International Journal of Agricultural Science, Research and Technology in Extension and Education Systems (IJASRT in EESs)
Available online on: www.ijasrt.webs.com
ISSN: 2251-7588 Print
ISSN: 2251-7596 Online
2015: 5(1):29-34

Received: 11 January 2015
Reviewed: 12 March 2015
Revised: 23 March 2015
Accepted: 28 April 2015

Knowledge of Women with Agricultural Household Jobs toward Innovation Management in Masjed Soliman Township, Khouzestan Province, Iran

Shahrzad Faraji and Azadeh Noorollah Noorivandi
[1] *MSc Student Agricultural Management Department, Shoushtar Branch, Islamic Azad University, Shoushtar, Iran*
[2] *Assistant Professor Agricultural Management Department, Shoushtar Branch, Islamic Azad University, Shoushtar, Iran * Corresponding author noorivandi_a@yahoo.com*

Keywords: Knowledge, Innovation management, Rural women, agricultural household jobs

Abstract

The purpose of this research was analyzing knowledge of women with household jobs agriculture toward innovation management in Masjed Soliman Township, Khouzestan Province, Iran. The population of this study included women with household jobs agriculture in Masjed Soliman Township. The total number of members was 100 people. Due to the low number of population, census methods were used to collect data. Questionnaire reliability was estimated by calculating Cronbach's alpha and it was appropriate for this study. Data were analyzed using the Statistical Package for the Social Sciences (SPSS). To reach the research objectives, appropriate statistical procedures for description were used. Data analysis was carried out through data description and data inferential analysis. The results of research showed the correlation between level of education, creativity, social participation, attitude toward innovation management, income and knowledge toward innovation management was significant. Therefore, we can conclude that woman with high level of education, creativity, social participation, attitude toward innovation management, income had high knowledge toward innovation management. The result of regression analysis by stepwise method indicated level of education, creativity, social participation, attitude toward innovation management and income may well explain for 64.6% changes (R^2 = 0.646) in knowledge of women with household jobs agriculture about innovation management.

1. Introduction

Investment in agricultural science and technology, generally in the form of research and extension services, has proved to be highly valuable for improving crop yields and lessening poverty in developing countries. Nevertheless, such investments should reflect all the parties' diverse needs for knowledge (Nwaiwu et al., 2012). There is broad consensus that innovation is critically important for meeting the challenges that confront the human race, including the need to improve competitiveness, sustainability and equality in agriculture (IICA, 2014). Agricultural innovation is vital to promoting agricultural and rural development and poverty reduction. Innovation in the agriculture sector is critical to achieving the necessary growth in production in an environmentally sustainable way (Sunding and Zilberman, 2001). Also, according Ommani (2011), 76% of farmers of Kouzestan Province had moderate to very low knowledge regarding innovation management. In this study, there was a significant relationship between the farmer's knowledge regarding innovation management with accessing to communications channels, level of education, income, crop yield, size of farm, social participation, and level of participation in extension classes. Level of education, income, crop yield, size of farm, social participation, level of participation in extension classes may well explain for 53% (R2 =0.534) changes in farmer's knowledge regarding innovation management.

Innovation is essential to respond to the critical concerns of society such as climate change and global warming, food/energy scarcity and security, environmental challenges or resource use/sustainability. Many of these innovations will be in the form of products/services or processes that improve the effectiveness and efficiency of responding to these social/economic challenges (e.g., dealing with the measurement and mitigation of negative externalities.). Others will be institutional innovations such as new markets for carbon sequestering or a cap and trade system to reduce greenhouse gas emissions, or new management systems such as lifecycle analysis to respond to resource constraints, environmental problems and sustainability issues (Boehlje et al, 2009). In the knowledge-driven economy, innovation has become central to achievement in the business world. With this growth in importance, organizations large and small have begun to re-evaluate their products and services to maintain their competitiveness in the global markets of today (European Commission, 2004). Socio-economic characteristics such as gender, ethnicity and education are considered as precursor factors and have significant effects on the decision-making process (Nepal & Thapa, 2009; Knowler & Bradshaw, 2007; Paudel & Thapa, 2004). It has been found that relatively well-educated people tend to adopt innovations more readily than less educated ones (Lapar & Ehui, 2004). Sometimes the decision on adoption is influenced by farmers' knowledge and perceptions about how to use scientific knowledge (Schultz, 1964). Key factors that facilitate agricultural diversity and commercialization are the rapid development of technologies; changes in agricultural production practices, such as improved seeds, chemical fertilizer use, technologies to control weeds and harvesting; improved rural infrastructure; and diversification in food demand patterns (Pingali & Rosegrant, 1995). Access to credit may enable farmers to adopt more capital intensive methods of production (Hazarika & Alwang, 2003). The development of agriculture may be increased if appropriate institutional systems for marketing farm products, agricultural inputs, credit systems and professional advice are provided (Weitz et al., 1976). Utilization of innovation could assist the farmers increase their production levels and profit margin considerably. Their capacity to educate their children would be enhanced and their standards of living improved. Government should therefore assist farmers to access the more efficient factors which influence innovation utilization. In a study area where illiteracy level was high, the employment of extension agents and the use of radios would facilitate innovation utilization.

2. Materials and methods

Questionnaire reliability was estimated by calculating Cronbach's alpha and it was appropriate for this study. The population of this study included women with household jobs agriculture in Masjed Soliman Township. The total number of members was 100 people. Due to the low number of population, census methods were used to collect data. Data were analyzed using the Statistical Package for the Social Sciences (SPSS). To reach the research objectives, appropriate statistical procedures for description were used. Data analysis was carried out through data description and data inferential analysis.

3. Results and discussion

Demographic profile

Table 1 shows the demographic profile and the descriptive statistics for some characteristics of the women with household jobs agriculture. The results of the demographic information of the women with household jobs agriculture indicated that the age of 27% of women with household jobs agriculture was between 20-30 years. The minimum age of participant was 14 years and the maximum age was 60 years. Based on educational levels, a greater proportion (32%) of them had elementary educational level. Based on the income, 46% of them had 5-10 million rial in month.

Knowledge of Women with Household Jobs Agriculture toward Innovation Management

In this study, for analyzing knowledge of women with household jobs agriculture, the Likert scale was used. The ratings on the Likert scale were from one to five (5. Very high, 4. High, 3. Moderate, 2. Low, 1. Very low). The final computed score represented the overall level of knowledge. The Table 2 revealed the answer of women with household jobs agriculture to each item of knowledge toward innovation management in and Table 3 identified the level of overall knowledge toward innovation management after computing 10 items of knowledge.

Correlation study:

Spearman correlation coefficients to test hypotheses was used, the results of this test are as follows (Table 4):

The results of table 4 showed the correlation (r=0.569) between level of education and knowledge toward innovation management at the level of 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that women with household jobs agriculture with high level of education had high knowledge.

Table 1. Demographic profile of women with household jobs agriculture

variables	Frequency	Percentage	Cumulative Percentage	
Age				
14-20	16	16	16	Mean=34.7
20-30	27	27	43	Sd= 12.71
30-40	23	23	66	Min=14
40-50	16	16	82	Max=60
50-60	18	18	100	
Educational level				
illiterate	19	19	19	
elementary	32	32	51	
Guidance school	18	18	69	
High school	16	16	85	
Diploma	15	15	100	
Income (Million Rials)				
1.5-5	37	37	37	
5-10	46	46	83	
10-15	5	5	88	Mean=7.2
15-20	5	5	93	Sd=5.5
20≤	7	7	100	

Table 2. Frequency of women with household jobs agriculture to each item of knowledge toward innovation management.

Items	1	2	3	4	5	Mean	sd	CV
Knowledge toward elements of innovation	31	24	17	15	13	2.55	0.97	0.380
Knowledge toward efficiency of innovation	17	32	21	19	11	2.75	0.89	0.324
Knowledge toward effects of innovation	22	25	29	16	8	2.63	0.96	0.365
Knowledge toward types of innovation	25	23	21	19	12	2.7	1.02	0.378
Knowledge toward create of innovation	25	23	21	13	18	2.76	1.04	0.377
Knowledge of how to use innovation	14	27	23	17	19	3	0.88	0.293
Knowledge of dissemination of innovation	15	21	33	19	12	2.92	0.93	0.318

(5. Very high, 4. High, 3. Moderate, 2. Low, 1. Very low).

Table 3. Level of overall knowledge toward innovation management.

attitude	Frequency	Percent	Cumulative percent
Very low	34	34	34
Low	22	22	56
Moderate	12	12	68
High	21	21	89
Very high	11	11	100
Total	100	100	

Table 4. Relationship between knowledge toward innovation management and independent variables.

Independent variable	Dependent variable	r	p
Level of education	knowledge toward	0.569	0.000
Level of creativity	innovation	0.712	0.000
Social participation	management	0.502	0.000
Attitude toward innovation management		0.419	0.000
Income		0.468	0.000

Table 5. Multivariate regression analysis

Independent variable	B	Beta	T	Sig
Level of education	0.376	0.265	3.676	0.000
Level of creativity	0.519	0.386	3.574	0.000
Social participation	0.457	0.458	2.475	0.000
Attitude toward innovation management	0.645	0.458	2.763	0.000
Income	0.375	0.453	2.482	0.000
Constant	11.398	----	2.974	0.000

R^2=0.646 F=7.754, Sig= 0.000

The results of table 4 showed the correlation (r=0.712) between level of creativity and knowledge toward innovation management at the level of 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that women with household jobs agriculture with high level of creativity had high knowledge.

The results of table 4 showed the correlation (r=0.502) between social participation and knowledge toward innovation management at the level of 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that women with household jobs agriculture with high social participation had high knowledge.

The results of table 4 showed the correlation (r=0.419) between attitude toward innovation management and knowledge toward innovation management at the level of 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that women with household jobs agriculture with high attitude toward innovation management had high knowledge.

The results of table 4 showed the correlation (r=0.468) between income and knowledge toward innovation management at the level of 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that women with household jobs agriculture with high income had high knowledge.

Regression analysis

Table 5 shows the result for regression analysis by stepwise method. Liner regression was used to predict changes in knowledge by different variables. The result of regression analysis by stepwise method indicated level of education, creativity, social participation, attitude toward innovation management and income may well explain for 64.6% changes (R^2 = 0.646) in knowledge of women with household jobs agriculture about innovation management.

4. Conclusion and recommendations

The results of research showed the correlation between level of education, creativity, social participation, attitude toward innovation management, income and knowledge toward innovation management was significant. Therefore, we can conclude that woman with high level of education, creativity, social participation, attitude toward innovation management, income had high knowledge toward innovation management. The result of regression analysis by stepwise method indicated level of education, creativity, social participation, attitude toward innovation management and income may well explain for 64.6% changes (R^2 = 0.646) in knowledge of women with household jobs agriculture about innovation management.

Therefore, to development of the knowledge of women with household jobs agriculture toward innovation management, considering variables of level of education, creativity, social participation, attitude toward innovation management and income are essential. This should be considered by agro-industry managers and planners.

Acknowledgments:

This paper is part of MSc thesis of Shahrzad Faraji graduate student of agricultural management department, Shoushtar branch, Islamic Azad University. Thus, appreciate of professors and lectures of agricultural management department.

References:

1) Boehlje, M., Bröring, S and Roucan-Kane, M. (2009). innovation in the food and agricultural industries: a complex adaptive system. Working Paper #09-19 December 2009, Dept. of Agricultural Economics Purdue University.

2) European Commission. (2004). Innovation management and the knowledge-driven economy. European commission. Directorate-general for enterprise. Retrieved from http:// ftp:// ftp. cordis.europa.eu/pub/innovation-policy/ studies/ studies _innovation_management _final_report.pdf

3) Hazarika, H., & Alwang, J. (2003). Access to Credit, Plot Size and Cost Inefficiency Among

Smallholder Tobacco Cultivators in Malawi. Agricultural Economics. 29 (1), 99-109.

4) IICA (Inter-American Institute for Cooperation on Agriculture). (2014). Innovation in agriculture: a key process for sustainable development. Retrieved from http:// argus. iica. ac.cr/Esp/Programas/Innovacion/Documentos%20de %20Tecnologa%20e%20Innovation/Innovation_PP_ En.pdf

5) Knowler, D., & Bradshaw, B. (2007). Farmer's Adoption of Conservation Agriculture: A Reviw and Synthesis of Recent Research. Food Policy. 32, 25-48. http://dx.doi.org/10.1016/j.foodpol. 2006.01.003

6) Lapar, M. L. A., & Ehui, S. K. (2004). Factors Affecting Adoption of Dual-Purpose Forage in the Philippine uplands. Agriculture Systems. 81, 95-114. doi: 10.1016/j.agsy.2003.09.003,http://dx.doi.org/10.1016 /j.agsy.2003.09.003

7) Nepal, R., & Thapa, G. B. (2009). Determinants of Agricultural Commercialization and Mechanization in the Hinterland of a City in Nepal. Applied Geography. 29, 377-389. doi: 10.1016/j.apgeog.2008.12.002,http://dx.doi.org/10.10 16/j.apgeog.2008.12.002

8) Nwaiwu, I. U., Obasi, P. C., Orebiyi, J. S., Ibekwe, U. C., Korie, O. C., Henri-Ukoha, A., Amaechi, E. C. C., & Osuagwu, C. O. (2012). Comparative analysis of productivity of Cassava based crop mixture under modern and indigenous technologies in Anambra State, Nigeria. International Journal of Agricultural Science, Research and Technology, 2(1), 17-21.

9) Ommani, A. R. (2011). Assessment of farmers' knowledge regarding innovation management in farming cooperatives in Shoushtar Township, Iran. Journal of American Science,7(1):321-324.

10) Paudel, G. S., & Thapa, G. B. (2004). Impact of Social, Institutional and Ecological Factors on Land Management Practices in Mountain Watersheds of Nepal. Applied Geography. 24, 35-55. http://dx.doi.org/10.1016/j.apgeog.2003.08.011

11) Pingali, P. L., & Rosegrant, M. W. (1995). Agricultural Commercialization and Diversification: Processes and Policies. Food Policy. 20, 171-185. http://dx.doi.org/10.1016/j.apgeog.2003.08.011

12) Schultz, T. W. (1964). Transforming traditional agriculture. New Haven, CT: Yale University Press.

13) Sunding, D., & Zilberman, D. (2001). The agricultural innovation process: research and technology adoption in a changing agricultural sector. Handbook of Agricultural Economics, 1, 207-261.

14) Weitz, R., David, P., & Levia, A. (1976). New settlements and employment. Rehovet: Settlement Study Center.

مجله بین‌المللی علوم، تحقیقات و فناوری کشاورزی در نظام‌های آموزش و ترویج
قابل دستیابی در: www.ijasrt.webs.com
شاپا نسخه چاپی:۷۵۸۸-۲۲۵۱
شاپا نسخه برخط: ۷۵۹٦-۲۲۵۱
۳٤-۲۹ :(۱)۵ :۲۰۱۵

۲۱ دی ۱۳۹۳ :دریافت نسخه اولیه
۲۱ اسفند ۱۳۹۳ :ارسال پاسخ داوری
۳ فروردین ۱۳۹٤ :دریافت نسخه اصلاحی
۸ اردیبهشت ۱۳۹٤ :پذیرش

دانش فنی زنان با مشاغل خانگی کشاورزی در زمینه مدیریت نوآوری در شهرستان مسجد سلیمان، استان خوزستان

شهرزاد فرجی و آزاده نورالله نوری وندی

دانشجوی کارشناسی ارشد مدیریت کشاورزی، واحد شوشتر ، دانشگاه آزاد اسلامی ، شوشتر، ایران
استادیار گروه کارشناسی ارشد مدیریت کشاورزی، واحد شوشتر ، دانشگاه آزاد اسلامی ، شوشتر، ایران

چکیده

هدف از این تحقیق تحلیل دانش زنان با مشاغل خانگی کشاورزی در زمینه مدیریت نوآوری در شهرستان مسجد سلیمان از استان خوزستان بود. جامعه آماری تحقیق به تعداد ۱۰۰ نفر بودند که از طریق سرشماری مورد مطالعه قرار گرفتند. پایای ابزار تحقیق از طریق ضریب کرونباخ آلفا بررسی شد که در سطح مطلوبی بود. از طریق نرم افزار SPSS داده‌های جمع‌آوری شده، تحلیل شد. بر اساس نتایج حاصل، بین سطح تحصیلات، خلاقیت، مشارکت اجتماعی، نگرش به مدیریت نوآوری، درآمد و دانش به مدیریت نوآوری رابطه مثبت و معنی‌داری حاصل شد. بنابراین افراد با سطح بالای تحصیلات، خلاقیت، مشارکت اجتماعی، نگرش به مدیریت نوآوری و درآمد دارای سطح بالای از دانش در زمینه مدیریت نوآوری بودند. بر اساس نتایج حاصل از رگرسیون، سطح تحصیلات، خلاقیت، مشارکت اجتماعی، نگرش به مدیریت نوآوری و درآمد ۶۴/۶٪ درصد از تغییرات متغیر دانش زنان با مشاغل خانگی کشاورزی در زمینه مدیریت نوآوری را تبیین کردند.

کلمات کلیدی:
دانش، مدیریت نوآوری، زنان روستایی، مشاغل خانگی کشاورزی