Journal of Information Systems Engineering and Management
2025, 10(40s)
https://www.jisem-journal.com/

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Agricultural Extension Roles of Village Agricultural Volunteers in Lamphun Province

Pitthawat Susingsa[1*], Phuthisun Kruekum[2], Phahol Sakkatat[3], Koblap Areesrisom[4]

[1]Ph.D. Candidate, Doctor of Philosophy in Resources Development and Agricultural Extension, Faculty of Agricultural Production, Maejo University, Thailand

*Corresponding Author's Email: susingsa2@gmail.com

[2,3,4]Faculty of Agricultural Production, Maejo University, Thailand

ARTICLE INFO

Received:14 Feb 2025

Revised: 14 Apr 2025

Accepted: 27 April 2025

ABSTRACT

This study was conducted to investigate: 1) socio-economic attributes of village agricultural volunteers in Lamphun province; 2) knowledge and knowledge sources about roles of the village agricultural volunteers; 3) factors having relationship with roles of the village agricultural volunteers; and 4) problems encountered and suggestions about agricultural extension tasks of the village agricultural volunteers. A set of questionnaires was used for data collection administered with 238 out of 582 village agricultural volunteers in Lamphun province, gained by Yamane's formula. Obtained data were analyzed by using descriptive statistics and multiple regression. Results of the study revealed that most of the respondents were male, 55 years old on average, single, upper secondary school graduates and they were farmers. The respondents had 3 household members and 11.81 rai of agricultural land holding each. They had 213,002.49 baht of annual household incomes and their annual household expenses were 106,198.32 baht on average. About one-half of the respondents (49.60%) had no household debts but the rest had (82,002.10 baht per year on average). Less than one-half of the respondents (42.40%) had no social position but most of them were savings group/village fund members. Less than one-half of the respondents (40.30%) had a high level of knowledge about agricultural extension roles of the village agricultural volunteers but had a moderate level of information perception. They perceived information through agricultural extension workers most. There were 4 factors having positive relationships with agricultural extension roles of the village agricultural volunteers: sex, age, social position (sig=0.05), meanwhile, educational attainment had a statistically significant relationship at 0.01. For problem encountered, it included monitoring agricultural situation in the village as well as knowledge transfer and agricultural problem-solving. Suggestions of the respondents were continual on knowledge of new technology and provision of welfare to the village agricultural volunteers for morale building.

Keywords: A agricultural extension, village agricultural, Volunteers, Lamphun province

INTRODUCTION

Currently,7.3 million farmer households throughout the country are facing problems and suffering about production, incomes and quality of life. This is due to changes of social/ economic conditions natural resources and the occurrence of natural calamities. All of these have direct/indirect effects on the farmer households. Each agricultural village needs to have correct data and planning on agricultural development for good and appropriate agricultural techno transfer. Besides, concerned

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agencies must be responsible for monitoring and reporting natural disaster related to agricultural emergencies (Lamphun Province Agricultural Office, 2023)

According to past operations, there was no confirmed information that village agricultural volunteers could work completely and continuously or not. In other words, did they coordinate and represent the Ministry of Agriculture and Cooperatives at the village level in accordance with their assigned roles or not? Therefore, it needs to investigate work performance of village agricultural volunteers to obtain data as guidelines for developing their work performance. This will lea d to agricultural development with farmers participation and maximum benefit.

RESEARCH METHODOLOGY

This study employed quantitative research to investigate agricultural extension roles of village agricultural volunteers in Lamphun province. Specifically, the objectives of this study were to investigate: 1) socio-economic attributes of village agricultural volunteers in Lamphun province; 2) knowledge and knowledge sources about roles of the village agricultural volunteers; 3) factors having relationship with roles of the village agricultural volunteers; 4) problems encountered and suggestion of the village agricultural volunteers. All independent variables in this study were sex, age, educational attainment, marital status, occupation, a number of household members, household income and expenses, household debts, agricultural land holding, social position and farmers group membership. The dependent variable was agricultural extension roles of the village agricultural volunteers. This was based on 5 aspects: 1) basic data collection about agriculture of the village; 2) planning on agricultural development at the village level; 3) knowledge transfer and agricultural problem-solving of the village; 4) monitoring agricultural situations of the village; and 5) practices beneficial to farmers and the community.

HYPOTHESIS OF THE STUDY

Personal basic factors, social/economic aspects, knowledge and sources knowledge about agricultural extension had an effect on agricultural extension roles of the village agricultural volunteers (Department of Agricultural Extension, 2023).

POPULATION AND SAMPLE GROUP

The population in this study were 582 village agricultural volunteers in Lamphun province. The sample group consisted of 238 village agricultural volunteers obtained by Yamane' s formula (95% reliability and 0.05 error). Sample group members were from the following districts: Mueang (67), Ban Thi (14), Mae Tha (29), Pasang (40), Wiang Nonglong (10), Ban Hong (25), Thung Huachang (14) and Li (37).

DATA COLLECTION

Two types of data were collected: primary and secondary data. The former data were collected through a set of questionnaires (Wadeecharoen et al, 2017) administered with a sample group of 238 village agricultural volunteers. The latter were collected through related literature and documents of the public sector.

DATA ANALYSES

Data analyses in this study were classified into 3 parts as follows:

Part 1. Socio-economic attributes of the village agricultural volunteers and knowledge/sources of knowledge about agricultural extension roles of the sample group. Descriptive statistics was used for data analysis (frequency, percentage, mean and standard deviation).

Part 2. Enter multiple regression analysis based on Statistical Package for the Social Science Program was used for finding relationships of factors having relationships with agricultural extension roles of the sample group.

Part 3. Typological analysis was used for analyzing problems encountered. Conclusion was in the form of description.

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RESULTS OF THE STUDY

The results of the study revealed the following:

1) Most of the respondents were male (76.50%), 55 years old on average (47.90%), married (81.50%) and most of them were farmers (73.10%). About one -third of the respondents (35.70%) were upper-secondary school graduates. The respondents had 3 household members and 11.81 rai of agricultural land holding each on average. They had 213,002.49 baht of an annual household income but they had 106,198.32 baht of annual household expenses. About one-half of the respondents (49.60%) had no household debts. The respondents had no social position but 42.40% were members of the village committee. Less than one-half of the respondents (40.30%) were members of the savings group and the village fund.

2) Knowledge and sources of knowledge about agricultural extension roles of the respondents

The respondents had a high level of knowledge related to agricultural extension roles (63.40%) but a moderate level of perception about sources of the knowledge (36,60%) as shown in Table 1. It was found that the respondents gained 11.19 out of the total score of 15. Furthermore, it was found that the respondents mostly gained the correct answer on "One village, one agricultural volunteer" (99.60%). This was followed by "The village agricultural volunteers must prepare an agricultural development plan of the village level" (92.00%). The question item least got the correct answer was "The village agricultural volunteers must be designated by the District Agriculture Office" (43.30%), followed by "The village agricultural volunteers must be registered with agencies under the supervision of the Ministry of Agriculture and Cooperative" (13.90%)

Table 1 A number and percentage of the village agricultural volunteers based on a level of knowledge about agricultural extension roles of the respondents

(n=238)

Levels of knowledge	Frequency	%
High	151	63.40
Moderate	87	36.60
M = 11.19	Min-Max = 6-15	S.D. = 2.14

Regarding sources of the knowledge, the respondents perceived it at a moderate level (M = 3.04). Based on its details, personal media was found at a moderate level (M=3.42). However, the respondents perceived the knowledge through agricultural extension workers most (M=4.03), followed by through training (M =3.63), online media (M=3.08) and mass media or T.V. (M=2.87), respectively. The following were found at a low level: printed material (M=2.46) and book/journals (M =2.59) as shown in Table 2.

Table 2 Sources of knowledge about agricultural extension roles of the respondents

(n=238)

Sources of the knowledge	M	S.D.	Description
1.Personal media	3.42	0.68	Moderate
2.Activities	3.37	0.82	Moderate
3.Online	3.08	1.19	Moderate
4.Mass media	2.87	0.94	Moderate
5.Printed media	2.46	0.97	Low
Total	3.04	0.72	Moderate

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3) Agricultural extension roles of the respondents

Based on the 5 aspects, as a whole, the respondents had a moderate level of agricultural extension roles (M =3.48). For its detail, the following were found at a high level: practices beneficial to farmers or the community (M =3.67), monitoring agricultural situations of the village (M =3.57), and planning for agricultural development at the village level (M =3.56), respectively. Two aspects were found at a moderate level: basic data collection and report related to the village agricultural (M =3.40) and knowledge transfer/agricultural problem-solving of the village (M =3.20) as shown in Table 3.

Table 3 Agricultural extension roles of the respondents

Agricultural extension roles based on 5 aspects	M	S.D.	Description
1.Practices beneficial to farmers and the community	3.67	0.83	High
2.Monitoring agricultural situations in the village	3.57	1.10	High
3.Planning for agricultural development of the village	3.56	0.81	High
4.Basic data collection and report related to agriculture of the village	3.40	0.84	Moderate
5.Knowledge transfer and agricultural problem-solving of the village	3.20	0.91	Moderate
Total	3.48	0.75	Moderate

Note: Mean (M =0.00-1.00 None, 1.01-1.50 Lowest, 1.51-2.50 Low, 2.51-3.50 Moderate, 3.51-4.50 High, 4.51-5.00 Highest

4) Factors having relationships with agricultural extension roles of the respondents

According to an enter multiple regression analysis used for selecting forecasters based on all input variables to the equation (Phusi-on, 2008), it aimed to investigate factors having relationships with agricultural extension roles of the respondents prior to a multiple regression analysis. In this case, the researchers investigated relationships between all independent variables to verify multicollinearity. It was found that the independent variables were related to each other which was not higher than 0.70 (multicollinearity is not a problem). According to review of related literature, there were 12 independent variables: sex, age, marital status, educational attainment, occupation, a number of household members, household income, household expenses, household debts, agricultural land holding, social position, and farmer group membership.

The dependent variable in this study was agricultural extension roles of the respondents. This was based on 5 aspects: 1) basic data collection and report; 2) planning on agricultural development at the village level; 3) knowledge transfer and agricultural problem-solving; 4) monitoring agricultural situations of the village; 5) practices beneficial to farmers and the community. Findings showed that all of the independent variables could explain variance of the dependent variable (agricultural extension roles of the respondents) at 36.80% (R^2=0.368). Four independent variables had a positive relationship: sex, age and social position (Sig=0.05 each) and educational attainment (Sig=0.01) as shown in Table 4

Table 4 Factors affecting agricultural extension roles of the respondents

Independent variables	Agricultural extension roles		
	β	t	Sig
Sex	0.026	2.283	0.023*
Age	0.143	2.514	0.013*
Educational attainment	0.102	2.596	0.010**
Marital status	-0.132	-1.094	0.275
Occupation	-0.064	-1.475	0.142
No. of household members	-0.056	-1.279	0.202
Household income	3.364 E-7	0.792	0.429

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Household expenses	-4.856 E-8	-0.057	0.954
Household debts	-4.814 E-7	-1.407	0.161
Area of agricultural land holding	0.002	0.561	0.575
Social status	0.142	2.262	0.025*
Farmer group membership	-0.099	-0.764	0.446
Constant	2.573	5.627	<0.001
R^2=.368 (36.80%) F=2.928	Sig. F=<0.001**		

Note: *Statistically significant at 0.05 level, ** Statistically significant at 0.01 level

DISCUSSION

According to Table 4, sex had a statistically significant relationship with agricultural extension roles of the respondents (Sig=0.05). This could be explained due to the fact that most of the respondents were male so there was a high tendency that their agricultural extension roles increased (0.264 marks). Based in the study, it was found that sex played roles in agricultural extension and community participation. To be a village agricultural extension volunteer, it needs to play roles which are accessible everywhere. Besides, a village agricultural extension volunteer must be a reliable leader. This conformed to a study of Nakhonkan et. al. (2015) which found that most village agricultural extension volunteers (67.70%) were male. It also conformed to a study of Jaikrasan et.al. (2019) which found that most village agricultural extension volunteers were male (63.30%).

It was found that age had a statistically significant relationship at 0.05 with agricultural extension operations of the respondents. This could explain that village agricultural extension volunteers who had increased their age by one year would have increased agricultural extension roles for 0.102 marks (when all values were constant). Results of the study showed that the volunteers having age range of 51-60 years had more agricultural extension roles. According to an additional interview, the village agricultural extension volunteers in this age range mostly had a lot of continual experiences. That was, they played roles in communication and collaboration between farmers and agencies responsible for agricultural development planning as well as data collection. This conformed to a study of Krathumkaew et. al. (2014) which found that most village agricultural extension volunteers were 51.13 years old on average and they were community leaders. They had been engaging in agriculture for a long time so they had reliable knowledge, skills and personality.

Results of the study showed that educational attainment had a statistically significant relationship at 0.01 with agricultural extension operations of the respondents. This could be explained that when all values were constant and the volunteers had increased educational attainment for one year, their agricultural extension operations would increase for 0.102 marks. Also, results of the study revealed that most of the respondents were upper secondary school graduates and became to be farmers, then they had a tendency to be community leaders or representatives, particularly on agricultural development. In addition, they would be able to rapidly create learning and agricultural development leaders. This conformed to a study of Srijarumedhiyan et. al. (2018), Lertsukkheerat et al. (2025), Ruksat et al. (2025) and Wongmajarapinya et al. (2024) which stated that skill and knowledge development of leaders is essential since knowledge and skill enhancement will make them have a new world view towards work development, and create the best plan and strategy to achieve organizational goals.

Findings showed that social position had a statistically significant relationship at 0.05 with agricultural extension operations of the respondents. This could be explained that when all values were constant and the volunteers had a new social position, they would gain increased roles in agricultural extension for 0.142 marks. It was also found that the volunteers would be selected to hold a social position since they were reliable and had social networks.

5) For problems encountered of the respondents based on the 5 aspects, as a whole, it was found at a moderate level. These involved the following: 1) monitoring agricultural situations of the village (M =2.71); 2) knowledge transfer and agricultural problem-solving (M =2.67); 3) planning for agricultural development at the village level (M =2.60); 4) practices beneficial to farmers and the

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community (M =2.55); and agricultural basic data collection/report of the village (M =2.40), respectively (Table 5). The following were their suggestions to concerned agencies: 1) welfare should be offered to village agricultural extension volunteers for morale support; 2) the volunteers should be promoted to have more roles in the village such as continual training on new technology; and 3) holding educational trips for the volunteers to create their inspiration to develop their respective villages.

Table 5 Problems encountered of the respondents

Problems encountered	M	S.D.	Description
1.Monitoring agricultural situations of the village	2.71	0.84	Moderate
2.Knowledge transfer and agricultural problem-solving of the village	2.67	0.89	Moderate
3.Planning for agricultural development at the village level	2.60	0.94	Moderate
4.Practices beneficial to farmers and the community	2.55	0.77	Moderate
5.Village's basic agricultural data collection and report	2.40	0.89	Low
Total	2.59	0.76	Moderate

CONCLUSION

Most of the respondents were male, 51-60 years old, upper-secondary school graduates and farmers. Besides, they were village committee members. Results of the study revealed that the respondents had a high level of knowledge about agricultural extension roles of village agricultural committee but a moderate level of perception about sources of the knowledge. Most of the respondents perceived agricultural information through agricultural extension workers most, followed by online mass media, and printed materials. Factors having statistically significant relationship with agricultural extension roles of the respondents were sex, age, social position and educational attainment. Findings showed that the respondents played roles in agricultural extension at a moderate level. Most of them did things beneficial to farmers and community since they were village committee members and usually monitored agricultural situations of the village. For knowledge transfer and agricultural problem-solving, sub-district agricultural personnel mainly did these tasks.

For problems encountered in agricultural extension operations of the respondents, the following were found: 1) concerned agencies had no supporting budgets for monitoring agricultural situations of the village; 2) village agricultural volunteers had no available time to continuously monitor agricultural situations of the village; 3) village agricultural volunteers lacked of knowledge about new technology and there were inadequate equipment. The following were suggestions: 1) welfare should be provided to village agricultural volunteers for morale support; 2) village agricultural volunteers should be promoted to play roles in the village more than before; and 3) trainings should be held continually for village agricultural volunteers based on knowledge about new technology.

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