Chapter VII

Conclusion and Recommendations

7.1 Conclusion

The policy environments were the main driving force that brought about the process of agricultural transformation in Vietnam. The first decade after the reunification in 1975, the centralized control policy and collectivization of land and labor resulted in severe stagnation and low performance of agricultural production, and Vietnam became food-importing country. The economic renovation or Doi Moi policy since1986, which recognized the co-existence of various economic sectors, introduced free-market mechanisms, and allowed household as an autonomous economic unit by returning the decision on the use of labor, and having access to long term land use. Such policy incentives had eventually resulted in poverty reduction and food increment. Vietnam had ranked second in rice export after Thailand.

Major technological changes resulted in increasing rice production were direct dry seeding, increasing use of chemical fertilizers and with proper usage, better pest management, better weed control practice by integrating land preparation, herbicide, manure, and water management. Other supporting services such as almost 10 folds increase in irrigation capacity from 1990 to 2000 (as noted in Tra Cu district), and credit support from 79,000 VND in 1992 to 736,000 VND per household in 2000 as observed in Tra Cu district. The rice planted area in Tra Cu district had increased 17 percent, and rice yield increased 60 percent from 2.48 t/ha in 1976 to 3.97 t/ha in 2000.

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The household studies to determine performance of four rice-based cropping systems revealed that average yield of traditional rice ranged from 3.78 to 4.06 t/ha. But farm households with diversified cropping systems, such as MR-TRS, MB-TRS, and T-TRS, seemed to better manage their traditional rice, with higher proportion of

households having benefit cost ratio higher than 2. However, among farm households adopting modern rice- traditional rice system, the productivity and profitability of modern rice did not show better performance than traditional rice. The rice-based double cropping systems showed higher income diversity than mono rice system. The current rice production practice of majority of farm households did not show good evidence of achieving sustainability level.

The farm performance as measured by various indicators, such as productivity, diversity, stability, profitability, and sustainability, had provided useful assessment of four rice-based cropping systems under studies with multiple objectives.

7.2 Recommendations

We had witnessed the intensification and diversification in land use systems brought about by the development and expansion of irrigation systems in Tra Cu district of Tra Vinh province. Further improvement of agricultural productivity could be enhanced through

- Better-integrated crop management practices to improve the yield of modern rice varieties, as the yield level was found to be lower than other parts of the Mekong Delta.

- Specifically, fertilizer management in rice production could be improved. Evidence from sustainability analysis indicated that farmers' use of chemical fertilizers was inappropriate. Various approaches in on-farm technology generation and transfer should help improve farmers' use of chemical fertilizers in rice production.

- The non-rice crops incorporated in rice-based cropping systems in the study were mung bean and taro. The former was short maturing, and fitted in less water available area. While taro was long maturing crop, and was selected for planting in a more favorable environment than that of mung bean. But yield

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gaps of these two crops were still wide. Specific management practice for each locality should be worked out to narrow the yield gap, so that production efficiency could be improved.

- With respect to Dai An village, since the area was partially irrigated, location-specific production technology should be worked out with full participation of farmers. Such approach would require the changing concept of technology transfer. Participatory technology development would be one approach that needs to be encouraged.

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