

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1. INTRODUCTION**

Having assessed achievements gained in the economic renovation in Vietnam, international economists fully agree that the biggest success has been recorded in the field of agriculture. Before the promulgation No. 10 and the introduction of new management mechanisms in agriculture in April 1988, Vietnam's agriculture sector had of serious self-insufficiency with a chronic deficiency of food over the years. However, after the implementation of the economic renovation, the situation has completely changed. Since 1989, Vietnam's agricultural sector has not only produced adequate food to feed 73 million people, but also has a surplus over 1.7 million tons of rice for export. Success in the agricultural sectors depends upon the efficient mobilisation of the rural population in the development effort. This, in return, depends on an efficient systems of organization at the farm level, appropriate incentives for production, timely supply of input, provision of infrastructure and technology, and efficient activities from subsection and region level.

Thua Thien Hue province located in the North Central Coast Region in Vietnam has total area of 5009 km<sup>2</sup>, with about 74,379 ha of agricultural land of which 49,200 hectare is covered by rice cultivation. The planted area for rice in the spring seasons is about 15% higher than in the summer season. The planting area for both seasons has been virtually constant over the years, averaging around 26,400 hectares in spring and 22,900 hectares in summer season. Rice yield has increased

significantly, since 1990 from 2.43 tones per hectare to 4.14 tones per hectare in the spring season and from 2.83 tones per hectare to 3.81 tones per hectare in summer season. (Thua Thien Hue statistic year book 1996)

Rice culture is classified according to source of water supply as rainfed or irrigated. Based on land and water management practices, rice land are classified as: lowland ( wetland preparation of fields) and upland ( dryland preparation of field). Then, according to water regime, rice land have been classified as upland, with no standing water, lowland, with 5- 50 cm of standing water and deepwater, with > 51 cm to 5-6 meters of standing water. In most rice growing countries, rice is usually grown as a lowland (wetland) crop. Under this system, land is either prepared wet or dry but water is always held on the field by bounds. About 30% of the world's rice are growing as rainfed lowland and about 45% as irrigated lowland ( De Datta, 1981)

The rice growing areas in Thua Thien Hue province are limited, about 26,400 hectares for spring rice and 22,900 hectares for summer rice. Sixty eight percent of the rice area in the spring season has irrigated system. In the summer season only 73% of the rice area has enough water supply.

In recent year the gross output of rice has increased mainly due to increasing the growing seasons from one to two or three and by using high yielding varieties. However, in coming years those factors will be constrained because of the limited land resource and limited capacity of increasing the growing seasons. Rice production in Thua Thien Hue province has been increased but not sustained from year to year, and the rice is insufficient for consumption needs. So that food security is still an issue that needs to be considered.

However, the likelihood of larger scale adoption of introduced rice production technology is still unclear, since there is a large variation in resource endowment among of farmers in the lowlands. While farmers seem to maximize output they are constrained by different socio-economic and physical factors. Individual farmers have different labor, capital, equipment and land variability, which all combine to make choice of technologies different. Thus understanding the detail about rice production in different regions and different planting methods of rice production in Thua Thien Hue province is always necessary.

In Thua Thien Hue province, farmers try to invest in rice production in order to improve rice yield. In rainfed lowland areas where the water source is very difficult and poor soil fertility farmers still plant local varieties, but have low rice yield and thus low income. Agricultural extension workers have been trying to change from a monoculture of rice to multicropping such as chili, mungbeans and peanut, but the area under multiple cropping is still low. This may be because of the return to the rice production and economic efficiency of rice suitable for farmer investment and suitable in environment in this region is still unclear

In analysis, in the Thua Thien Hue economy as well as the agricultural sector, there arise several important questions.

Can Thua Thien Hue sustain its status population?

Can rice production be self – sufficient in the long run?

What comprehensive strategies are needed for further agricultural development? To answer these questions, understanding of the rice production situation and factors affecting farmer's decision are very necessary.

## 1.2. Objective of the study

Give the above background, the overall objective of this study was to understand the household rice production system, determining socio-economic as well as physical factors effecting rice production in the lowland of Thua Thien Hue province.

The specific objectives of the study were as follows:

1. To investigate farmer management practices for rainfed and irrigated lowland rice production systems,
2. To identify constraints to rice yield of both production systems in Thua Thien Hue province
3. To analyse economic efficiency of rice production in both systems