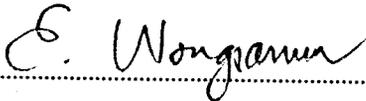
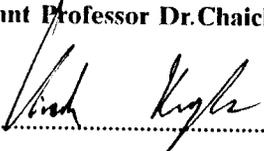


**THESIS TITLE : OPINIONS OF SMALL DAIRY HOLDERS TOWARD DAIRY
PRODUCTION IN CHANGWAT KHON KAEN**

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ABSTRACT

The objectives of this investigation were: to study household socio-economic status of farmers who engaged in dairy production, dairy cattle raising system and their attitudes toward dairying and to compare on the attitudes of dairy farmers in irrigated areas and those in the rain-fed areas. The study sample consisted of 160 small scale dairy holders in Khon Kaen Province. The sampled farmers were chosen on the following methods : stratified random sampling, quota system and purposive random sampling. The data were collected by using interview schedules with observed judgments. The data obtained were statistically analyzed for the lowest and highest values, arithmetic means, frequency, percentage, and Chi-square.

The results showed that the majority of farmers were male, had the average age of 43.2 years old, obtained primary education and had the average family size of 5.2 persons per household. Most of them raised dairy cows as their main occupation and had farms in rain-fed areas with the average farm size of 38.2 rai (2.5 rai=1 acre) per family. The sampled farmers earned their average annual income of 118,884.10 Baht and, out of this amount, 90,836.90 Baht came from dairy production. On average, each farm family

had loans for an amount of 279,768.80 Baht and, out of this amount, 234,975.00 Baht had been used in dairy production and more than half of the farmers stated that they could not pay back the loan in time according to the debt obligation.

For the dairy production system, it was found that the farmers had been engaging in dairy farming for an average duration of 5.9 years and they accepted dairying because they thought that it would be a better alternative farming activity for their family income. The labours for dairy production were 2.6 persons per household and most of them were family heads. They used 20.3 rai of cultivated areas for dairy cattle raising and in turn 15.4 rai were used for pasture establishment. The respondents had the average of 17.8 dairy cows with 7.0 heads under milking per farm. Majority of the dairy cattle were Holstein Friesian breed. They normally allowed their cows to graze in the pasture and most of the cattle were vaccinated and treated for internal parasites annually. They normally use artificial insemination in dairy cattle. Most dairy farms faced with the problems of animal health and infertility. They normally provided palleted concentrated feed for their animals. They had pasture grass on their farm for the average duration of 5.8 months annually. Rice straw and soybean residues were used in dry season. Their important problems were high price of concentrated feed and low quality of roughage. Most of them milked their cows by hands. They sometimes cleaned their cows with water and anti-septic solution. The majority of farmers did not always record milk production of individual cows but keeping cow mating records.

The majority of farmers indicated that raising dairy cattle needed a large amount of capital therefore loan services were important for investment. They pointed out that the best way in raising dairy cattle was to own a farm with good soil fertility and adequate water supply, and parts of the farm should be located in upland area. Members of the family had to share their labour, at least two family members should be ready to take up their turns. The main labour should be male and had basic knowledge and skills on animal health and artificial insemination. The farmers had to receive adequate training on dairy production. The farmers viewed that their dairy cows adapted well to local feed stuff and produced a fairly good amount of milk, but having problems on infertility and poor adaptation to heat. They reported that starting dairy production with five milking cows were appropriate when accompanied by other agricultural activities. However, before having five cows on the farm, an adequate pasture should be established. The interviewees stated that the dairy cooperative was a suitable place for farmers to obtain knowledge

on cow raising, but the relationship between farmers and the committee members of cooperatives was not well established. The farmers indicated that milk price was relatively low and could not cover their investments, but milk collecting station had its respectable good will and was not too far from their farms. The prevention on the out break of diseases was adequate but the treatment of ill dairy cows was inadequate while artificial insemination was not promptly carried out with proper schedule and the availability of requested semen was inadequate. The extension personnel normally realized dairy problems but did not seriously take action to solve out the problems. For the credit service, the farmers pointed out that the amount of loan and guaranteed assets were appropriate, but the lag and payment periods were too short as compared to current income from dairy production.

When compared the attitudes toward the dairy cattle production of farmers whose farms were in irrigated areas and rain-fed areas, the results revealed that there were statistically significant differences in their attitudes in some aspects. These included the items on having at least two family members for dairy production, main labour had to be male, having training before raising dairy cows, and too far distance of milk collecting station. The proportion of farmers in irrigated areas agreed with the mentioned items more than those in rain-fed areas.

Recommendations from this study are as follows: 1) Extension workers should advise farmers to cull poorly performed dairy cows out of the herd as soon as possible, 2) Extension workers should teach farmers to realize about the danger of diseases and see the importance of parasitic control in their dairy herds, 3) The farmers should be trained to be able to practise basic caring for animal health and artificial insemination, 4) Extension workers should advise farmers to have effective use of rough feed with concentrated feed, 5) The farmers should be encouraged to allocate more cultivated areas for pasture, 6) The loan payment period should be extended to be coincided with the income from dairy production, 7) Only the farm families with at least two labours should be selected into extension programme on dairy production, 8) Training should be provided for main labours of each participating farm family, and 9) Dairy extension programme should be promoted in rain-fed areas rather than in irrigated areas.