

Farm to Market: Post Covid-19 Opportunities and Challenges for Farmers in Kampong Cham Province, Cambodia

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Abstract: This study deals with the farmers who engage in agricultural practices in Kampong Cham Province, Cambodia, and those who were given the access to training opportunities provided by an international non-governmental organization. The aim of this project was to alleviate poverty in the region by introducing sustainable farming techniques and eventually to produce low-input chemical products that are safe for the human body and environment and can also bring more income to the farmers. Approximately 1,500 local farmers in Kampong Cham Province are part of the project. The baseline survey of 500 principle farmers and the endline survey including 100 principle farmers were completed. The research was conducted to shed light on the impact of the project implemented over three years, while suggesting some perspectives to link the farm and the market in the post Covid-19 time. Hence, the objective of this study was 1) to recognize the impact of the project by data analysis of the surveys, 2) to conduct an analysis based on the consumers' awareness base survey regarding their behavioral change before and after Covid-19, and to suggest the way forward. This study concluded that the project was impactful in terms of target farmers being able to produce compost, liquid fertilizers, and bio-pesticides by utilizing surrounding natural resources, however, the challenge remains that they are struggling to find a market where they can add more value to their products.

INTRODUCTION

Food safety practices are not well observed in many markets in Cambodia. Bacterial contamination is commonly found in wet market or animal source foods. At the study site, an international non-governmental organization implemented a project on sustainable farming practices to produce low-chemical input products. Connecting farming to the market is particularly important for economic empowerment of the female farmers in the region due to the fact that they play an important role in selling products in the market. Emergence of the global pandemic of Covid-19 from the early 2020 has brought some behavioral changes to many individuals. This study will seek some perspectives to link the farm to market in the post Covid-19 world.

METHODOLOGY

The research site is across 10 districts in Kampong Cham Province, Cambodia. Kampong Cham Province is northeast of Phnom Penh, and southeast of Siem Reap. The baseline survey of 500 principle farmers and the endline survey including 100 principle farmers were completed in order to recognize the impact of the project. The additional interviews with 50 individual consumers were conducted in Kampong Cham Province and the capital of Cambodia to grasp if the opportunities may arise for small scale farmers in terms of marketing their low-chemical input products after the Covid-19 pandemic.

Questionnaire and Interview Results

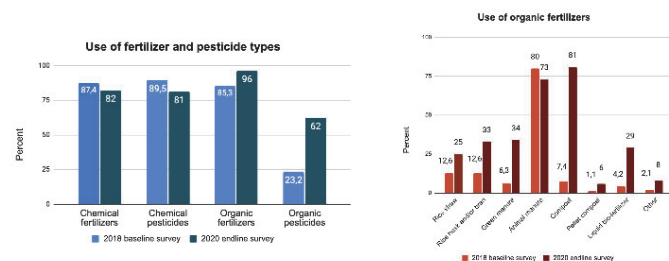


Fig. 1 Use of fertilizer and pesticide types

Fig. 1 shows farmers using chemical fertilizers had decreased by 6.2 %, and farmers using chemical pesticides had decreased by 9.5%, whereas the farmers who reported using organic pesticides had increased by 167% (or 38.8 percent points from 23% to 62%) from 2018 to 2020. In addition, Fig. 2 shows the numbers of farmers who use organic fertilizers had increased by 12.5% among which compost saw the biggest relative increase: 994.6% (or 73.6 percent points from 7.4% to 81%).

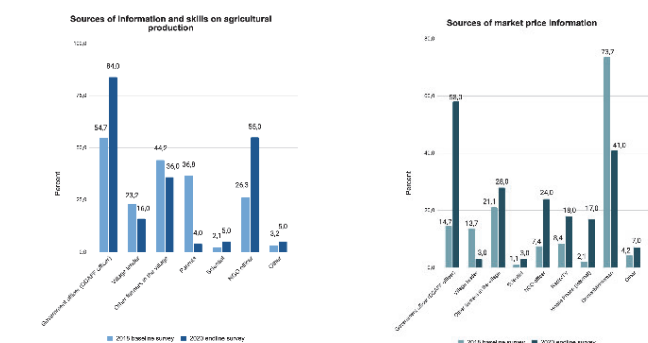


Fig. 2 Use of organic fertilizers

Fig. 3 shows farmers using chemical fertilizers had decreased by 6.2 %, and farmers using chemical pesticides had decreased by 9.5%, whereas the farmers who reported using organic pesticides had increased by 167% (or 38.8 percent points from 23% to 62%) from 2018 to 2020. In addition, Fig. 2 shows the numbers of farmers who use organic fertilizers had increased by 12.5% among which compost saw the biggest relative increase: 994.6% (or 73.6 percent points from 7.4% to 81%).

Farm to Market: An additional interview was administrated with 50 individuals in Kampong Cham and the capital of Cambodia. The participants' demographic characteristics ranged in age from 19 to 67 and was comprised of 29 females and 21 males who are randomly selected in the local market. There was an increase in the number of people interested in organic/safe foods: out of 33 interviewees in Kampong Cham, 30 people answered that they understand what organic/safe foods are. Whereas the answers from residents in the city indicated they have a more sophisticated understanding of what organic/safe vegetables are and how their claims can be verified. All of the interviewees answered that they choose organic/safe vegetables if/when both organic/safe and chemical-input vegetables are available. However, their perception on organic/safe food was either very expensive or expensive (Table 1).

Age	Table1 Participants' Perception on Organic/Safe Vegetables * Choices: [1.Very Expensive, 2. Expensive, 3. Not Expensive, 4.No Idea]	
	KPC (n = 33)	PHN (n = 17)
<21 Years old	2.0 (n = 1)	
21-41 Years old	2.38 (n = 13)	1.87 (n=16)
>41 Years old	2.42 (n = 19)	2.0 (n=1)
Average	2.26	1.93

Table 2 shows that the frequency of using organic/safe vegetables at home and at restaurants. A higher number of participants in Kampong Cham answered that they recognize organic/safe vegetables as the neighboring small scale farmers (sellers) told them so. No specific organic/safe shops were identified among interviewees, except the weekend organic market in the downtown. Whereas answers from residents in the city tended to include retail marts like Aeon Mall, Macro, and Chip Mong, where they can recognize the traceability and certificate on the package of the products.

Age	Table 2 Frequency of using Organic/Safe Vegetables * Choices: [1.Frequent, 2. Medium, 3. Less, 4.Not at all]	
	KPC (n = 33)	PHN (n = 17)
<21 Years old	1 (n = 1)	
21-41 Years old	1.92 (n = 13)	2.5 (n=16)
>41 Years old	1.43 (n = 19)	2 (n = 1)
Average	1.45	2.25

Covid-19 has changed the way we live, and Cambodia is no exception. They experienced two major lockdowns of the capital in April and December 2020. Peoples' well-beings felt to be more centered of their concerns. The interview results showed that all of them have reflected some behavioral changes after the pandemic, washing hands more often and using alcohol to clean their hands were among of the most popular practices. Some sellers in the local market have become more aware of how they prepare/handle the products. Many interviewees answered that they have better eating habits after Covid-19 pandemic, practicing healthier food choices. However, the consumers' perceptions of higher prices of the organic foods and no availability of organic/safe shops in Kampong Cham have hindered purchase the products.

CONCLUSION

This study concluded that the project was impactful in terms of target farmers being able to produce compost, liquid fertilizers, and bio-pesticides by utilizing surrounding natural resources. The local agricultural extension officers are more engaged with the farmers, and mobile phones (internet) have gained popularity as a mean of getting agricultural information, which indicates the possibility of extending their marketing online in the future. The individual interview showed the clear behavioral changes and concerns toward their well-beings after the pandemic, which can be linked to the opportunities for organic/safe food consumption, however, the challenge remains for small scale farmers to find a market to sell their low-chemical input products. More education and training for farmers in terms of marketing may also be needed to adequately inform consumers on how to access organic/safe foods at affordable prices.