

## CHAPTER VII

### CONCLUSIONS AND RECOMMENTATIONS

#### 7.1 Conclusions

The study examines three groups of vegetable farmers in three villages, Preak Thaker, Somroung Ker, and Chroy Thore, where farmers are being exposed to three dissemination systems namely, government supported, non-government supported, and no extension supported but learning from contact farmer, respectively

Chory Thore is the village located near the city, therefore farmers have easy access to market and benefited from higher price. While other two villages located at a distance from the city, farmers normally face fluctuation and receive lower price.

The main vegetable production constraints are insect pest and diseases, less irrigation facilitation, seasonal flooding that interrupts vegetable growing season, high speed price, lack of capital and labor. The problem is intensified by lack of technical information and knowledge as result of insufficient extension services.

The governmental and non- governmental extension systems are similar in the approach that both systems provide training for farmer participants, and through the process, a few competent. Farmers can be further trained as farmer trainers for technology dissemination. Since the country still has not enough extension staff members to oversee all the communes and villages.

The technology dissemination service systems in vegetable production are assessed in three villages like 35 farmers in each village randomly selected for participatory study.

The overall extension systems operated by government and NGO are better organized than farmer-to-farmer where contact farmers give guidance to farmers upon request. The extension system has proved useful and efficiently increased vegetable production, with the NGO supported program provides highest net income, but farmers under the system also incur higher production cost. The NGO supported program is emphasized on efficient use of renewable resource, such as compost, and

effective pest management while farmers in the government program tend to emphasize on chemical pest control measure, and use of chemical fertilizers. In the contact farmers system, vegetable farmers use higher dosage of chemical. Their knowledge on natural enemies are lacking majority would spray chemicals once they detect the insect pests. But they get higher net return than the government supported village because of its advantage being located near the city, with easy access to market and higher price.

Farmers in three villages perceive that technological information and knowledge, and extension services with regular visits of extension officials are crucial for improvement of vegetable production. Funding has been identified as major constraint by extension officials and farmers for scaling out extension systems to meet farmers' needs.

The integrated pest management with farmers field school approach (IPM/FFS), a collaboration program believes FAO and MAFF of Cambodia, works well under field conditions. Contact farmer approach for grass-root level technological dissemination is quite effective considering the farmer performance of the vegetable production in Chroy Thore village, if the recipient farmers were better organized the contact farmers, who is local resource person, could provide significant contribution to productivity improvement.

## 7.2 Recommendations

The following recommendations based on results of farmer workshop and author's own observations are suggested.

1. Under limited human resource in extension system, the MAFF should explore the option of intensive development of contact farmers. The network of contact farmers should be established and supported by MAFF with collaboration of NGO or external funding agencies. The research result shows that contact farmers with financial limitation can still function as local resource person for technology dissemination.

2. The IPM/FFS program organizing by the NGO in Somroung Ker village should try to reduce production cost by maintaining the yield level at 7 t/ha.

3. The contact farmer system in Chroy Thore should improve on agronomic practice on plant population and crop spacing, safe use of pesticide, and reducing the use of chemical fertilizers. Emphasis should also be on quality vegetable production by tacking advantage of it location near the city.

4. Vegetable growing areas in Kandal province is well-known for its traditional vegetable-based farming systems. The area should be protected for food production gone to feed urban population. Institutional set up such as extension training centers should be established in selected sites staffed with farmer volunteers as contact farmers to work as local resources persons in vegetable production. Safe use, pesticide-free and organically based vegetable production systems should be explored particularly in the peri-urban areas.

5. The IPM/FFS approach should be modified and adapted to local conditions and to human resource available. It is effective but it also needs high investment in time and manpower. Proper schedules should be designed to fit farmers' cropping calendar.