

# Benefits and Determinants of Rice-Duck Farming in Northeast Thailand

## - Case study on irrigated areas in Khon Kaen Province -

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Place of fieldwork: Khon Kaen, Thailand

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- Research background

Traditionally, duck has been reared in China and Southeast Asian countries, and Thai people have eaten both duck meat and eggs (Photo 1). Even today, duck is an important poultry food, in spite of the sharp increase in layer chicken and broiler production.

Rice-duck farming is considered a type of sustainable agricultural system and is a suitable method in Southeast Asian countries where ducks have been reared traditionally.



Photo 1: Duck Eggs

- Research purpose

Many previous studies have focused on both the economic and ecological benefits of rice-duck farming, but few mention the constraints the production system places on farmers' practice.

Duck is reared in irrigated areas (Photo 2)—where farmers can use water constantly and produce rice more than twice a year—because these areas provide good feed supply.



Photo 2: Irrigated Paddy Field  
(My Study Site)



Photo 3: Rain-fed Paddy Field

In northeast Thailand, however, most paddy fields are rain-fed (Photo 3) because irrigation facilities are limited only in flat lowland like my study site, and consequently resources for duck farming are more limited than any other region even in irrigated area.

This study measures the optimal carrying capacity for duck releasing and finding the constraint to prevent farmer from duck

farming. I characterize the benefits and issues of duck farming in the study village.

- Results and achievements



Photo 5: Cassava  
(at Khon Kaen Univ.)

I visited various places in northeast Thailand and found that farming systems differ from region to region and that these differences create various types of agricultural landscapes. In the dry season, the differences between the landscapes of irrigated and rain-fed paddy fields were quite evident.



Photo 4: Sugarcane (at Mahasarakham)

Members of the Faculty of Agriculture, Khon Kaen University, cooperated with farmers and used farmers' feedback to develop agricultural technologies that are more effective.

They also observed farmers' socioeconomic conditions to facilitate farmers' production in cooperation with governmental and non-governmental organizations.

In this faculty, a system of cooperation between the social sciences and natural sciences has been created to enable a better understanding of agriculture and farmers' living through multi-faceted analysis.

- Implications and future research

I was able to conduct interviews with a duck farmer who moved out of the study village. This farmer did not follow traditional methods; I wished to examine how the rice-duck farming system might have changed in the process of moving.

According to interviews with duck farmers, monitoring ducks' movement is necessary (Photo 6). Therefore, I also focused on positional factors and created a map for future research.



Photo 6: Duck Movement