
CHAPTER VII

CONCLUSION AND RECOMMENDATION

7.1 Conclusion

The Lahu and the Chinese Haw communities have grow two crops of red kidney bean for cash during rainy season in a year. Under the farmer practices, the May planting produces higher yield than the September planting. However, the field experiment had indicated that with improved soil conditions, crop growth and high yield potential in September planting could be improved.

The rhizobial inoculation could not provide the convincing result of increasing seed yield. However, the fertilizer treatment only showed significant yield increment when it was applied twice in September planting. But with the current grain price, and input costs, it was not beneficial to use fertilizer at the tested rate.

The fertilizer treatment had suppressed nitrogen fixing ability of rhizobium, when it was applied once at 7 DAP (F₁) and twice at 7 DAP and 30 DAP (F₃). However, when it was applied once at 30 DAP (F₂), there was no apparent suppression, and RUI-N% was significant higher which was comparable to non-fertilized treatment.

The field experiment did not show any indication of rhizobial and fertilizer interaction.

7.1 Recommendation

The results of one year study at Ban Kae Noi could provide a number of management recommendations and research issues as follows:

1. With good weed control practice, the application of chemical fertilizer would be less necessary for improving red kidney bean in the first season planting. Favourable growing conditions, good weed control practice and availability of indigenous rhizobial strain could compensate for chemical fertilizer application.

2. With subsequent cropping in the following season, improving soil conditions, through liming and fertilizer application would enhance red kidney bean yield.

3. Several studies on effectiveness of rhizobial inoculation on red kidney bean yield show contradictory results, particularly when the seed is inoculated with introduced strain of rhizobium. It is therefore advisable to identify and quantify the local strain, particularly in the areas where red kidney bean has long been established as commercial crop.

4. More refined soil-plant relationship studies should be conducted for production of red kidney bean on the highland environment, so that better integrated plant nutrient management could be developed for this short season crop.