commodities;
- The PPC has assigned the DoTT to start developing "Brand of Dien Bien Rice". The thing is new and the DoTT staff are not experience. Before contacting with the Team, even they can not distinguish "label" from "brand". There are a number of work to do for reaching a brand.
- Findings found by this study and the final report with relevant recommendations will serve very important basis for the DoTT decisions.
- DoTT will discuss with SNV and do look forward to reaching an agreement on the follow-up step. DoTT will collaborate with the related agencies to fulfil the assigned duty.
- On this occasion, DoTT expresses its best wishes to all SNV staff, Ms Haasje personally and the Team members.

21 January, 2006 (Saturday): Work over data

22 January, 2006 (Sunday): Flight to Hanoi

Dien Bien 15 January

Market Place

Reseller #1

Ba Thai 4600

From China

Easily broken, not soft when cooking

IR 64 6000

First choice by consumers from this buyer

Tham Thom 7000

Aromatic

Second choice

Nep Nuong 9000

Sticky

Popular at Tet, people willing to pay the higher price

Definitely more popular at Tet

Te Thom 6500

Ordinary aromatic

Te Nuong 6200

Upland ordinary

Black sticky 7000

Used to make alcohol

Reseller #2

Very passive seller

(a) Gets phone calls from Hanoi from end consumers who have visited Dien Bien and like the rice, driver takes to Hanoi, receives and returns the money

Orders are between 50 – 500 kg

(b) Local growers contact her if they want to sell

Merchants in Hanoi deal directly with processors

Her margin is around VD200 /kg for which she must provide storage and bags

Works most days except when sick of special occasions

Reseller #3

Tam Thom rarely used locally but preferred by Hanoi

Receives phone orders from Hanoi

Orders in range 100 – 200 kg, sometimes up to 500 kg

Humong grow, sell to Thai who then on market to her

Sellers come to her, not her to them

Photos 182

Right Upland stick normal 8000

Left Upland sticky aromatic 9000

Retailer (husband and wife)
Dien Bien
17 January 2006

Not a store nor a designated place in the market place but an operation was based on using the footpath.

Retailing the whole year round. On average they sell 200 kg per day but during Tet they sell on average 500 kg per day.

Dien Bien Households: IR 64 and Te Thom
Tourists Hanoi: Tham Thom
Civil servants Hanoi:
Hotel Hanoi (K 15 for Lai Chau people): 200 kg per time sent through the bus Upland sticky rice and Tham Thom

Main attributes sought for by the customers:
1. purity 2. cleanliness 3. origin

Best Tham Thom is from Thanh Anh commune. Best IR 64 in Samon commune.

She buys rice from grower or collector or processors. Prefers to buy rice as it is easier to assess the quality of rice than that of paddy.

Highest price: February
Lowest price: May – June
Difference of prices between the highest and the lowest is 500 to 700 VND/kg

Storing: she stores 1 to 2 tonnes in her house the year round to ensure the relation with her customers and never to be short of rice to sell.

Retailer
Dien Bien City
17 January 2006

She does the retailing business only during this period (two to three weeks prior to Tet festival).

She buys only rice.
Her customers are mainly in DB:
DB restaurants: purchase IR 64, Tham Thom, Te Thom 50 – 100 kg / week
DB households. Brings the rice to their door step
From Hanoi: ask for tasty rice (not variety)

Main attributes: 1. Purity 2. Tasty 3. Variety

Her suppliers are:
collectors who buy from processors and bring to her
processors who bring to her

April to October : prices are low
Tet: prices are high.

Retailer
Dien Bien City
17 January 2006

She does the retailing business the whole year round. Sells 7 different types of varieties. Buys paddy and rice but sells rice.

She gets the paddy in 50 – 70 kg bags and she gets the rice in 50 – 70 kg bags. Repacks the into packs of 5, 10, 20, 30, 50 kg bags. She stores max 300 kg rice but not ore as she doesn't have the cash to buy more at a time.

November – December: prices are high. May – June: Prices are low

Her customers:

DB restaurants buy 50 kg every 10 days

DB households (4 people) buy 10 – 20 kg every 10 days

Vietnamese tourists buy 10kg to 50 kg bags and a few by 100 kg bags but there are no regular customers from Hanoi.

Grower Co Zian

18 January

She takes 1.3 tonne of paddy to produce 800 kg rice. She has more paddy at home. The reason she is getting so much milled today is that she needs the money to build a new house and the need to pay for school fees and books for her children. Aged 51, Co Zian has five children of which the youngest is 7.

She only grows Te Thom. This is because

It has the best eating quality

she and her family can eat it at home

the surplus is readily saleable

it has the same yield as IR 64

its price is higher than IR 64's D5.000 kg / rice

it is less susceptible to loss due to pest and diseases, and weather compared with IR 64.

The present time is the best to sell rice as the prices are the highest. She receives D6.200 / kg rice. This is up on the previous price of D5.900 – D6.000. She takes back the hull and husks in the tuktuk she hired to bring the paddy to the miller.

This was the first time she has been to this processor. She is trying him because his prices are higher than her regular processor. The method by which she found out this information was through word of mouth of other growers. Different villages go to different processors and then discuss the results amongst each other.

Collector and Processor
Dien Bien Valley
18 January 2006

A truck is offloading Upland ordinary Thai Lan (7 T) and Upland Sticky paddy (3 T) from Mung Cha commune collected from local collectors. Around five men are offloading, the lady processor is controlling the quality of the paddy by introducing a tester in each bag and sampling in the middle and her husband is weighing 10 bags at a time. The lady collector has hired two trucks (capacity 10 T and capacity 30 T) at the rate: 250,000 VND / tonne. The drivers are brothers. She does this business from October to March. The collector checks with the lady processor the quality and checks the weighing. The lady processor tests every bag to ensure that it is true-to-type. The processor does business with many collectors and the collector does business with many processors, nevertheless both of them have a long lasting business relationship (no contract). Both ladies have a recording book where they write the accounts.

The bags are marked with a number or a letter (indicating the variety) and the weight of the paddy bag as per the weighing between the collector #1 and the collector #2 (the one who is present). There is no differentiation based on the commune origin of the paddy.

Paddy transport:

The truck was rated at 10 tonnes. It was fully loaded in the sense that the volume of the truck was fully occupied. However as the truck was carrying paddy then the load capacity of the truck was not fully stretched. Another truck from the same company arrived. This was rated at 15 tonnes but was not loaded much more than two-thirds in height. The large truck is unable to go into the high hills to collect the paddy. Instead the smaller truck goes to the villages and returns to a central point to load the large truck. Assuming that the smaller truck could not achieve a full load in the villages, then it must go to village #1 empty, load the paddy then return to the large truck to discharge. The result would be multiple handling and high transport costs associated with at least two empty journeys to the villages. If the large truck came to the mountains empty, its per journey costs would be high because of no back-loading.

The truck travels 130km to the collection point. The last 10 kms is an extremely poor road. The truck is used for rice transportation in the season and general cartage in the off-season.

Payment to the growers is on a cash basis. The buyer then sells to the processor. The buyer does not act as agent for the processor.

The busiest period is October to March for the collector #2. During Tet time she collects and had 40 T / week paddy transported from collector #1 to processor.

The processor had around 200 tonnes of storage. This usually empties by May to be refilled with the June harvest.

Processor's main business is in Son La. The main varieties she processes are Thai Lan ordinary upland rice, Tam Thom, IR 64 and sticky rice Nep Ghe (to make rice wine).

She stores from January (??) 200 T until May (the next harvest).

She has only 1 or 2 customers from Hanoi (very small part of the trade).

Husk price: 2,000 VND / 60 kg (=3 bags)

Husks are used as fire wood.

Retailer

Dien Bien City
18 January 2006

Activity

She has a motorbike, she purchases rice from processors and she sells to the post office officials who carry the rice in the post office truck. People from the post offices in Ha Long, Ha Thay, Son La, Ha Noi, call her to have rice from DB and she puts it in the post office car. She buys big 70 kg bags and repacks the rice in mostly 15 kg bags but also 5, 10 and 20 kg bags purchased from Hanoi.

Quantities and varieties of rice handled

Main varieties sold are Them Thom (most), Te Hem that is an aromatic sticky (second most popular), and IR64.

Supplier

The reseller buys from the processor because the processor has equipment that can clean up the product to a level of cleanliness that she wants. All she does is a small amount of hand picking to remove the husks of the paddy. She goes to this processor because she wants to have clean rice as that is what Hanoi customers want.

Customer

Action occurs by customers asking her to supply them. Initial contact was with the one person who has passed on her details through word of mouth. She handles about a tonne per day. Her customers state a clear preference for Dien Bien rice. She never visits customers, they tend to call her. She gets paid through the truckers. Customers from Hanoi pay her later than when they receive the rice. They pay her when they come to DB.

Preferred type is upland sticky aromatic rice. This is particularly true for Tet. Single harvest occurs in October. She prefers this because it is "upland" therefore known not to have fertilizers and chemicals. This suggests that "natural" from "uplands" is a selling point. Even rice that comes from two crops a year is not considered as "natural".

People from Hanoi prefer:

Tam Thom
Te Thom
IR 64

Aromatic Upland sticky is only popular at the Tet time.

Attributes that Hanoi customers seek:

Aromatic
Clean
Pure

Prices and margins

Profit margin is around D20 000 / 100 kg. This is consistent with others. From this she must clean and repack. Repack is into parcels from 5 kg to 50 kg. Most popular size is 15 kg. She uses either new poly bags for 5 kg to 15 kg, or old fertilizer bags for 50 kg parcels. New bags she purchases from Hanoi. Her profit: 20,000 VND / 100 kg = 200 VND / kg

Co Dao Thi Hung
Processor
Just outside of Dien Bien
18 January 2006

Co Dao used to be a local collector but moved into processing in 1999. At the moment she buys from local collectors then on-sells to larger processors that in turn on-sell to Hanoi. She has a small re-seller business supplying direct to Hanoi customers but this is very passive as they contact her.

She was extremely cynical about the storage facility provided through the national food security system. If all goes well, it buys rice from harvest in Year T-1 that fills the storage. Then before harvest in T-2, it releases the stored rice to empty the sheds for the T-2 harvest. Because of the prices that it pays, it cannot fill the shed for the past two years. As a result, it has had to go to the other provinces where the rice is exceptionally cheap. In 2005, the National Food Security system was selling Thai Binh rice that it had purchased and transported to Dien Bien for D2.400 /kg paddy. In contrast the lowest price for paddy in Dien Bien was D2.700 /kg paddy.

She is now doing a large proportion of her business with just the one company in Hanoi. The company requires her to provide pre-processed, defined as husked paddy but not polished. The company's order is for 15 tonnes. Requirement is just for Te Thom. Co Dao is suspicious of the company as she feels it is working with a number of other processors and all have been told the same thing.

Co Dao much prefers to work with producers of Thai Upland Ordinary because:

Tasty and thus sells well.

Thai Upland producers like to sell their product all in one load. This make collection by her very easy. If necessary, she can collect up to 100 t at once.

The bigger processors in the Valley can handle between 400 – 600 t. These are Moc Dai and Tetchin.

In her view the preferred types of rice are
Upland aromatic sticky from Dien Bien Dong
Upland sticky from Si Pa Phin
Thai Ordinary Upland from Si Pa Phin

In the past two years there has been considerable price fluctuation whereas prior to then there was hardly any. Part of the reason has been the increase in the number of traders coming from Hanoi into Dien Bien. They work with the big processors who in turn work directly with smaller processors.

Prices increase from November onwards. May is the peak supply period for Te Thom and IR 64. Tet is the peak demand period for Te Thom. At this stage the price is higher but usually IR 64 and Te Thom are comparably priced. Son La prefers Thailand Ordinary.

She was extremely cynical about the storage facility provided through the national food security system. If all goes well, it buys rice from harvest in Year T-1 that fills the storage. Then before harvest in T-2, it releases the stored rice to empty the sheds for the T-2 harvest. Because of the prices that it pays, it cannot fill the shed for the past two years. As a result, it has had to go to the other provinces where the rice is exceptionally cheap. In 2005, the National Food Security system was selling Thai Binh rice that it had purchased and transported to Dien Bien for D2.400 /kg paddy. In contrast the lowest price for paddy in Dien Bien was D2.700 /kg paddy. When the system sells to processors like her, they sell quite mixed products with sticky types being mixed with non-sticky types. Rice can be stored in the system for up to three years. When she has purchased rice from the system, she has used it as pig feed. Previously she used to collect for the system, acquiring up to 250 t per annum.

Ms Lic
 Agro food
 Dien Bien
 18 January 2005

Company handles paddy rice and corn. She mainly buys paddy but will buy rice. Her market is within and beyond Dien Bien. The company has its own trucks but it prefers to use locally owned vehicles for local work. Hired trucks are preferred for the collection work in the higher hills.

Company staff are based in the region and act as collectors for the trucks. However, most of her business is in the valley rather than the hills because (a) there is only one crop a year in the hills (b) upland product is expensive to collect because of high transport costs and the cost of maintaining in-situ staff. Even though there is greater competition and the margins lower, she prefers to do business in the valley as the costs are lower.

Upland rice is usually upland ordinary. She also handles Upland Aromatic but does not handle Upland Aromatic Stickies. However she stated that Upland Aromatic Sticky rice is the best to deal with because of the high margins.

Valley rice includes C61 but the area is now reducing. IR 64 constitutes about 20 percent of the area planted. Tam Thom constitutes about 70 percent of rice consumption in Dien Bien because of it is aromatic.

Tam Thom price in 2005 was D5.700 / kg but D6.200 / kg in 2006.

For storage she has 70 -100 tonnes for paddy for the upland and valley harvests from October onwards. She stores around 200 t per crop of the lowland harvest of May-June. Storage is for around one month.

The Company has regular customers in Dien Bien and Hanoi. The former is a smaller market in terms of volume but with frequent purchases. The major clients in Hanoi are private food manufacturers. Their purchases are in much larger parcels. The Hanoi companies pay half on delivery and the other half with the next delivery Customers in Hanoi prefer aromatic and upland aromatic sticky. There is very little demand in Hanoi for IR 64. Only in Dien Bien does there seem a demand for IR 64.

Her biggest complaint is the price of transport. The truckers are mainly private sector companies from Dien Bien.

When asked for her most busiest period she had to think for a while then nominated September until Tet.

Prices and margins

| Variety | Purchase (rice) VND / kg | |
|----------|--------------------------|-------|
| | 2005 | 2006 |
| Tam Thom | 5,700 | 6,200 |

Reseller
Dien Bien
18 January 2006

Buys from processor and on-sells to Post Office staff along the way to Hanoi. Transport is provided by Post Office truck so transport is free.

Action occurs by customers asking her to supply them. Initial contact was with the one person who has passed on her details through word of mouth. She handles about a tonne per day. Her customers state a clear preference for Dien Bien rice.

The reseller buys from the processor because the processor has equipment that can clean up the product to a level of cleanliness that she wants. All she does is a small amount of hand picking to remove the husks of the paddy.

Main varieties sold are Them Thom (most), Te Hem that is an aromatic sticky (second most popular), and IR64.

Customer priority is for first, aromatic, second, clean third, not mixed.

Profit margin is around D20 000 / 100 kg. This is consistent with others. From this she must clean and repack. Repack is into parcels from 5 kg to 50 kg. Most popular size is 15 kg. She uses either new poly bags for 5 kg to 15 kg, or old fertilizer bags for 50 kg parcels. New bags she purchases from Hanoi.

She gets paid through the truckers.

Preferred type is upland sticky aromatic rice. This is particularly true for Tet. Single harvest occurs in October. She prefers this because it is "upland" therefore known not to have fertilizers and chemicals. This suggests that "natural" from "uplands" is a selling point. Even rice that comes from two crops a year is not considered as "natural".

Secondary collector - Processor
Dien Bien
18 January 2006

There was a 10 tonne truck unloading paddy for a processor. The truck was hired by a lady A who purchased the rice from village collectors and sold to the processor, Lady B, we visited. The rice was sticky and ordinary uplands. The latter was three times the volume of the former. The lady who hired the truck and the processor were regular business partners.

Price of truck hire for Lady A was about D3 million. The truck was rated at 10 tonnes. It was fully loaded in the sense that the volume of the truck was fully occupied. However as the truck was carrying paddy then the load capacity of the truck was not fully stretched. Another truck from the same company arrived. This was rated at 15 tonnes but was not loaded much more than two-thirds in height. The large truck is unable to go into the high hills to collect the paddy. Instead the smaller truck goes to the villages and returns to a central point to load the large truck. Assuming that the smaller truck could not achieve a full load in the villages, then it must go to village #1 empty, load the paddy then return to the large truck to discharge. The result would be multiple handling and high transport costs associated with at least two empty journeys to the villages. If the large truck came to the mountains empty, its per journey costs would be high because of no back-loading.

The rice is aggregated in the village by local collectors who can be either a farmer - collector, or just a farmer, or just a collector. The rice in the truck was segregated by type not by grower or region. The buyer tested every bag to ensure that it was true-to-type.

Payment to the growers was on a cash basis. The buyer then sold to the processor. The buyer did not act as agent for the processor.

The truck travels 130km to the collection point. The last 10 kms is an extremely poor road. The truck is used for rice transportation in the season and general cartage in the off-season.

The busiest period is October to March. During Tet, the buyer will handle 40 tonnes / week.

The processor had around 200 tonnes of storage. This usually empties by May to be refilled with the June harvest.

The processor sells. Her main market is Son La and not Hanoi. She prefers to deal with Thailand Ordinary Uplands. She does handle some IR 64, Tam Thom, and the sticky type Nep Ghe.

Cha Za Zea
Ex Vice Chair of the District Committee
H'Mong Village,
Dien Bien Dong
19 January 2006

Cha stopped growing rice some years ago.

If a family of four has 50 packs (weight not specified) of Thailand Upland Ordinary paddy, it needs 30 packs to live on, leaving 20 to be sold. With Aromatic Upland Sticky, the yield from the same area of land is around 30-40 packs.

In the village, around rice production is 70 percent of Thai type. Most of the rest is Aromatic Upland Sticky with there being some Red Sticky.

He has a large area of land for farming. Three hectares are for rice. He sells/sold up to a tonne of paddy a year in around five tranches. Actual timing of sale was based on the need for money. Within the 3 ha, around 60 percent is for Thai, the rest is for sticky, rice to make rice wine, and Aromatic Upland Sticky. He never sells the Aromatic Upland Sticky. Sticky is a low yielding rice on the poor soils of the uplands with yields of just 400 kg / paddy. Some households in the village cultivate other varieties. However, most cultivate Thailand Upland. The most that is sold is two thirds of a tonne per year per household. The preference is for the higher yielding varieties of Thailand.

Prices

D2.200 – 2.300 / kg paddy last year
D3.000 – 3.200 / kg paddy this year.

Prices tend to be stable year-round

In his view, production of Aromatic Upland Sticky will stay stable in the village.

Usually the local collector comes to the households in the village to buy but some villagers take their rice to the collector. Prices are stated. There is a little negotiation.

Mr Cha will travel to other parts of Dien Bien Dong, find out what the prices are and then add a transport factor to the cross roads. Prices tend to move in parallel between the various parts of Dien Bien Dong.

There is television in the village and he gets five channels.

H'mong Village
Dien Bien Dong
19 January 2006

The village has a very small mill for self processing. Only a very small volume is sold to the collectors at the cross roads.

Current prices are
D4.500 /kg / paddy for sticky aromatic upland
D3.000 / kg / paddy for Thailand Ordinary.

In 2005, the prices were D3.500 / kg / paddy for sticky aromatic upland

Over the whole of the year, prices tend to be stable.

Production is mainly Thailand Ordinary Uplands with only a small volume of Upland Aromatic Sticky being grown.

Upland Aromatic Sticky is sold only when they need extra cash.

Nguyen
Wine Rice Buyer
Suoi Lu Village
Phi Nhu Commune
Dien Bien Dong
19 January 2006

Buys rice to make wine and for his own consumption.

Farmers bring their paddy to a central point where the product is then purchased by collectors from Dien Bien.

The village has five processors who have their own storage.

Very poor farmers purchase rice on an advance basis from the collectors in the village (and elsewhere). The growers contract to repay the rice in paddy when they harvest. A price is set for the rice at that stage. If the price of rice harvest increases with the new harvest, the borrowing farmer has to repay with a higher volume of paddy. If the price falls then he has to repay less.

Kinhs do not prefer sticky rice.

September-October is when the prices are lowest.

Currently (January 2006) prices are very high because it is the period just before Tet.

| | |
|------------------------|--------------------------|
| Aromatic upland sticky | D7.000 /kg / paddy (sic) |
| Thailand ordinary | D3.300 /kg / paddy |
| Other upland aromatic | D3.500 /kg / paddy |

Collectors as a whole tend to know what is the on-going price and thus have power. Single isolated collectors in the villages do not seem as well equipped.

Ngo Duy Vong
Collector – Processor
Suoi Lu Village
Dien Bien Dong
19 January 2006

Vong is a collector who processes paddy. He is from Thai Binh province, moving to Dien Bien Dong in 1999. He is related to four of the other five collector / processors in the village. He sells locally and to secondary collectors in Dien Bien. He also does custom milling.

He mainly handles sticky but also aromatic sticky. Vong handles around 30-40 tonnes paddy annually of all types. Around 30 percent of his sales are ???, Thai ordinary are about 10 percent of his sales with the balance being stickies.

After harvest, the traders come asking about volumes. They talk to him and to other people before setting a price. At that stage they send trucks to buy the product.

He prefers to deal with traders who have their own trucks as they pay higher prices compared with traders who have to hire the trucks. The previous year the traders were largely traders-without-trucks but this season they were traders-with-trucks.

Farmers are increasingly keeping their own rice in their own storage systems and then selling throughout the year. Previously, their selling was one-off after harvest. Despite this, even though farmers know that the prices are higher in the pre-Tet period, many have already sold prior to this because they need money and they have no rice left.

He pays D3.200 /kg clean paddy. “Clean” was stressed. Current price is D3.500 /kg paddy. His margin is around D100 /kg. Usually he pays the growers 100 percent and the traders pay him 100 percent. He does not receive from the growers nor does he give to the growers any advance.

Khau Sang is a locally variety of Aromatic Upland Sticky. It is not derived from the Lao Aromatic Upland Sticky. It is considered a superior type. Prices are D6.000 /kg rice basis. Thailand Upland Ordinary sells for D5.500 /kg rice.

His conversions are from paddy to rice
 Khau Sang sticky 70 percent
 Thailand 73 percent (he was quite precise).

Traders offer a price and he negotiates. Usually he can get D100 – 200 /kg above what they ask. If he can offer higher volume he tends to get an additional premium of D10 – 20 /kg.

Since he moved here he has noticed changes:
 a marked change with local people now demanding and being prepared to pay for higher quality rice. The demand for sticky has increased in the period February and March and later because he has run out of Thailand Ordinary.
 There is increasing production of Thailand Ordinary.

He likes Thailand Ordinary both for its flavour and the fact that the bran is considered good for the pigs. Thailand ordinary is the now the best ordinary type.

Traders ask for (in descending order):
 Aromatic Upland Sticky of Lao origin
 Thai
 Khau Sang
 Sticky

H'mong get free IR 64 seed but they do not like it. Instead they eat the seed and plant their own preferred types.

He considers that the traders do not mix the various types.

His major constraint is the lack of capital. With more capital he could buy more rice. Lack of labour is also a bottleneck as there is just he and his wife.

H'mong people plan ahead. They estimate what they will need during the year and consume their rice according to that plan. In contrast the Sa do not plan and are usually the ones who need to borrow rice.

Appendix E Distribution and Marketing of Rice in Ho Chi Minh City

E.1 Introduction

437. A visit was made to Ho Chi Minh City between 15 – 17 February, 2006. The visit had two major aims.

1. Undertake a rapid survey of rice marketing.
2. Gain an assessment of the development of supermarket retailing as a guide for potential development in Hanoi.

438. The mission comprised:

1. Mr. Du, Director, Export Promotion Centre, Department of Trade and Tourism, Dien Bien
2. Grant Vinning, Marketing Specialist, Agrifood Consulting International Ltd, Hanoi
3. Cuong Nguyen Hung, SNV – Dien Bien

E.2 Approach

439. The basic approach was to undertake market observation visits and to interview as many chain participants as possible. Visits were made to

1. markets
2. retailers
3. wholesalers
4. supermarkets.

440. Seven markets¹⁶ were visited and observations made of prices and market names for rice from around 30 retailers. Discussions were held with ten retailers and wholesalers. Five supermarkets¹⁷ were visited and detailed discussions held with the one operator.

E.3 Comment on Marketing Terminology

441. The usual strict marketing terms for various actors in the value chain do not seem to apply in Vietnam as many of these roles blur. This fact has already been amply detailed with value chain actors at the production end of the production - marketing continuum where at any one time an individual can be a producer, a huller, a collector, and a trader.

442. At the marketing end of the spectrum, a rice merchant may operate a shop that in traditional marketing terms is a retail shop selling directly to end-consumers. However, the same operator may have a significant trade with other retailers and the food service sector from the same shop. This would usually classify him as a wholesaler. In addition, the same operator may have another outlet that concentrates on servicing just retailers and others who on-sell rice. This is a traditional wholesaler function.

¹⁶ Cho Nancy, Cho Co Giang, Cho Thai Binh, Cho Binh Tay, Cho Tran Chanh Chieu, "Tourist Market", Cho Bai Thanh.

¹⁷ Saigon Co-op, Big C, Maximart, SATRA, Hanoi Supermarket.

443. Another marketing term of confusion is the type of retailers now common in Vietnam. A person operating a stall selling just a hundred kilograms of just rice to end-consumers is as valid a retailer as the rapidly increasing large supermarket selling several thousand items.

444. Finally, the term “market” is also confusing. In Vietnam, a “market” varies from just a few stalls on a site that sell just the one type of product, such as just fruit and vegetables or just meat or just rice, to ones that have all manner of goods ranging from fresh produce such as fruit, vegetables, fish, and meat, to dry grocery goods, to clothing and household goods. The term can also refer to what in traditional marketers would call a wholesale market, that is, a number of stalls handling the same range of products and whose customers are largely on-sellers.

445. In order to provide consistency, this report uses the following definitions:

1. Retailer: Some-one whose main customer base is end consumers.
2. Supermarkets: Retailers who operate modern premises selling a large range of produce.
3. Wholesaler: Someone whose main customer basis is retailers.
4. Market: a formal location where retailers and wholesalers sell to primarily to end consumers¹⁸.

446. The major outcomes of the discussions are noted below.

E.4 Dien Bien Rice in Ho Chi Minh City

447. At the wholesaler and retailer level, no one has heard of Dien Bien rice. A supermarket operator had heard of Dien Bien rice but did not stock it. One retailer had heard of it but only because her daughter had brought some back from a trip to the North. The particular rice was an aromatic whose quality she did not rate as high as that from the South.

448. At three retailers, a rice named "64" was observed. None of the sellers knew anything about the origin other than it was just another rice. It was priced towards the bottom end of the price range.

E.5 Origins of Rice Sold in Ho Chi Minh City

449. Most rice seen was from the Cuu Long. Rice from Long An and around Can Tho were the most commonly noted origins. Some product was labelled “northern rice” and “Hanoi rice” but the retailers could not tell if the rice was actually from the North / Hanoi, or if they were merely marketing names used.

¹⁸ This is a far more general definition than that provided by Phan Thi Giac Tam and Le Thanh Loan who provide the formal definition of Decree No. 02/2003/NĐ-CP dated January 14th 2003 by the Prime Minister. There, markets are classified into three grades regarding the number of traders, the centrality of their location, the types of market construction and their service availability (i.e. parking area, loading & unloading services, storage facility etc.). The minimum sales area of an outlet is 03 square meters. Accordingly, markets of grades 1, 2 or 3 possess respectively at least 400 stalls, 200 and less than 200 outlets. See Phan Thi Giac Tam and Le Thanh Loan for Malica. Trends and Policy on Markets and Supermarkets in Ho Chi Minh City. April 2005.

450. There were some imported rice. Most was from Thailand. Supermarkets more than retailers tended to stock Thai rice. An extreme case was one supermarket that had rice that had been grown in Vietnam, exported to Australia, and then re-exported back to Vietnam.

451. At the retailer level, some black and red types were imported from Cambodia and Myanmar.

452. Two types of North Vietnam aromatic rices were seen:

1. nep cai hoa vang
2. nep tam thom.

453. Both priced at the high end of the scale.

E.6 Preferred Rices

454. The trend is towards aromatic and not plain rices. Consumers in HCMC are willing to pay higher prices for the aromatic and higher quality rices.

E.7 Demand

455. There is a two-segment market. One is the small market for higher priced and higher quality rice that are invariably aromatic types.

456. The other is the much bigger segment of lower quality and lower priced ordinary rice that services the labour class.

457. The lower quality market segment is relatively stable. The higher quality segment is experiencing considerable change as more and more consumers switch to the more aromatic rices.

458. Demand for rice is largely even throughout the year. It is higher in March and April. Whilst there is an upward movement in demand for Tet, it did not seem to be a great leap.

459. The demand for sticky rice is very much just for Tet.

E.8 Supermarket Development

460. The supermarket situation in Ho Chi Minh City has been noted by Phan Thi Giac Tam and Le Thanh Loan, Hagen¹⁹, and the GAIN reports²⁰. It is difficult to construct a consistent time series of growth because it is unable to be determined if the growth has occurred organically, that is by starting afresh with each new building, or by acquisition of existing businesses. However, in broad terms it is possible to confirm the usual

¹⁹ Phan Thi Giac Tam and Le Thanh Loan. 2005. Trends and Policy on markets and supermarkets in Ho Chi Minh City. Malica and Asian Development Bank.

Hagen J. 2002. Causes and consequence of food retailing innovation in developing countries: supermarkets in Vietnam. WP 2002-26. Dept. Of Applied Economics and Management, Cornell University.

²⁰ Vietnam Retail Food Sector. 2005. GAIN Report VN 5076. FAS USDA November 2005.
Vietnam Retail Food Sector. 2000. GAIN Report VN 0010. FAS USDA July 2000.

observation that the supermarkets in HCMC are superior in total numbers, numbers per chain, size of layout, and SKUs.

E.9 Supermarket Rice

461. Hanoi Supermarket, despite its name and having logos stating that it specialises in products from the north, does not stock any rice from the north. However, interest was shown in stocking Dien Bien rice.

462. Packaging at the retailer level seemed to be superior to that in the north.

463. Rice from Long An and around Can Tho were the most popular types in the stores.

464. All supermarkets had at least four brands. One had 13 brands.

465. Package sizes observed were 1, 2, 5, 10, 15, and 25 kgs. The most popular sizes were 2 and 5 kg packs.

E.10 Rice Names

466. No rices were seen at the wholesaler, retailer, or supermarket levels that were identified by variety. Instead, rices were identified by characteristics. These were usually:

1. region
2. softness
3. stickiness / glutinous
4. fragrance
5. old / new

467. Table 103 summarises nearly 70 names used by marketers that they think distinguishes their rice and enhances its marketability.

Table 103 Names of Different Rice Sold in Ho Chi Minh City

| | | | |
|--------------------|-----------------------|--------------------------|----------------------|
| 8 Thom | Nang huong plu xuang | Nep toc thom | Tam thom |
| 64 deo ngot | Nang thom cho dao | Nhat deo | Tao nguyen cu |
| 64 mem deo | Nang thom cho dai moi | Nhong got | Thai lai |
| 64 moi | Nep bac | Ngoc nu no men | Tau huong noxap |
| 64 tham | Nep bac sang | No | Thai nguyen cho bao |
| 108 cu | Nep bac thom | No 4200 | Thom cho dao |
| 108 no mem | Nep bac thom hoa vang | SARI | Thom dai loan |
| Bui | Nep bac dai hoa vang | Thai lan | Thom huong laid biet |
| Bui ca mau | Nep cu | Thai lan jasmine rice | Thom my |
| Bui cao lanh | Nep lao | Tai nang thom | Thom nhop |
| Bui sua | Nep ngong | Tai nguyen han | Thom nhat |
| Cai nguyen cho dao | Nep ngong sang | Tai nguyen lun | Thom thai |
| Cu | Nep nong thom | Tai nguyen thom | Thom thai moi |
| Dai | Nep o mon | Tai nguyen cho dao | Thom thai deo |
| Deo thom 64 | Nep sap | Tai nguyen thom dac biet | Xuong ga |
| Deo | Nep sap sang | Tam mot bui | |
| Huong lau thom deo | Nep thom | Tam nang huong | |
| Nang huong dho dao | Nep thom loi 1 | | |
| Nang thom | | | |

Names given to rice by wholesalers, retailers, and supermarkets. February 2006

468. It is noteworthy that across the 70 names, only two were used four times, one was used three times and eight used twice; see Table 104. This illustrates the extent to which marketers seek to differentiate their product through names in order to enhance the marketing appeal.

Table 104 Common Rice Names Sold in Ho Chi Minh City

| Market name | Times used |
|---|------------|
| nep thom cho dao, thai nguyen cho dao | Four |
| nep ngong | Three |
| nep dac dai hoa vang, nep nong thom, SARI, tai nguyen thin, tai nang huong, tai nguyen cu, thom my, thom thai | two |

Most common market names used by wholesalers, retailers, and supermarkets. February 2006

469. One marketer has adopted a numbering system that combines the characteristics "soft", "fragrant", "glutinous". In this system, No.1 is more soft than fragrant, but No.2 is more fragrant than soft. A total of seven numbers were used:

1. "1"
2. "2"
3. "3"
4. "5"
5. "premium" (not defined)
6. "special" (not defined)
7. "VIP" (not defined)

470. A consumer interviewed said she liked the numbering system. Table 106 contains the prices of the 70 types of rice that were seen at 10 retailer stalls.

E.11 Rice Types

471. Compared to what was seen in Dien Bien, Hanoi, and Melbourne²¹, HCMC retailers stock a much larger number of rice types. Most had at least seven types, or at least seven names, of different rices. In addition, most stalls had at least one coloured type of rice. One wholesaler stocked 10 types of stickies.

E.12 Prices

472. HCMC has essentially a two-tiered market segmentation. At the high end are the aromatic and speciality rices demanded by the middle and upper income groups. At the low end, labourers require a low priced product. This segment also includes rice for government institutions and the military.

²¹ See Rice marketing in Australia: A very rapid survey. Grant Vinning, Marketing Specialist, Agrifood Consulting International, Hanoi, February 2006

473. The highest prices are for rices derived from Thai, Japanese, and Taiwanese varieties. Japanese derived rices are the highest priced but suffered from slow sales.

474. At the retailer level, variations of around 100 percent were common at most stalls. Table 105 contains the range of prices from 11 retailers.

Table 105 Range in Rice Prices – Ho Chi Minh City

| Stall | Low price | High price | Number of varieties | Comment |
|-------|-----------|------------|---------------------|--|
| #1 | 4200 | 7600 | 12 | |
| #2 | 4300 | 7500 | 8 | 2 coloured varieties |
| #3 | 4400 | 7500 | 11 | Two coloured varieties |
| #4 | 4000 | 8500 | 11 | Four coloured varieties |
| #5 | 4100 | 7400 | 10 | |
| #6 | 4200 | 7500 | 12 | |
| #7 | 4200 | 7500 | 10 | |
| #8 | 4100 | 7200 | 9 | |
| #9 | 4300 | 7900 | 12 | Bac hoa vang highest price |
| #10 | 4250 | 7250 | 19 | Nang Thom highest price |
| #11 | 5700 | 9500 | 4 | Nep Bac Thom Van Vang highest price |
| #12 | 4200 | 9500 | 21 | Thom Nhap and Nep Bac Thom highest price |

Retailer prices at Tran Chanh Chien Rice Wholesale Market, February 2006

E.13 Supply chain

475. The retailer system in HCMC is marked by a great deal of passivity in that none of those interviewed sought out new sources of supply. They depended on the wholesalers approaching them. In turn, at the wholesaler level, traders from the countryside take the lead and come into HCMC in order to find new markets rather than the wholesalers going out to find new supplies.

476. There are some HCMC merchants who go to Hanoi to source rice and some Hanoi merchants who come to HCMC. Transport of northern rice is by road not rail.

E.14 Conclusions

477. High end consumers are increasingly going for aromatic, and are willing to pay more for better quality.

478. There is high passivity amongst the sellers at the markets as they wait for rice merchants to service them rather than they seek out the merchants.

479. Dien Bien appears to have an outlet in HCMC only at the high priced end of the market. This is due to high transport costs. If this is to be the case then the market outlet will invariably be at the supermarket level.

480. Using a supermarket outlet strategy allows for easier promotional activities. This is considered vital in order to get name “Dien Bien” known.

481. Packing of rice in bags labelled “Dien Bien” with an approved packer is one way of addressing the issue of mixing of product.

Table 106 Rice Wholesale Prices in Ho Chi Minh City Rice

| | Market #1 | Market #2 | Market #3 | Market #4 | Market #5 | Market #6 | Markets #7 | Market #8 | Market #9 | Market #10 |
|-----------------------|-----------|-----------|-----------|------------------|-----------|-----------|------------|-----------|-----------|------------|
| 8 Thom | | | | | 7200 | | | | | |
| 64 deo ngot | 4600 | | | | | | | | | |
| 64 mem deo | | | | | 5000 | | | | | |
| 64 moi | | 4700 | | | | | | | | |
| 64 tham | | | | 5050 | | | | | | |
| 108 cu | | 4650 | | | | | | | | |
| 108 no mem | | | | | | 4800 | | | | |
| Bui | | | 5000 | | | | | | | |
| Bui ca mau | | 5050 | | | | | | | | |
| Bui cao lanh | | | | 5050 | | | | | | |
| Bui sua | | | | | | 5100 | | | | |
| Cai nguyen cho dao | | | 6000 | | | | | | | |
| Cu | | | | | | 4400 | | | | |
| Dai | | | 4500 | | | | | | | |
| Deo thom 64 | | | | | | | | 5000 | | |
| Deo | | | | | | | | | | 5500 |
| Huong lau thom deo | | | | | | | | 6500 | | |
| Nang huong dho dao | | | | | | | | | | 9000 |
| Nang thom | | | | | | | | 8000 | | |
| Nang huong plu xuang | | | | | | | | 5200 | | 9000 |
| Nang thom cho dao | 7600 | | 8000 | 7250 | | | 7500 | | | |
| Nang thom cho dai moi | | | | | | | | | | 10000 |
| Nep bac | | | 9000 | | | | | | | |
| Nep bac sang | 10000 | | | | | | | | | |
| Nep bac thom | | | | | 8500 | | | | | |
| Nep bac thom hoa vang | | | | 9500 | | | | | | |
| Nep bac dai hoa vang | | | | | | | | | 12000 | 12000 |
| Nep cu | | | | 6050 AND 5750 | | | | | | |
| Nep lao | | | | | | | 7500 | | | |
| Nep ngong | 7200 | | 6500 | | | | 6500 | | | |
| Nep ngong sang | | | | 6550 | | | | | | |
| Nep nong thom | | | | | | | | 7000 | 10000 | |
| Nep o mon | 5400 | | | | | | | | | |
| Nep sap | | | | | 5700 | | | | | |

Table 106 Rice Wholesale Prices in Ho Chi Minh City Rice

| | Market #1 | Market #2 | Market #3 | Market #4 | Market #5 | Market #6 | Markets #7 | Market #8 | Market #9 | Market #10 |
|--------------------------|-----------|-----------|-----------|-----------|---------------------|-----------|------------|-----------|-----------|------------|
| Nep sap sang | 7200 | | | | | | | | | |
| Nep thom | | | 15000 | | | | | | | |
| Nep thom loại 1 | | | | | | | | | 10000 | |
| Nep toc thom | | | | | | | | | 16000 | |
| Nhat deo | | | | | | | | | 18000 | |
| Nhong got | | | | | 7000 | | | | | |
| Ngoc nu no men | 4600 | | | | | | | | | |
| No | | 4550 | | | | | | | | |
| No 4200 | | | | | | 4200 | | | | |
| SARI | 5000 | | | | 5200 | | | | | |
| Thai lan | | | | | | | | | 7000 | |
| Thai lan jasmine rice | | | | | | | | | 12000 | |
| Tai nang thom | | | | | | | | 5000 | | |
| Tai nguyen han | | 4850 | | | | | | | | |
| Tai nguyen lun | | | | | | | | 4500 | | |
| Tai nguyen thom | | | | 6250 | 6600 | | | | | |
| Tai nguyen cho dao | | | | | | 6100 | 6000 | 5500 | 7000 | |
| Tai nguyen thom dac biet | | | | | | | | 6500 | | |
| Tam mot bui | | 4650 | | | | | | | | |
| Tam nang huong | | | | | | | | 7000 | 7000 | |
| Tam thom | | | | | | | | | | 7000 |
| Tao nguyen cu | | 6250 | | 6250 | | | | | | |
| Thai lai | 5400 | | | | | | | | | |
| Tau huong noxap | | | | | | | | 5000 | | |
| Thai nguyen cho bao | 5800 | | | 5850 | | | | | | |
| Thom cho dao | | | | | 7500 AND 8000 | | | | | |
| Thom dai loan | | | | | | | | 7000 | | |
| Thom huong laid biet | | | | | | | | 9000 | | |
| Thom my | 8000 | | | | | | | | | 11000 |
| Thom nhop | | | | | 9500 | | | | | |
| Thom nhac | | | | | | | | | | 18000 |
| Thom thai | | | 6000 | | 5200 AND | | | | | |

Table 106 Rice Wholesale Prices in Ho Chi Minh City Rice

| | Market #1 | Market #2 | Market #3 | Market #4 | Market #5 | Market #6 | Markets #7 | Market #8 | Market #9 | Market #10 |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|------------|
| | | | | | 6200 | | | | | |
| Thom thai moi | | 5500 | | | | | | | | |
| Thom thai deo | | | | | | | | 5500 | | |
| Xuong ga | | | | | | | | 4200 | | |

Source: Study Team Interviews, February 2006

Appendix F Distribution and Marketing of Rice in Hanoi

F.1 Introduction

482. Two field visits were made examining rice marketing in Hanoi. Different personnel were involved with the two visits:

1. 13 January
 - a. Dr Siem, Pham Quang Trung, Grant Vinning – Agrifood Consulting International
 - b. Anne Claire Degail, Cuong Nguyen Hung – SNV Vietnam
2. 22 – 24 February
 - a. Mr Minh, Mr Hung, Department of Trade and Tourism, Dien Bien
 - b. Pham Quang Trung, Grant Vinning – Agrifood Consulting International
 - c. Anne Claire Degail, Cuong Nguyen Hung – SNV Vietnam

483. The visits were of a two-fold nature

1. Introduce the members of SNV Vietnam and the Department of trade and Tourism in Dien Bien to aspects of supermarket retailing.
2. Develop an understanding of the marketing of rice in Hanoi as a means of advancing strategies that would assist Dien Bien in enhancing the marketing of rice from the province.

F.2 Approach

484. The basic approach was to undertake market observation visits and to interview as many chain participants as possible. Visits were made to

1. markets
2. retailers
3. wholesalers
4. supermarkets
5. processors.

485. Nine markets²² were visited and observations made of prices and market names for rice from around 25 retailers. Discussions were held with 13 retailers and wholesalers. Five supermarkets²³ were visited and detailed discussions held with the one processor. In addition, discussions were held with a chef from a leading hotel.

486. A form of open questionnaire was developed that was used to guide the discussions, see Box 37.

487. Prior to the field work a day's training on marketing was spent with the two officers from Department of Trade and Tourism. The purpose of the training was to explain to the officers enough of the principles of marketing and marketing research so that they had an

²² Chau Long, Buoi, Nhia Tan, Thoi Trang Det May, Luong Dinh Cua, Thai Ha, Nga Tu So, Trieu Khuc, Thanh Xnan, Ha Dong. See Table 114 to Table 121 for a listing of markets in Hanoi.

²³ Metro, Big C, Intimex, Hanoi Star Mart, Fivi Mart. In addition a mini mart was also visited. See Table 121.

understanding of what the purpose of the field work was. From that training a number of specificities emerged that were incorporated into the questionnaire used to guide the field work.

F.3 Comment on Marketing Terminology

488. This report adopts the same terminology as used in the Ho Chi Minh City report²⁴. That is, a “retailer” is one whose main customer base is end-consumers, “supermarkets” are retailers who operate modern premises selling a large range of produce, a “wholesaler” is someone whose main customer basis is retailers, and a “market” is a formal location where retailers and wholesalers sell to primarily to end-consumers. As evidence of the blurring or traditional marketing roles, two of the supermarkets visited also on-sold rice to the food service sector. In one case this was a significant operation.

489. In addition, this report uses the term “processor” to describe a value chain actor whose primary function is processing the rice for on-selling. The processing can be full husking or the refining of brown rice, that is, rice that has been partially hulled.

490. The major outcomes of the discussions are noted below.

F.4 Rice Marketing in Hanoi

491. Rice marketing in Hanoi is governed by truck size.

492. The city has a curfew on the movement of trucks inside the city limits. Rules relate to the movement of trucks of various sizes in different parts of the city at different times of the day. .

493. The result is a fragmented distribution system that consists essentially of large trucks delivering products to large enterprises on the fringes of the city or at least where the vehicle restrictions are non-operative. From these sites the product is delivered to larger establishments within the city in vehicles of smaller size. From these centres, product is distributed to smaller facilities or directly to retailers. Rice is but one a vast number of products that are required to be so distributed. With rice, unit sizes of the operators are of the order of thousands of tonnes for the out-city operations, hundreds of tonnes for the inner city establishments, and hundreds of kilograms for the third tier.

494. The three tiered system of rice distribution results in a blurring of roles. The outer-city centres are essentially processors who are also wholesalers. The inner city centres are essentially wholesaler who may also retail. The third tier is primarily retailers who may also wholesale. With the movement to the various tiers the price of the rice increases. This is due to the reduction in vehicle size, and thus higher per unit transport costs, and the adding of margins by each of the actors in this chain.

495. Each level tries to offer a service that is commensurate with the higher prices that must be charged. Thus, the bicycle sellers who are the end of the distribution chain and thus have the highest per unit costs, offer the service of door to door delivery of various sized parcels of rice.

²⁴ Rice marketing in Ho Chi Minh City. Grant Vinning and Cuong Nguyen Hung. Agrifood Consulting International, Hanoi February 2006.

496. Processors appear to be the most pro-active in this process. They move into the producing areas and actively seek out suppliers.

497. One processor handles around 2,000 tonnes per annum of rice. It appears that this is the biggest processor²⁵, albeit there is at this stage no independent means of verifying this. He receives rice from the provinces.

498. Some of the rice is rice, that is, paddy that has been fully husked, milled, and processed. Most of the rice imported from the south is in the rice form. Rice from Dien Bien is purchased in the brown form. At the factory, the brown rice is further processed first by removing stones and extraneous matter, and then by milling, polishing, grading out brokens as per customer requirements.

499. Some wholesalers and retailers claim that they organise themselves into purchasing rice directly. There are two possibilities. One is that they purchase from the provinces directly. A wholesaler who had a milling and bagging operation could be one such operator. It is more likely that wholesalers and retailers work together to purchase from one of the processors on the outskirts of Hanoi. This approach has the advantage of reducing some of the multiple handling costs. However it would be only operable if the buyer had adequate storage to take the load resulting from the purchase.

500. The enforced multi-tiered distribution system and the blurring of roles between processors, wholesalers and retailers produces problems in double counting when one seeks to estimate the turnover of different actors in the chain. It is useful to keep reverting back to the simple reference point that Hanoi consumes 400,000 tonnes of rice a year or just over 1,000 tonnes a day. The total volume figure is arrived at by assuming that each of Hanoi's 4 million citizens consumes an average 100kg of rice a year.

F.5 Dien Bien Rice Sold in Hanoi

501. At the wholesaler, retailer and supermarket level there was widespread knowledge of Dien Bien rice. Many interviewees stated that the demand for Dien Bien really jumped with the publicity given to the fiftieth anniversary of the Battle of Dien Bien Phu. However that was only in 2004, a little later when most refer to the surge in demand for Dien Bien rice. The real growth in the demand for Dien Bien rice appears to have started about five years ago. The magnet of drawing visitors to Dien Bien to visit the battle sights and then perchance eat Dien Bien rice is a major advantage that few other provinces in Viet Nam and especially the other northern provinces have.

502. Retailers and wholesalers state that Dien Bien rice is appreciated for its "taste" and "aroma". However, when pressed they cannot specify either terms, nor can they specify why those attributes occur other than some vague reference to weather and soils. When asked to specify the attributes in terms of the uplands and valley floor of the province they are unable to do so. The implication is that they have been told the reasons why Dien Bien rice is good and they repeat this without really be able to specify.

²⁵ Cited by two wholesalers who dealt with the processor. When comparing this processor with another one whose turnover is around 500 tonnes per annum, then the cited processor is indeed very large.

503. It is possible that Dien Bien rice represents a taste-aroma combination that has peculiar appeal to just those in the North. This is not a unique phenomena with many countries having regions with tastes peculiar to that region.

504. It is clear that Dien Bien is a term with market appeal. At the retail level, nine names contained the term “Dien Bien” and at the supermarket level there were twelve names containing the term “Dien Bien”, see Table 107.

Table 107 Names for Dien Bien Rice in Hanoi

| Supermarkets | Retailers |
|----------------------------|--------------------------------|
| Bao thai hong Dien Bien | 64 Dien Bien |
| Huong thom Dien Bien | Dien Bien moi |
| Nep cam dac san Dien Bien | Nep Dien Bien cao doc san vang |
| Nep huong Dien Bien | Nep nuong Dien Bien moi |
| Nuong Thom Dien Bien | Nep thom Dien Bien |
| Tam Dien Bien | Tam Dien Bien moi |
| Tam xoan Dien Bien | Tam Dien Bien moi bac san |
| Tan Dien Bien | Te Dien Bien moi |
| Te thom Dien Bien | Thom deo dam da Dien Bien |
| Te thom dac sac Dien Bien | |
| Thai lan tom Dien Bien bao | |
| Thai Thom Dien Bien bao | |

Names used to describe Dien Bien rice. January - February 2006

505. Three of the nine terms that referred to nep incorporated the term “Dien Bien”.

506. Rice from Hai Hau is commonly cited as the competitor to rice from Dien Bien. Yet the term “Hai Hau” was only seen twice at the retail level and five times at the supermarket level.

507. Despite the frequent positive references to Dien Bien rice’s organoleptic properties, it is considered to be too highly priced. It is stated that on a comparable value-for-taste basis, Hai Hau rice is more competitive.

F.6 Origin of Rices Sold in Hanoi

508. Most of the rice seen at the three outlets of wholesaler, retailer and supermarket levels did not specify origin.

509. From discussions it is clear that Hanoi receives rice from all over Vietnam. Specific mention was made of rice from the Dien Bien and the north west, the Red River Delta, central Vietnam and the Mekong delta.

510. Origins specifically noted in the marketing names were

1. Dien Bien
2. Hai Hau
3. Thai Binh
4. Ha Bc
5. An Giang

511. There is some imported rice from Thailand and Japan. Both are considered very minor suppliers. Product from Thailand far outweighs the product from Japan.

F.7 Rice Types

512. Hanoi demands the three basic types of rice:

1. Plain
2. Aromatic
3. Sticky

F.8 Demand for Rice

513. Hanoi appears to have a three-tier market for rice.

514. At the higher level is the market for high priced rice. This appears to be a small market. High quality, usually defined in terms of softness and aroma, are the distinguishing features of this segment.

515. At the lower level there is the low priced market. From what was observed, this appears to be by far the biggest market. This market is based solely on price. For this market, even VDG100 / kg is enough to cause consumers to switch from one type of rice to the cheaper one.

516. In the middle is the price sensitive market that prefers quality but is only prepared to pay a certain premium for that quality. This market segment is mid size in volume between the higher and lower prices segments.

517. Demand for rice is largely even throughout the year. It is higher in March and April. Whilst there is an upward movement in overall rice demand just prior to Tet, it did not seem to be a great leap. Whilst the demand for sticky rice peaks at Tet, it is not just for Tet. There is a year-round demand for sticky rice on the first and fifteenth day of lunar month as part of worshipping.

518. Whilst there is a demand for aromatic rice, the attribute of aroma did not seem to be as highly valued as it is in the South. It is possible that this is because it is just assumed that all rice in the North is aromatic where-as this is not the case in the South and thus it must be specifically demanded.

519. The demand for sticky rice has been noted above. It appears to be based on ethnicity, being especially popular on a year-round with the people from the North West.

F.9 Supermarket Development

520. The supermarket situation in Hanoi has been noted by Phan Thi Giac Tam and Le Thanh Loan, Hagen²⁶, and the GAIN reports²⁷. The overall view that supermarkets in

²⁶ Phan Thi Giac Tam and Le Thanh Loan. 2005. Trends and Policy on markets and supermarkets in Ho Chi Minh City. Malica and Asian Development Bank.

Hagen J. 2002. Causes and consequence of food retailing innovation in developing countries: supermarkets in Vietnam. WP 2002-26. Dept. Of Applied Economics and Management, Cornell University.

²⁷ Vietnam Retail Food Sector. 2005. GAIN Report VN 5076. FAS USDA November 2005.
Vietnam Retail Food Sector. 2000. GAIN Report VN 0010. FAS USDA July 2000.

HCMC are superior when compared with Hanoi in total numbers, numbers per chain, size, sophistication, and numbers of SKUs is confirmed.

521. Table 114 to Table 121 contains some details on the trade centres, supermarkets, and mini marts of Hanoi. If one extrapolates the rate of growth in supermarkets in just over the four years encompassed by the GAIN reports, then they will soon be a dominant force in food marketing in Hanoi.

F.10 Supermarkets and Rice

522. Rice in the supermarkets was available in 1, 2, 5, 10, 15, and 25 kgs. The most popular sizes were the 5 and 10 kg packs.

523. One supermarket operator stated that it was the supermarkets, specifically his chain, that was responsible for the introduction of rice in packs in Vietnam. That supermarkets would want to market rice in packages rather than loose / bulk is understandable for reasons of management of shelf space, movement of product in the store, and the application of bar coding. However, the introduction of rice in packs by this specific supermarket would not have been all that innovative given the long history of packaged rice in Thailand.

524. The operator claimed that the 23 percent of all rice marketing in both Hanoi and Ho Chi Minh City was in consumer packs. Observation across the nine markets in general and at seven retailers of rice specifically showed a wide usage of rice in packs. The marketing of rice in packages in Hanoi seems far more widespread than in Ho Chi Minh City.

525. The success of marketing rice in the packaged form has had the spin-off effect of encouraging provinces that consider that their rice has a special feature to go into the packaging of rice as a means of preserving the identity of the rice. The operator gave as criteria of "special", rice from Dien Bien and Thai Binh. He also stated that some companies were undertaking a form of contract farming by providing seed, and monitoring and assisting with production and harvesting. The end product is packaged in order to brand and preserve identity. Two companies were nominated – the North East Company, and Bao Minh.

526. The operator claimed that the sale of rice in the package form will rise to around 60 percent of all rice sales in Hanoi by 2007. If one looks at this particular supermarket's operation then some the figure has some merit. The supermarket supplies rice to a number of the canteens that operate in the industrial zones. The demand for this service is based on the canteens' need for food security in terms of reliable supply and the non-contamination of the food. It is possible that the latter attribute is part-and-parcel of supplying the goods manufactured by the industrialists into the United States. Notwithstanding the size of the industrial zone canteens' demand, the estimate of 60 percent is considered to be too high. This is because it represents around 240 000 tonnes annually, a figure derived from the estimated annual rice requirement of Hanoi of 400 000 tonnes.

527. An unusual feature of rice packaging in supermarkets is that some packs were completely opaque. In contrast, all packs at the retailer level were of varying degrees of transparency, allowing consumers to visually inspect the content. This may adversely impact upon sales as visual inspection of rice to examine "quality" is a long standing tradition in Vietnam.

528. The packaging of rice has another implication for quality. The aroma of rice deteriorates after milling. Old rice is considered to have a less favourable smell compared with new rice. The importance attached to “new” rice is the reason why the retailers identified 13 of their their product as new. Supermarkets stock far fewer nep type rices compared with the wholesalers.

F.11 Retailers and Rice

529. Hanoi rice retailers stock around the same number of rice types compared with Ho Chi Minh City. That is between 7 and 14 types, with an average of nine types.

530. A noticeable difference between the rice resellers of Hanoi and Ho Chi Minh City is the role of coloured rices. The “coloured rices” were black, brown *luc*, and red. In Ho Chi Minh City, nearly all stalls observed had at least one type of coloured rice. This was not the case in Hanoi. Here, very few retailers stocked a coloured rice. When one was stocked it was invariably black and termed *luc*.

F.12 Food Sservice Sector and Rice

531. Hanoi has a huge food service sector demand for rice. The sector has several components:

1. Vietnamese outlets that run the full gamut of road-side / footpath micro stalls to formal restaurants.
2. Western-style restaurants and the hotel trade with these restaurants tending to be bigger than their Vietnamese counterparts.
3. The canteens in the industrial estates and large sites throughout the city.
4. Army
5. Institutional such as schools and hospitals.

532. Some parameters to the size of this market can be easily established if it is considered that if just every third Hanoi resident eats a third of a kilogram of rice at a Vietnamese-style restaurant once a day then the total annual volume is around 170,000 tonnes

533. Demand in this market segment is growing mainly through the growth in the industrial zones’ canteen requirements.

534. Demand is quite heterogenous in the segment. In the main, it is for low quality rice albeit for the Western style outlets the demand is high. A major issue is the double use of the rice. That is, if a cooked rice is not consumed in a day, can the rice be used to make fried rice the next day. Some cooked rices, when left overnight, become too hard to be used the next day.

F.13 Rice Names

535. At the wholesaler, retailer, and supermarket levels, rices were invariably identified by characteristics rather than varieties. The usual characteristic related to:

1. Country. Countries mentioned were Thailand, Japan, Korea, and Taiwan. Further, the rice can be imported as a final rice from one of the countries or the seed can be derived from one of the countries.
2. Region. These can be “north”, “south”, “centre”.
3. Geographic. The only distinction noted here is with “upland” rice.
4. Softness. Rice can be identified as “soft” in the sense that it has a degree of fluffiness about it that allows the grains to cling to each other thereby making it easier to use with chopsticks. In contrast to “soft” rice is “hard” rice in the sense that the grains do not cling together but stay as separate grains.
5. Stickiness. Sometimes the word “glutinous” is used.
6. Fragrant / aromatic.
7. Age. Rice can be new or old. New rice is considered to more aromatic than old rice. Old rice has the perceived advantage of resulting in a larger volume of cooked rice from a set weight.
8. Shape. The shape of the grain, xuan, is an identifying issue.
9. Colour. Black, red, and brown rice colours are the most common colours. Pink is also an identifying attribute.
10. Use. Some rice is identified in terms of its end use. The two most common are for medicinal uses or to make wine.

536. Retailers use a more restricted range of names to market rice. In one stall the only name identified was *gao*. At Nguyen Thiep Market, four retailers were seen sitting side by side and none of them had any identification of either rice type or price. Across the seven retailers, 45 names were employed; see Table 108

Table 108 Rice Names in Retail Shops, Hanoi

| | | |
|--------------------------------|--------------------|------------------------|
| 64 Dien Bien | 480 | Bac hung moi |
| Bao thai | Bac thom | De bun moi |
| Di | Di huong | Dien Bien moi |
| Du | Du huong moi | Gao |
| Gao bac | Gao di | Huong dan nau |
| Huong lai doi | Nang huong | Nep |
| Nep cam | Nep cam moi | Nep cai hoa vang loai |
| Nep Dien Bien cao doc san vang | Nep hoa vang | Nep hoa vang xuat khan |
| Nep nuong Dien Bien moi | Nep thom Dien Bien | On moi |
| Tam | Tam deo | Tam Dien Bien moi |
| Tam Dien Bien moi bac san | Tam Hai Hau | Tam thai |
| Tam thom | Tam thai lan moi | Tam thai lan xin |
| Tam thom Hai Hau moi | Tap dao moi | Tao giao |
| Te Dien Bien moi | Te meo | Te thom moi |
| Thom deo dam da Dien Bien | Xuan con | Xi deo gia |

Names given to rice by retailers. February 2006

537. Retailers go to sufficient lengths to create a market niche for themselves and their rice that many of the terms are used by just one or two retailers. A number of retailers used the same name but this was not common; see Table 109.

Table 109 Common Rice Names Used by Retailers - Hanoi

| Name | Frequency of use |
|---------------------------------------|------------------|
| Bac hung moi | 4 |
| De bun moi, Du huong moi, Te thom moi | 3 |

Most Common names used by retailers. February 2006

538. Supermarkets display a far wider range of names. It must be noted that these are not names invented by the supermarkets. Instead they are names that rice processors use because they consider that the use of this name will improve their market appeal. Nearly 70 different names were used; see Table 110

Table 110 Rice Names in Hanoi Supermarkets

| | | |
|-----------------------------|----------------------------|---------------------------|
| Agrice Agrico | Agrixx Agrico | Bac huong |
| Bac huong Hao Hau | Bac thom | Bao thai hong Dien Bien |
| Bong sc vang | Dac san mien bac | Dac san vang cao bao |
| Dac san Vung Cao | Dai loan. deo | |
| Deo thom ngon | Du Huong Hai Hau | Han Quoc |
| Hoa mai vang | Hong hac | Huong thom Dien Bien |
| Koshi hikari | Luc huyet rong | Lut dac san mien bac |
| Lut Thom | Mien bac | Mi trung C.cap |
| My | Nep cam dac san Dien Bien | Nep cao hoa vang dac biet |
| Nep cai hao vang | Nep dac san mien bac | Nep huong Dien Bien |
| Nep Nuong Dac San Dien Bien | Nhat bac | Nhat lovely |
| Nuong Dac san Dien Bien | Thom Dien Bien | Rong vang |
| Susi Nhat Ban | Tai nguyen | Tai nguyen thom |
| Tam AP Be Xuan Dai | Tam dac san Dien Bien | Tam dai loan |
| Tam Dien Bien | Tam thai | Tam tom Hai Hau |
| Tam thom thai lan | Tam thom BS din bien bao | Tam xoan |
| Tam xoan Dien Bien | Tam Xoan Hai Hau | Tam Xoan Hai Hau dac biet |
| Tam xoan Xuan Dai | Tan Dien Bien | Tap thai binh |
| Te thom Dien Bien | Te thom dac sac Dien Bien | Thai ? do |
| Thai lan | Thai lan tom Dien Bien bao | Thai Lan thom dac biet |
| Thai Thom Dien Bien bao | Thom dai loan ST3 | Thom ngon hao hang |
| Thom hao hang | Thom lai | Thom thong dung |
| v-thinh thai hom mali | v-thinh thai pathum thaini | Vo nau chao huyet ro |
| Xaon Hai Hau | Xioeo ha bac | |

Names used for rice at supermarkets. January - February 2006

539. Given that all of the rice is packaged in supermarkets, then in reality the different names are really those used by processors. The complete list of rices marketed by just two processors shows the use of nearly 40 names; see Table 111.

Table 111 Rice Names Used by Processors in Hanoi

| Processor A | | Processor B | |
|--------------------|----------------|----------------------------------|---------------------------------|
| Bac Thom | Tam Dai Loan | Bac Huong | Nhat (Koshihikari High Quality) |
| Deo Phan Thiet | Tan Thai | Dac San Mien Bac | Nuong Dac San Dien Bien |
| IR 64 | Tam Dien Bien | Dac San Vung Cao | Susi Nhat Ban |
| Khang Dan | Tap giao mua | Han Quoc | Tam Ap Be Xuan Dai |
| Nep Hao vang | Tap giao chime | Lut Dac San Mien Bac | Tam Dac san Dien Bien |
| Nep nong Dien Bien | Te 504 | Lut Thom | Tam Xoan Hai Hau |
| Soc Mien | Xi | My | Tam Xoan Xuan Dai |
| Tai nguyen sua | | Nep Cam Dac | Te Thom Dac San Dien Bien |
| | | Nep Dac san Mien Bac | Thai Lan |
| | | Nhat (Koshihikari Super Quality) | Thai Lan thom dac biet |
| | | Nhat (Koshihikari Best Quality) | |

Rice names used by two processors in Hanoi, January-February 2006

540. The observations from four supermarkets showed that none used the same name across all the names used.

541. When the names used by retailers are compared with those of the supermarkets, and ignoring the difference of *moi* as a distinguishing feature, then just four names are commonly used across both:

1. Bac hung
2. Bac thom
3. Nep nung Dien Bien
4. Tam Dien Bien.

F.14 Prices

542. The prices sought by five retailers for their 45 rices are shown in Table 112 below.

Table 112 Selected Retail Prices for Rice in Hanoi

| | Retailer #1 | Retailer #2 | Retailer #3 | Retailer #4 | Retailer #5 | Retailer #6 | Retailer #7 |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 480 | | | | | 5200 | | |
| Bac hung moi | 6800 | 6800 | 6800 | | | 6800 | |
| Bao thai | 6000 | | | | | | |
| Bac thom (i) A | | | | | 6500 | | |
| Bac thom (ii) A | | | | | 7000 | | |
| De bun moi | 4800 | 4800 | 4800 | | | | |
| Di | | | | | 6200 | | |
| Di hung | | | | | | | 7000 |
| Dien Bien moi | | 5000 | 5000 | | | | |
| Du | | | | 6000 | 6200 | | |
| Du hung moi | | 6800 | 6800 | | | | 7500 |
| Gao | | | | 4400 | | | |
| Gao | | | | 4800 | | | |
| Gao | | | | 5200 | | | |
| Gao | | | | 5600 | | | |
| Gao | | | | | 4800 | | |
| Gao | | | | | 5200 | | |
| Gao | | | | | 4400 | | |
| Gao bac | | | | 7000 | | | |
| Gao di | | | | 6000 | 6200 | | |
| Huong lai doi | | | | | | 8000 | |
| Nang hung | | | | | | | 5800 |
| Nep (i) A | | | | 7500 | 7000 | | |
| Nep (ii) A | | | | 9000 | | | |
| Nep cam | 9000 | | | | | | |
| Nep cam moi | | 9000 | | | | | |
| Nep cai hoa vang loai 1 (i) A | | 8000 | | | | | |
| Nep cai hoa vang loai 1 (ii) A | | 11000 | | | | | |
| Nep Dien Bien cao doc san vang | 12000 | | | | | | |
| Nep hoa vang | | | | | 9000 | | |
| Nep hoa vang xuat khan | 11000 | | | | | | |
| Nep nuong Dien Bien moi | | 12000 | 12000 | | | | |
| On moi | | | | | | | 5500 |
| Tam | | | | 8000 | | | |
| Tam deo | 7000 | | 7000 | | | | |
| Tam Dien Bien moi | 7800 | | | | | | |
| Tam Dien Bien moi bac san | 9000 | | | | | | |
| Tam Hai Hau | 7500 | | | | | | |

Table 112 Selected Retail Prices for Rice in Hanoi

| | Retailer #1 | Retailer #2 | Retailer #3 | Retailer #4 | Retailer #5 | Retailer #6 | Retailer #7 |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tam thai | | | | 9000 | | | |
| Tam thom | | | | | 8000 | | |
| Tam thai lan moi | 8500 | 8500 | | | | | |
| Tam thai lan xin | | | | | | 9000 | |
| Tam thom Hai Hau moi | | | 7500 | | | 7500 | |
| Tap dao moi | 4400 | | | | | | |
| Tao giao | | | | | | | 4700 |
| Te Dien Bien moi | 5500 | | | | | | |
| Te thom moi | 4600 | | 4500 | | | 5200 | |
| Xuan con | | | | | | | 5000 |
| Xi deo gia | | | | | | | 5400 |

A Refers to the retailer pricing two different lots of rice with exactly the same identification.
Hanoi. Select retail prices, February 2006 (VND / kg)

543. For five of the retailers, prices varied by over 100 percent, from a low of around 4,400 VND / kg to a high of at least 9,000 VND / kg. In another two, the price range was still more than 50 percent, albeit these two also stocked the fewest number of rice types.

544. Prices for *nep* types of rices were highest. *Tam* named rices were the next highest.

545. The highest priced rice was from Dien Bien:

1. Nep Dien Bien cao doc san vang
2. Nep *nuong Dien Bien moi*

546. Where Dien Bien and Hai Hau rice were comparable, that is tam types, the Dien Bien price was significantly higher.

547. Whilst being identified as the highest priced rice may be a matter of provincial pride, if little of the rice moves at that price compared with that from Hai Hau then it is misplaced pride.

548. The prices sought by four supermarkets for their rices are shown in Table 113 below.

549. Table 112 and Table 113 show that the frequent comment that supermarket prices are higher than that of the retailers can be challenged. The comparison is made difficult by the fact that in only very cases can a one-on-one comparison be made.

1. Bac thom is one of the few cases where a one-on-one comparison is possible. Here, the supermarket prices are much higher than that of the retailers.
2. With nep type rices the retailers' prices are higher
3. With tam rices, the prices are comparable.
4. Supermarket prices are slightly cheaper on a kilogram basis with volume purchases, that is 10 and 15 kgs, whereas retailers formally do not offer a discount for larger volumes. The caveat "formally" is required because retailers do offer a discount for volume purchases but the discount varies depending on the actual volume purchased and the customer's relationship with the retailer.

Table 113 Selected Supermarket Prices for Rice in Hanoi

| | Supermarket #1 | Supermarket #2 | Supermarket #3 | Supermarket #4 |
|----------------------------------|----------------|----------------|----------------|----------------|
| Agrice Agrico | | 11520 | | |
| Bac huong (TD) A | 7200 | | | |
| Bac huong Hao Hau (BM) A | 6532 | | | |
| Bac thom | | | 9500 | |
| Bao thai hong Dien Bien (BM) A | 5910 | | | |
| Dac san mien bac | | 10200 | | |
| Dac sn vang cao bao | | 10250 | | |
| Dai loan (TD) A | 8850 | | | |
| Du Huong Hai Hau (BM) A | 6130 | | | |
| Hoa mai vang (Tigi) A | 8960 | | | |
| Hong hac | 9420 | | | |
| Huong thom Dien Bien (BM) A | 7550 | | | |
| Luc huyet rong | | | | 11500 |
| Mi trung C.cap (SAFOCO) A | | | | |
| Nep cao hoa vang dac biet (BM) A | 8240 | | | |
| Nep dac san mbac (TD) A | 8850 | | | |
| Nep huong Dien Bien | | | 13500 | |
| Nhat bac (TD) A | 14900 | | | |
| Nhat lovely (Angimex) A | 17380 | | | |
| Nuong Thom Dien Bien | | 8040 | | |
| Rong vang (Tigi) A | 9070 | | | |
| Tam dai loan (DB) A | 6953 | | | |
| Tam Dien Bien | 7600 | | | |
| Tam thom thai lan (BM) A | 7900 | | | |
| Tam thom BS din bien bao | | 9700 | | |
| Tam xoan | | | 8750 | |
| Tam xoan Dien Bien | | | 10000 | |
| Tam Xoan Hai Hau dac biet (BM) A | 8210 | | | |
| Te thom Dien Bien (TD) A | 7200 | | | |
| Thai ? do | | | 11500 | |
| Thai lan tom Dien Bien bao | | 11500 | | |
| Thai Thom Dien Bien bao | | 11400 | | |
| Thom lai | 6372 | | | |
| Thom thong dung (Aro) A B | 5060 | | | |
| V-thinh thai hom mali | 11004 | | | |
| Vo nau chao huyet ro | | | | 12700 |
| Xaon Hai Hau (TD) A | 8410 | | | |

A Refers to the supermarket's identification of the supplier.

B Metro's home brand.

Hanoi. Select supermarket prices January - February 2006 (VND / kg)

F.15 Conclusions

550. There is a definite demand for Dien Bien rice in Hanoi. This appears to be a regional preference. However the demand is tempered by its high price. Dien Bien's main competitor on a value for money basis is the rice from Hai Hau.

551. Hanoi does not have as pronounced a demand for aromatic rice as Ho Chi Minh City.

552. On the other hand, Hanoi appears to have a greater demand for sticky rice compared with Ho Chi Minh City. Again, this appears to be a regional phenomenon.

553. Supermarkets will continue to grow in terms of the proportion of total food that they handle. However, it is considered that they will only increase their share of the total rice market if they address the suspicion that packaged rice is not old and therefore has lost its appeal of aroma.

554. The share of packaged rice will continue to grow. However, the growth will be within the mini-mart system that are closely associated with the apartment complexes where the bulk of the population live.

555. The rules relating to the use of trucks in Hanoi governs at least at the wholesaler level the distribution of rice in Hanoi. Rice must be delivered to the processors who operate from the outskirts of the city where the trucking rules do not apply. It is highly unlikely that the trucking rules will be changed. Dien Bien will always face the problem of high transport costs. It has limited options. Two interrelated suggestions are made.

1. Ensure that only fully loaded vehicles move out of the province to the outskirts in order to reduce per unit transport costs.
2. Work with the wholesalers within Dien Bien to ensure that, when they move product from the processors on the outskirts of the city into the wholesaler premises within the city, the loads are also at full vehicle capacity to again reduce per unit transport costs.

556. The above suggestions also indicate the need for a far more pro-active role by value chain participants in Dien Bien in order to achieve the necessary full-load conditions. Primary and secondary collectors in the province must be more assertive in their seeking out of supplies and customers in order to achieve the full-vehicle capacity. Wholesalers and processors in the province should also be pro-active in seeking out markets within Hanoi in order to ensure that where-ever possible full-vehicle loads are employed in the convoluted distribution system within Hanoi.

Table 114 Retailers in Hanoi

| Shop | Notes |
|-------------------------|--|
| Metro | <ul style="list-style-type: none"> • Large under cover parking. • High proportion of males shopping. • Not many families. • Large island dedicated to rice. • Appears to be more upmarket |
| Big C | <ul style="list-style-type: none"> • Well located • Considerable car parking • Appears to be slightly downmarket compared with Metro • Yamada had packs in Thai, Japanese, Korean indicating high market targeting |
| Sien Thi Intimex | <ul style="list-style-type: none"> • Appears poorly located off major road. • Poor parking so shopping basket restricted to bicycle / motor bike • Appears to promote state-related rice |
| FiviMart | <ul style="list-style-type: none"> • Limited car access |
| Products on Sale | <ul style="list-style-type: none"> • Most packs were 5 kg and 10 kg. There were some 2 kgs and some 25 kgs bags. • Packaging nearly all transparent plastic. Great range on quality of packaging, from very soft almost finger penetrating to quite stiff plastic. • Magic words were <ul style="list-style-type: none"> ○ region (Hai Hau, Dien Bien) ○ type “upland”, “sticky” ○ percent broken ○ moisture content ○ “no soil, stone or other material” ○ “special” albeit “special” not defined. ○ “safe / clean” ○ ‘high quality’ ○ “good to cook, fragrant, delicious”. ○ Purity of product <ul style="list-style-type: none"> ✓ seed – “99.9 percent seed from Dien Bien” / “Taiwan ST3 seed” ✓ type – Tan Xoan • Mention made of type – Tan Xoan, Sticky, and sticky from Dien Bien • A number of brands from the South, possibly to capture the Southerners here. • Government based labels had cooking information. • “Nice” data included <ul style="list-style-type: none"> ○ how to cook ○ manufactured date ○ use by date • Most common information related to source or origin: Dien Bien and Hai Hau most common, then An Giang |

Source: Study Team Field Visits, 13 January 2006

Box 37 Questionnaire for Retailers and Distributors of Rice

| |
|--|
| <p>Background</p> <ul style="list-style-type: none"> • We are from SNV the Netherlands development organisation • Working with the Dien Bien Department of Trade and Tourism • We are researching the demand for rice in order to develop strategies to improve the position of the poor in Dien Bien <p>Rice questions</p> <ul style="list-style-type: none"> • Is rice an important part of their business • What is volume traded • Is rice growing in importance • Broad indicator of mark up |
|--|

- Are there special occasions to buy rice
- Who buys
 - age
 - sex
 - income
- Do consumers ask for rice by
 - region – North, South,
 - characteristics aromatic, sticky
 - variety IR64
- Is mixing a problem
- What is the usual package size of purchase
- What are magic words
 - Region North, South, Dien Bien, Hai Hoa
 - Soft
 - New
 - Old
 - Glutinous / sticky
 - Aromatic
- At what high price does demand reduce
- Does the price of rice from the supplier change during the year
- From where do they get their rice: describe the chain as far back from them as possible
- Who is the distributor
- Who are the packers
- Where is the packaging done
 - In the producing region
 - In Hanoi

Dien Bien rice questions

- Do they stock DB rice in response to specific demand
- What is the regional origins of those demanding DB rice
- What are the reasons for buying DB rice
 - Smell
 - Taste
 - Stickiness
- What do they mean by taste
- What can DB do to improve the way it does business

Distributor

- what is the chain from point of production to distributor
 - number of points where product is stored along the chain
 - assessment of care taken when moving along the chain
- usual unit size along the chain
 - from Dien Bien
 - into warehouse Hanoi
 - to retailer

- from whom does distributor buy
 - from producer
 - from processor
 - from trader
- on what basis did the trade begin
 - did the distributor go to the supplier
 - did the supplier approach the distributor
- how often does the distributor contact the supplier
- how does the distributor gain his market information, especially about crop size
- is mixing a problem

Table 115 Wholesale Markets in Hanoi

| Market name | Market address | Civil numbers |
|------------------|----------------|---------------|
| Den Lu | Hoang Mai | 218 |
| Dịch Vong | Cau Giay | 700 |
| Xuan Dinh | Tu Liem | |
| Thang Long North | Dong Anh | |
| Hoa Tay Tuu | Tu Liem | |

Table 116 The First Category Market in Hanoi

| Market name | Market address | Civil numbers |
|----------------------------------|----------------|---------------|
| Dong Xuan | Hoan Kiem | 1950 |
| Long Bien | Ba Dinh | 450 |
| Nga Tu So | Dong Da | 720 |
| Hom – Duc Vien | Hai Ba Trung | 501 |
| Hung Tuan Secondhand – Motorbike | Tay Ho | 300 |
| Dich Vong Secondhand – Motorbike | Cau Giay | 300 |
| Mơ | Hai Ba Trung | 787 |
| Dong Anh town Market | Dong Anh | |
| Soc Son | Soc Son | 500 |

Table 117 The Second Category Market in Hanoi

| Market name | Market address | Civil numbers |
|------------------|----------------|---------------|
| Hang Da | Hoan Kiem | 648 |
| Ngoc Ha | Ba Dinh | 250 |
| Ngo Sy Lien | Dong Da | 182 |
| Kim Lien | Dong Da | 398 |
| Thanh Xuan North | Thanh Xuan | 412 |
| Kim Giang | Thanh Xuan | 195 |
| Khuong Dinh | Thanh Xuan | |
| My Dinh | Tu Liem | |
| Truong Dinh | Hai Ba Trung | 223 |
| Mai Dong | Hai Ba Trung | 201 |
| Cau Dien | Tu Liem | 170 |
| Gia Lam | Gia Lam | 180 |
| Thach Ban | Gia Lam | 80 |

| | | |
|-------------|------------|-----|
| Ninh Hiep | Gia Lam | 390 |
| Ny | Soc Son | 365 |
| Phu Lo | Soc Son | 400 |
| Van Dien | Thanh Tri | 151 |
| Duoi Ca | Thanh Tri | |
| Thuong Dinh | Thanh Xuan | 40 |
| Buoi | Tay Ho | 339 |

Table 118 The Third Category Market in Hanoi

| Market name | Market address | Civil numbers | Market name | Market address | Civil numbers |
|-------------------|----------------|---------------|----------------------|----------------|---------------|
| Cua Nam | Hoan Kiem | 56 | Phung Khoang | Tu Liem | |
| Hang Be | Hoan Kiem | 300 | Vinh Quynh | Thanh Tri | 124 |
| Cau Dong | Hoan Kiem | 101 | Thanh Liet | Thanh Tri | 100 |
| Thanh Cong B | Ba Dinh | 321 | Thinh Liet | Thanh Tri | 60 |
| Chau Long | Ba Dinh | 300 | Ngu Hiep | Thanh Tri | 42 |
| Linh Lang | Ba Dinh | 15 | Tan Trieu | Thanh Tri | 50 |
| Thanh Cong A | Ba Dinh | 68 | Linh Nam | Thanh Tri | 40 |
| 19/12 | Hoan Kiem | 284 | Huu Hoa | Thanh Tri | |
| Huu Tiep | Ba Dinh | 112 | Dai Kim | Thanh Tri | |
| Thai Ha | Dong Da | 245 | Dong My | Thanh Tri | |
| A12 Khuong Thuong | Dong Da | 214 | Viet Hung | Gia Lam | 165 |
| Tho Quan | Dong Da | 200 | Yen Vien | Gia Lam | 91 |
| Lang Thuong | Dong Da | 400 | O Cach | Gia Lam | 109 |
| Lang Hạ | Dong Da | 200 | Phu Dong | Gia Lam | 35 |
| O Cho Dua | Dong Da | 75 | Kim Lan | Gia Lam | 83 |
| Kham Thien | Dong Da | 86 | Bun | Gia Lam | 128 |
| Dang Tran Con | Dong Da | 250 | Yen Thuong | Gia Lam | 76 |
| Nam Dong | Dong Da | 150 | Keo | Gia Lam | 182 |
| Khuong Thuong | Dong Da | 60 | Duc Hoa | Gia Lam | 40 |
| Tam Da | Tay Ho | 108 | Sui | Gia Lam | 57 |
| Xuan La | Tay Ho | 85 | Duong Xa | Gia Lam | 48 |
| Yen Phu | Tay Ho | 125 | Kieu Ky | Gia Lam | 17 |
| Nhat Tan | Tay Ho | | Gia Quat | Gia Lam | 36 |
| Khuong Trung | Thanh Xuan | 160 | Vang | Gia Lam | 144 |
| Hoa Binh | Hai Ba Trung | 558 | Bat Trang | Gia Lam | 117 |
| Dong Tam | Hai Ba Trung | 285 | Trau Quy | Gia Lam | 27 |
| Nguyen Cao | Hai Ba Trung | 233 | Doc La | Gia Lam | |
| Cao Dat | Hai Ba Trung | 116 | Prefabricated market | Dong Anh | 184 |
| Bach Khoa | Hai Ba Trung | 123 | Sa | Dong Anh | 54 |
| Quynh Mai | Hai Ba Trung | 436 | Lien Ha | Dong Anh | 200 |
| Tuong Mai | Hai Ba Trung | 233 | Co Dien | Dong Anh | 310 |
| Nguyen Cong Tru | Hai Ba Trung | 416 | Boi | Dong Anh | 285 |
| Vinh Tuy | Hai Ba Trung | 120 | Ong | Dong Anh | 120 |
| Tan Mai | Hai Ba Trung | 66 | Van Tri | Dong Anh | 160 |
| Hoang Van Thu | Hai Ba Trung | 80 | Kim | Dong Anh | 128 |
| Cau Giay | Cau Giay | 167 | Doc | Dong Anh | 150 |
| Nghaa Tan | Cau Giay | 352 | Kim No | Dong Anh | 150 |
| Nha Xanh | Cau Giay | 200 | Doc Van | Dong Anh | 100 |
| Duong Quang Ham | Cau Giay | 100 | Bac Hong | Dong Anh | 101 |
| Dong Xa | Cau Giay | | To | Dong Anh | 310 |
| Hop Nhat | Cau Giay | 90 | Duc Tu | Dong Anh | 42 |

| | | | | | |
|------------|------------|-----|------------|----------|-----|
| Trung Hoa | Cau Giay | 150 | Xuan Canh | Dong Anh | 280 |
| Nhan Chinh | Thanh Xuan | 310 | Trau | Soc Son | 100 |
| Xuan Dinh | Tu Liem | 129 | Thanh Nhan | Soc Son | 600 |
| Nhon | Tu Liem | 170 | Phu Cuong | Soc Son | 100 |
| Canh | Tu Liem | 240 | Tang | Soc Son | 120 |
| Dam | Tu Liem | 112 | Tha | Soc Son | 120 |
| Dai Mo | Tu Liem | 170 | Hien Ninh | Soc Son | 100 |
| Thuong Cat | Tu Liem | 58 | Minh Phu | Soc Son | |
| Dong Ngac | Tu Liem | 65 | Mai Dinh | Soc Son | |
| My Dinh | Tu Liem | | Xuan Thu | Soc Son | |

Table 119 Trading Centers in Hanoi

| Supermarket name | Address | Management Organization |
|--|-----------------------------|---|
| Thang Long Metro – Wholesale Trading Center. | Co Nhue, Tu Liem | Metro Cash & Carry Vietnam Limited Company |
| VKO Center | 148 Giang Vo, Ba Dinh | Bao Ha Joint-stock Company |
| Asean Trading Center | 10 Pham Ngoc Thach, Dong Da | Dong Da Hotel - Trading Company |
| Cat Linh Trading Center | 1F Cat Linh, Dong Da | Hanoi Trading Company |
| Trang Tien Trading Center | 24 Hai Ba Trung, Hoan Kiem | Trang Tien Trading and Investment Company |
| Intimex Trading Center | 26 Le Thai To, Hoan Kiem | Intimex Export-Import Company – Ministry of Trade |
| Star Bowl Entertainment Sport Culture Center | 2B Pham Ngoc Thach, Dong Da | Hanoi Entertainment Sport Culture Center Company |
| Cau Giay Trade Center | 139 Cau Giay road | Cau Giay Trade Joint-stock Company |
| Nghia Do Trade Center | 1 Nghia Tan, Cau Giay | Nghia Do Service Trade Joint-stock Company |

Table 120 Supermarkets in Hanoi

| Supermarket name | Address | Management Organization |
|--------------------------------|--------------------------------|---|
| Lang Ha Supermarket | 23 Lang Ha, Ba Dinh | Bao Quang Trade Produce Company |
| GTC Thang Long Supermarket | 87-89 Le Duan, Hoan Kiem | GTC Thang Long General Trade Tourism Company |
| GTC Thang Long Supermarket | 15-17 Ngoc Khanh, Ba Dinh | GTC Thang Long General Trade Tourism Company |
| Marko Supermarket | 148 Giang Vo, Ba Dinh | Phuong Anh Limited Company |
| Marko Supermarket | 649 Kim Ma, Ba Dinh | Phuong Anh Limited Company |
| Marko Supermarket | 379 Tay Son, Dong Da | Phuong Anh Limited Company |
| Giang Vo Intershop Supermarket | C4 Giang Vo, Ba Dinh | Hanoi General Service Trade Company |
| Fivimart Trúc Bạch | 10 Tran Vu, Ba Dinh | Nhat Nam Joint-stock Company |
| Fivimart Tôn Đản | 210 Tran Quang Khai, Hoan Kiem | Nhat Nam Joint-stock Company |
| Siêu thị Hà Nội Seiyu | 8 Pham Ngoc Thach, Dong Da | Hanoi- Japan Food Joint-stock Company |
| Bo Ho Intimex Supermarket | 26 Le Thai To, Hoan Kiem | Intimex Trade Center |
| Intimex Hao Nam Supermarket | 131-135 Hao Nam, Ba Dinh | Intimex Trade Center |
| Thái Dương Supermarket | 76 Nguyen Chi Thanh, Dong Da | Bao Quang Trade and Produce Company |
| Hanoi Star Supermarket | 36 Cat Linh, Dong Da | Thien Giang Trading Limited Company |
| Hanoi Star Supermarket | 2B Pham Ngoc Thach | Thien Giang Trading Limited Company |
| Techsimex Supermarket | 9 Dao Duy Anh, Dong Da | Techsimex Import-Export and Technical Service Company |
| Family mart Supermarket | 152A Lac Trung, Hai Ba Trung | New Technology Transfer and Applying Science and Technology Company |

| | | |
|------------------------------------|---|--|
| Family mart Supermarket | 59 Khuong Trung, Thanh Xuan | New Technology Transfer and Applying Science and Technology Company |
| Family mart Supermarket | 3A-4A E Hospital road, Cau Giay | New Technology Transfer and Applying Science and Technology Company |
| Tay Do Supermarket | Km 10+300 Phu Dien, Tu Liem | Trung Tin Joint-stock Company |
| Co Loa Supermarket | Dong Anh Town | Co Loa Trade Tourism Company |
| Hà Nội Coop Mart | 1E Truong Chinh, Thanh Xuan | Hanoi Trade Co-operative Union |
| Vinaconex Supermarket | 17T3 New City Area Trung Haa, Cau Giay | Vietnam Construct Export-Import General Company – Vinaconex. |
| Thanh Ha Supermarket | CC2 New City Linh Dam North, Hoang Mai | Thanh Ha Trade and Investment Limited Company |
| No. 5 Nam Bo Supermarket | 5 Le Duan, Ba Dinh | No. 5 Nam Bo Grocery Store |
| Thai Ha Supermarket | 174 Thai Ha, Dong Da | Minh Hoa Trade Limited Company |
| Anh Thu Interior Supermarket | 80 Chua Boc, Dong Da | Anh Thu Trade and Produce Company |
| Anh Thu Interior Supermarket | 132 Le Duan, Dong Da | Anh Thu Trade and Produce Company |
| Elmaco Supermarket | 240 Ton Duc Thang, Dong Da | Mechanical Equipment and Electrical Materials Company |
| Tam Tu Interior Supermarket | 155A Nguyen Luong Bang, Dong Da | Dong Tam B Limited Company |
| Bach Khoa Supermarket | E7 Bach Khoa, Hai Ba Trung | Hanoi Food Company |
| Dam Trau Trade Center | 112A3 Dau Trau, Hai Ba Trung | Investment and General Export-Import Joint-stock Company – Ho Chi Minh Branch. |
| Thanh Xuan General Grocery Company | C12 North Thanh Xuan | Hanoi Grocery Company |
| Vinaconex Electricity Supermarket | | |
| Quan Nhan Supermarket | B1 Thang Long International Village, Cau Giay | Quan Nhan Private Enterprise. |
| Bac Linh Dam Supermarket | New City Area Linh Dam North, Hoang Mai | Private Constructive Enterprise. No. 1 Lai Chau. |
| Thanh Tam Supermarket | 19 Cat Linh, Dong Da | |
| ACE Mart Dinh Cong | CT6 New City Area Định Công, Hoàng Mai | Trinh Thai Service Trade Limited Company |
| Todimax Supermarket | 5 Dien Bien Phu, Ba Dinh | North Electricity Joint-stock Company |
| Nha Xinh Interior Supermarket | 12 Tran Binh Trong, Hoan Kiem | Architecture Construction Joint-stock Company |
| Steel Supermarket | Km 12, Highway 32, Tu Liem | Hanoi Metal Company |
| Hanoi Fashion Business Center | 25 Ba Trieu, Hoan Kiem | Vietnam Textile and Garment General Company |

Table 121 Mini Marts in Hanoi

| Supermarket name | Address | Management Organization |
|--------------------------------------|----------------------------------|---|
| Trade Center | 7 Dinh Tien Hoang, Hoan Kiem | Hanoi Variety Store Company |
| Cửa hàng bách hóa Bờ Hồ | 19-21 Dinh Tien Hoang, Hoan Kiem | Hanoi Variety Store Company |
| ODA and Export-Import Duty free Shop | C4 Giang Vo, Ba Dinh | Hanoi General Service and Trade Company |
| Diplomatic Corps Duty free Shop | C4 Giang Vo, Ba Dinh | Hanoi General Service and Trade Company |
| Grocery Store | D2 Giang Vo, Ba Dinh | Hanoi Grocery Company |
| Hang Bai Supermarket No.18 | 18 Hang Bai, Hoan Kiem | Hanoi Trade Company |
| Citimart Supermarket | 49 Hai Ba Trung, Hoan Kiem | Dong Hung Trade Service Limited Company |
| Sport Supermarket | 157K Nguyen Thai Hoc, Ba Dinh | Private Enterprise |
| Market Centre | 6 Chua Boc, Dong Da | Variety Trade Limited Company |

| | | |
|-----------------------------|-------------------------------------|-----------------------------------|
| Computer Supermarket | 156 Ba Trieu, Hai Ba Trung | |
| Golden Bee Supermarket | 86 Mai Hac De, Hai Ba Trung | EDD Limited Company |
| Womab Supermarket | B2 Thang Long International Village | Thien Trang Trade Limited Company |
| “Cho Hang Vui” Supermarket | Linh Đàm Peninsula, Hoang Mai | Thanh Tan An Limited Company |
| Child Supermarket - Newkids | 48 Ba Trieu, Hoan Kiem | Private Enterprise |

Appendix G Marketing of Vietnamese Rice in Melbourne, Australia

G.1 Introduction

557. Opportunity was made of a visit to Melbourne to undertake a rapid market survey of the marketing of rice amongst the city's Vietnamese population.

558. Melbourne is considered to have Australia's largest Vietnamese community. The name "Nguyen" is the second most common name in the Melbourne phone book.

559. In the time available, the approach taken was to concentrate on the retail stores that service the Vietnamese population. These stores are concentrated in the two Melbourne inner suburbs of Footscray and Victoria Street, Richmond. Any grocery-type store that had Vietnamese on the hoarding or had the term "Asian grocery" on the outside was visited. Around 20 such stores were visited in the two suburbs, see Table 123. I also visited a Coles store in Footscray to see how an Australian mainstream retailer reacted to the competition of the "Asian groceries". No such store existed in Victoria Street Richmond so I was unable to do a comparable exercise.

560. Where possible, discussions were had with the store operator. English was a problem and this limited the number of discussions.

561. An open questionnaire was used, see Box 38

G.2 Rice Imports

562. Despite being a sizable rice producer and exporter, Australia is an active importer of rice.

563. In the stores visited, imported rice was identified from the following origins:

1. China
2. India
3. Pakistan
4. Thailand
5. United States
6. Vietnam.

564. Without being statistically accurate, in the stores visited rice from Thailand was by far and away the biggest volume supplier. The exception was an Indian store that stocked around 12 brands of Basmati rice. I was unable to verify the comment that there are around 100 brands of Thai rice on the market in Melbourne.

565. A number of importers were identified from the labelling on the bags. Five of these were phoned but with limited success. Most were too far out of the city to visit in the time available. A list of known distributors of imported rice noted from the packaging observed is contained in Table 124.

566. The importers contacted estimated that the rice types imported were

1. Aromatic (referred to as “Jasmine”) - around 85 percent
2. Sticky - around 15 percent

567. Demand for both types is basically static but does tend to rise around Chinese New Year / Tet.

G.2.1 Vietnamese Rice

568. Vietnam imported rice has a poor reputation. The following comments were made:

1. commercial loads not true to sample
2. after initial good shipment, quality deteriorates
3. poor quality.

569. The references to quality had several parameters:

1. High proportion of stones and brokens.
2. “Smell” in that the rice was viewed as having no appealing smell.
3. Poor tasting.
4. Poor shelf life. The 3-4 months of shelf life experienced with Vietnamese product compared very poorly with the 12 months that store keepers considered that they could get from Thai product.

570. Just the one Vietnamese brand imported by just the one importer was observed:

1. Brand: Watermelon Brand
2. Rice identification: Gao Thom Huong L...(?)
3. Address: Hieu Trai Dua Hau 29 Doan Nhi Hai Q4 Ho Chi Minh City
4. Agent: DHN Trading Company (see Table 124).

571. Store keepers that did import Vietnamese rice confirmed that this was the only Vietnamese brand imported and the importer was the only agent known to have handled Vietnamese rice.

G.2.2 Dien Bien Rice

572. Not one shopkeeper reported their being asked about rice from Dien Bien. Amongst the random but wide range number of people who I spoke with, not one mentioned Dien Bien rice.

573. Similarly, there was no knowledge of IR 64.

G.3 Rice Types

574. The stores visited displayed a very large array of types of rice:

1. Brown / natural brown
2. Long grain
3. Medium grain
4. Short grain

5. Jasmine
6. Basmati
7. Arborio
8. Aromatic long grain basmati
9. Black
10. Red
11. Sushi
12. Black glutinous
13. Hand / machine brokens
14. Sticky

575. Most stores stocked at least two types. All stocked aromatic.

576. The most number of types were seen Coles the indigenous Australia food retailer who has about 35 percent of the total retail food market. It stocked 10 types of rices. A recently opened large scale supermarket in Richmond also stocked nine types.

577. Australian rice is considered to be popular in the Asian food service sector. This is because when cooked and left over from Day #1, it will not go so hard as to prevent its use as fried rice on day #2.

578. The bulk of the stores carried at least one type of coloured rice. Black was by far the most common coloured rice with the balance shared nearly evenly between red and brown. The coloured rices were invariably labelled as “Gao Luc”.

579. Aromatic sticky rice was invariably used in making desserts and cakes.

G.4 Package Size

580. Pack sizes varied from

1. 1 kg
2. 2 kg
3. 5 kg
4. 10 kg
5. 15 kg
6. 25 kg

581. The commonly sold pack size was 15 and 25 kgs as this was the cheapest form on a \$ / kg basis. A few shops sold just the bulk packs and a few sold just the smaller 1 kg and 2 kg packs. Most shops sold some of each.

582. Most of the Thai rice is imported in bulk (not defined) and repacked in Australia.

G.5 Packaging

583. All the packaging was of a higher quality than seen in Hanoi. It was colourful, with strong but not stiff plastic. Most packs were transparent but a few had windows. As a rule, basmati rice is packed in a form of muslin and hessian rather than plastic.

584. Thai packages had multiple languages printed on them. The languages were

1. Thai
2. English
3. Vietnamese
4. Chinese
5. French

G.6 Brands

585. Nearly all shops stocked at least three brands of rice.

586. The most number of brands was observed was ten. The store also carried a large stock of fresh fruit and vegetables.

587. Two stores carried nine brands. One was Coles, the indigenous Australia food retailer who has about 35 percent of the total retail food market. The nine brands marketed by Coles are seen as its means of competing with the local Asian grocery stores.

588. The most popular brands were:

1. Royal Umbrella
2. Antler CTF

G.7 Consumer Preference

589. One store stated that the overwhelming preference was for aromatic types. Stickies were considered too hard to cook.

590. The following Vietnamese names were identified:

1. Gao Luc
2. Gao Dut Do
3. Huong Thom Thuong Hang
4. Nep Nang Chou
5. Nep Than
6. Nep Thom Nang Huong
7. Nep Thuong Hao Hang
8. Tam Thuong Hang
9. Thai Hom Mali
10. Than Tai
11. Thom Thailand
12. Thom Thuong Hang
13. Thom Dac Biet
14. Thuc Pham Thuong Hang

591. Whether these words have any specific significance in Vietnamese is not the issue. Instead, they represent what the Thai marketers think will have an impact.

G.8 Location in Store

592. The positioning of the rice in most of the stores illustrated the availability of rice in the general community.

593. Usually, most retailers tend to have two suites of products: (a) necessities (b) nice-to-have. Necessities are invariably placed at the rear of the store. The notion is that since consumers have to have the product there is little sense in placing these products in the more desirable parts of the store. By placing them at the back of the store, customers are “pulled” through the store past the nice-to-have products to.

594. In most of the stores visited, the bulk packs of 15 and 25 kgs were at the back. This suggests that they were items considered necessary. The smaller packs were usually, but not solely located by themselves and towards the front of the store.

595. Placing the bulk packs at the rear of the store indicates that the store considered that customers have no choice in their sourcing of rice. That is, there is no wholesale market where customers could source alternative supplies.

G.9 Prices

596. Most rice was valued around the AUS\$1.50 /kg. Bulk packs were cheaper on a \$ / kg basis; see Table 122.

Table 122 Retail Prices of Rice in Melbourne

| Store | Type | AUS\$ per kg |
|---------------------|--|---------------|
| Store A – Footscray | Sweet rice | 2.90 |
| | Hand Broken Thai | 1.50 |
| | Gao Luc (brown) | 2.90 |
| | Black Glutinous (“suitable for diabetics”) | 3.50 |
| | Thai Sticky | 1.90 |
| Store B – Footscray | Pin Kiew Glutinous | 1.95 |
| Store C – Footscray | Gao Luc (brown) | 3.50 |
| | Glutinous | 1.70 |
| | Thai Jasmine Long grain | 2.08 |
| Store D – Footscray | Brand A Glutinous | 1.80 |
| | Brand B Glutinous | 1.99 |
| | Brand C Glutinous | 1.99 |
| | Brand D Glutinous | 1.80 |
| Store E – Footscray | Jasmine | 1.65 |
| | Gao Nep | 1.95 |
| Store F – Footscray | Jasmine | 1.35 – 1.40 / |
| Store G – Footscray | Japanese derived but Chinese produced “sweet rice” | 2.90 / |
| | Thom Thuong Hang | 1.99 |
| | Thuong Hang Than Tai | 1.99 |
| | Nep Thuong Hang | 1.99 |
| Store H – Footscray | Nep Thuong Hao Hung | 1.90 |
| | Thom Thuong Hang | 1.95 |
| | Red Rice | 3.99 |
| | Black glutinous | 3.39 |
| Store I – Richmond | Premium Sweet | 2.90 |
| | Thai Jasmine Perfume Rice | 2.30 |
| | Black Glutinous | 2.50 |
| | Tam Thuong Hang | 1.50 |
| | Sweet rice | 2.75 |
| | Gao Luc (Brown) | 2.20 |
| Red Rice | 2.30 | |
| Store J – Richmond | Nep Thom Nang Huong | 1.85 |
| | Tam Thuong Hang | 2.10 |
| Store K – Richmond | Black Glutinous | 2.99 |
| | Rose Glutinous | 3.79 |
| | Nep Thuong Hang | 1.99 |

| | | |
|--------------------|----------------------------------|--------------|
| | Tam Thuong Thom Thuong Hang | 1.50 1.75 |
| Store L – Richmond | Tam Thuong Hang A1 Super Broken | 1.30 |
| Store M – Richmond | Nep Thuong Hang Thom Dac Biet | 1.75 1.80 |

Table 123 Vietnamese / Asian Grocery Stores visited

| Footscray | Richmond |
|---------------------------|---------------------------------------|
| Tan Quang | Victoria Street Minh Phat Supermarket |
| Hiep Thanh | Tatsing Food Store |
| Coles | Huy Huy Supermarket |
| Tan Tien Asian Grocery | Thuoc Phan a Chau Tan Hung |
| Little Saigon Supermarket | Tah Thanh Hung Supermarket |
| Tiem Tap Hoa Phuoc Vinh | Chan Phat Asian Grocers |
| Tatsing Food Store | Tan Dai Asian Grocery |
| Thuc Pham a Chau | Duc Hung Lo |
| Vinh Xuong Grocery | Mau Hung Asian Grocery |
| Thanh Phat Supermarket | |
| Melbourne Groceries | |

Box 38 Questionnaire Used for Rice in Melbourne

| |
|---|
| <p>Questionnaire used</p> <p>Dien Bien Rice Value Chain</p> <p>Name</p> <p>Location</p> <p>Type of business</p> <p>How long have you been in Australia</p> <p>Do you use rice</p> <p>Do you import rice from Vietnam</p> <p>Could you identify the import chain</p> <p>Can you name any of the rices from Vietnam</p> <p>Do you specifically ask for Dien Bien rice</p> <p>What do you look for in a rice</p> <ul style="list-style-type: none"> Flavour Aromatic Stickiness Upland Other <p>Can you name any of the rice varieties from Vietnam</p> <p>What size pack do you prefer</p> <p>Does demand vary throughout the year</p> |
|---|

Table 124 Distributors of Rice Identified by Retail Packaging

| Name | Contact Details |
|------------------------------------|---|
| Capital Asian Groceries Pty.Ltd: | 7A Bando Road, Springvale 3171 |
| Chan Australia: | 13 A Libbert Ave, Clayton South Victoria 3169, Tel: 03 9558 4148, Fax: 9558 4143 |
| DHN Trading Import Export Pty.Ltd: | 56 Korong Road, Heidelberg West, Victoria 3011, Tel: 03 9458 1432, fax: 03 9442 34808 |
| DL | Tel 03 9318 6681, Fax: 03 9331 0586 |
| Hoa Australia: | 13 Enterprise Court, Mulgrave Business Park, 3170, Tel: 03 9546 7277 |
| Kien Fat: | 10 Paproth Grove, Altona North, Victoria 3015 |
| Lay Brothers: | 22-29 David Street, Dandenong Victoria 3175, Tel: 03 9791 6399, Fax: 03 9792 4880 |
| Lim Australia Pty.Ltd: | 12 Eileen Road, Clayton South, Victoria 3169, Tel: 03 9562 3888 |
| Ly Trading Co: | 6 Parsons Ave, Springvale, Victoria 3171, Tel: 03 9574 666, fax: 003 9574 6166 |
| Nan Fong Trading: | 47 – 51 Cranwell Street, Braybrook, Victoria 3019, Tel: 03 931 8577 |
| New Eastland Pty.Ltd. | 23-24 Kempton Court, Keysborough, Victoria 3173, Tel: 03 9738 5800, Fax: 03 9798 6911 |
| New World Trading: | 561 – 563 Somerville Road, West Sunshine, 3020, Tel: 03 9311 4911, Fax 03 9390 1256 |
| Oriental Merchant Pty.Ltd | 10 Westgate Ave, Laverton North, Victoria 3026, Freecall 1800 806 842 |
| Tan & Co. Pty.Ltd; | 38 Dingley Avenue, Dandenong. Victoria 3175 |
| The Quang Pty.Ltd. | 18 Coora Road, Oakleigh South, Victoria 3167 |
| Wah-Lien Trading Pty.Ltd | 9017 Elizabeth Street, Keynton Street Victoria 3031, Tel: 03 9376 2888 |
| Xiao Trading Co | 12/11 Urban Street, Braeside, Victoria 3195, Tel: 03 9587 9993 |