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Productivity Gains from Training: The Views of Beekeepers in Sulaimani City

Kawan Sirwan ISMAEEL[1]*, Khansa Hameed HAMAFARJ[1], Rezhen HARUN[1], Iulia C. MURESAN[2]

[1]Univeristy of Sulaimani, College of Agricultural Sciences Engineering, Department of Agribusiness and Rural Development, , Kurdistan Regional Goverment, Bakrajo, Iraq
[2]University of Agricultural Sciences and Veterinary Medicine, Faculty of Horticulture, Department of Economic Sciences

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Abstract

The study examined the impact of training on the productivity of beekeepers in Sulaimani City, Kurdistan Regional Government, Iraq. Data for the paper was collected from questionnaire surveys from April until August 2019. The sample size was of 82 beekeepers, but in the end 54 questionnaires were validated. Data analysis was conducted by using standard statistical and economic processes. The study revealed that training plays a vital role in enhancing the productivity of the beekeepers.

Keywords: *beekeeping; training; productivity*

1. Introduction

Agriculture is an action in which human rears honey bees and obtain their products [18]. Bees are identified as one of the most important organisms on Earth, as livestock can play an important part in rural economy [11, 14].

Bee products are widely used in the food, medicine, pharmaceutical and cosmetics industry; furthermore, the powerful potentials for bee products as significant agro forestry food and raw material sources are also mainly due to the different uses of its products: honey, bee wax, propolis, royal jelly, bee venom and pollen [22, 24, 16].

In the history of development economics, beekeeping has been thought of as a great source of further income and very productive to farmers. Beekeeper is taking an active part in protecting the future of the planet [26, 9].

Recent developments in the field of bees have led to a renewed interest in training beekeepers, in 1950s human capital theory which is a key factor for economic performance is interest to investment aspects of education and training [23].According to Engeto (2017) training is “an effort initiated by an organization to foster learning among its workers” [12]. Agricultural training to the right people at the right time and in a right way will remain extremely important for the development of the agricultural sector and to develop farmers to make them better entrepreneur and decision makers. In addition, improve the quality of work, skills, knowledge, understanding, attitude, enhance using tools and machine; reduce waste, accidents, turnover and lateness [15, 13, 19].

Nowadays, the maintaining organizations a blurred position regarding investment in training, employees training and development programs are becoming a necessity for every organization not only to achieve business goals but most important for optimum organization; while, it have a positive effect and play important role in increasing organizational productivity and effectiveness.

* Corresponding author.
Tel: +964702284049
e-mail: kawan.ismael@univsul.edu.iq,

In additional, beekeepers who trained and received other integrated services improved their practice [28, 27, 4, 5, 3, 1, 6, 10].

Accordingly, low investment or lack of training increases absenteeism rate, low output, poor quality, results in high unit cost, hinders farmer's productivity and poor performance on the job [2, 20].

Hence, there is need for continuing training programs for beekeepers to increase the quality of beekeepers production of honey [10].

Beekeeping in Sulaimani city has developed which come first level in Iraq in the number of bees and the amount of honey producing, especially after create bee directorate since 2004, which has a play role in motivating the beekeepers by provision several training courses for them and has a significant role in marketing their honeys.

It is in the light of the importance attached; to the need for beekeepers training that this study seeks to establish how knowledge gained from training influences on employee productivity in Sulaimani city, Kurdistan Region and determining the correlation relationship between the training courses of the beekeepers and each of the personal and functional variables as the following: (gender, age, educational level, experience, reasons for selecting beekeeping and exposure to the sources of information).

2. Material and Method

This research comes as the framework of the diagnostic research within the descriptive approach. It is an appropriate approach to reach a detailed data and facts about the needs of the individuals at a certain time. The population of this study was concentrated at the Honeybee Directorate, Sulaimani city, Kurdistan Regional Government, Iraq. The sample size, for this study consisted of a group of 82 beekeepers, in the end just 54 questionnaires were validated, the others were not proper fulfill. The basic concept behind this group of researchers was to see the effect of training on the same individual and then to analyze their behavior regarding the production system, after trainings. The data for this research was collected through a personal interview with the respondents during the period 01.04.2019 to 01.08.2019.

3. Results and Discussions

The social characteristics of the beekeepers indicate that majority of the respondents 51 (94.4%) were males, while 5.6% are females. The age of beekeepers ranged from 22 years to above 52. While majority of the respondents (37.03%) are between the ages of 33-42 years, 31.48% respondents each between (43-52) years, 16.6% are between the ages of (22-32) years and 14.81% of beekeepers are above ages of 52 years.

The results reveal that the majority of beekeepers not too old or too young. Concerning to the educational status, 37% respondents have bachelor holders, diploma at 5.6%, 18.5% had a tertiary education, secondary education at 14.8%, primary education at 16.7%, 3.7% of beekeepers are never attended formal education but can read and write and 3.7% of beekeepers are Illiterate. The result of the study revealed that 40.7% of beekeepers had been in beekeeping for less than 5 years experience, while 33.3% had more than 10 years (Table 1).

Beekeepers selecting beekeeping working for different purposes, working beekeeping as a hobby was the majority which is 55.5%, 27.7% at source of income and 16.6% of the respondents doing beekeepers genetically. The majority of beekeepers (84%) acknowledged getting information from training course, friends/coworkers and social media. The sources of book, TV, were %7.4, %3.7 respectively, however newspaper/magazine, exhibition and University/Institute represents the same result which is % 1.8.

Table 1. Socio-economic characteristic of the respondents

Variable	Frequency	Percentage
Gender		
Male	51	94.4
Female	3	5.6
Total	54	100
Age		
22-32	9	16.6
33-42	20	37.03
43-52	17	31.48
<52	8	14.81
Total	54	100
Education		
Illiterate	2	3.7
Write and reading	2	3.7

Table 1. Socio-economic characteristic of the respondents - continued

Variable	Frequency	Percentage
Primary education	9	16.7
secondary education	8	14.8
Tertiary education	10	18.5
Diploma	3	5.6
Bachelor	20	37
Total	54	100
Beekeeping experience (year)		
5>	22	40.7
6-10	14	25.9
<11	18	33.3
Total	54	100
Reasons for selecting beekeeping		
Genetically		
Hobby	9	16.6
Source of income	30	55.5
Total	15	27.7
Source of information	54	100
Training course		
TV	16	29.6
Book	2	3.7
Newspaper &Magazine	4	7.4
Social media	1	1.8
Friends/Coworkers	13	24.7
Exhibition	16	29.6
University &Institute	1	1.8
Total	1	1.8
	54	100

Table 2 indicates that majority of respondents which represent 74.07% who participated between (1-2) training courses, 16.6 % respondents each between 2 and 5 training courses and 9.2% of beekeepers participated more than 5 training courses.

As revealed above, the most common methods of facilitation identified by the respondents during their trainings are lecture (24.2%).

The other methods demonstrations, discussion, presentation and seminar represent the remaining 21.6%, 20.3%, 19.7% and 14.1% respectively.

Table 2. Beekeepers training

Training (number)	Frequency	Percent	Mean	Std. deviation
1-2	40	74.07	2.93	2.839
2 - 5	9	16.6		
> 5	5	9.2		
Total	54	100		

Table 3: Types of Training Received

Response	Frequency	Percent%
Lecture	38	24.2
Demonstration	34	21.65
Discussion	32	20.38
Presentation	31	19.74
Seminar	22	14.01
Total	157	100

Table 4. Response on the Quality of Training

Response	Frequency	Percent%	Mean	Std. deviation
Very good	33	61.1		
Good	14	25.9	3.44	0.816
Medium	5	9.3		
Bad	2	3.7		
Total	54	100		

Table 4 presents the responses given by the beekeepers on the quality of the training programs for which they have participated. The findings indicate that majority of the respondents 61.1% agree that the quality of training course have been very good on the other hand, the 2 respondents representing a 3.7% indicated otherwise. As shown in table 5 that the majority of beekeepers which representing 55.55% produced between (1-4) kg per hive of honey, 37.03% between (5-8) kg per hive. While 6.4% of beekeepers their productivity above 8kg per hive**.**

Table 6 shows there is no significant correlation relationship between the productivity and each of independent variables (age, gender, education and experience).

While there was highly significant correlation relationship between the productivity and training course because of p-value = 0.000 at level 0.05.

Table 5.Productivity of beekeepers

Productivity (kg)	Frequency	Percent	Mean	Std. dviation
1-4	30	55.55	4.57	9.39
5-8	20	37.03		
Above 8	4	6.4		
Total	54	100		

Table 6.Relationship between productivity and independent variables

Independent Variables	Dependent variable (productivity)			
	DF	X^2	P-Value	Cramer's V
Age	30	32.168	0.360	0.446
Gender	10	5.332	0.868	0.314
Education	60	53.668	0.705	0.407
Experience	20	23.013	0.288	0.462
Training	90	180.946	0.000**	0.610

As shown in Fig. 1 training was considered to have a positive effect on productivity by enhancing the production level of beekeepers.

Most of researches including Abomeh & Peace, Menon [23], Patrignani & Conlon, [25], Bartel [7] training have significant effect on the employee's productivity.

According to Desalgne [10], beekeepers who received direct training course increased their incomes by 27%.

In a panel of Italian firms showed that 0.01 percent point increase in training intensity boosts firms' productivity by about 0.07 percent [8].

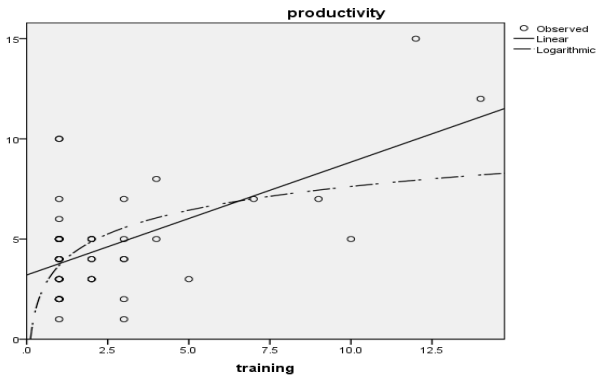

Figure 1. The relationship between training and productivity

In the same time, Patrignani & Conlon [25] explained that there is a positive relationship between training and productivity for small organizations and a negative relationship between training and productivity for large organizations.

Al-Dossary [3] showed that there is a balanced relation between the training and the productivity of the workers

4. Conclusion

From the above mentioned facts we can conclude that training would provide opportunities to the beekeepers to get more productivity and profit. Furthermore, our research showed that is highly significant correlation relationship between the productivity and training course. It can be concluded that, achieving better beekeepers productivity in the Sulaiamani city is enhance by training beekeepers, because after being trained they can conduct their jobs more effectively. Also, bee directorate in the Governorate of Sulaimani has Sufficiency in efforts by provision of specialized training for the beekeepers. Training has a significant role to play on beekeepers productivity. Our recommendations are the bee director should set up extensive training course to beekeepers to enhancing their information and skills, also conducting other studies similar to this study in the governorate of Sulaimani and other areas of Kurdistan Region.

References

[1] Abomeh O.S., N.N. Peace, 2015, Effects of Training on Employees' Productivity in Nigeria Insurance Industry, British Journal of Economics, Management & Trade 7(3): 227-235.

[2] Adeniji M.A., 2002, An analysis of human resources development programmes in two selected Nigerian university libraries, unpublished MLS Thesis, Department of Library and Information Studies, University of Ibadan.

[3] Al-Dossary S.M., 1998, The Efect of Training in productivity of goverbment workers.M.Sc Thesis. Institute of geaduate studies, Police Scincies Department.

[4] Almeida R., P. Carneiro., 2006, The return to firm investment in human capital. World Bank Policy Research Working Paper no. 3851.

[5] Al-Rabia B., 2007, Impact training of organization Production (Case study of Sunlghaz Organization), Msc Thesis, Mohamad Buqra Bumrdas University, College of Economic Sciences.

[6] Asava M.M., 2013, Influence of employee productivity in the processing sector: A case of Ugna limited Eldoret, Kenya, Resesrch project submitted in partial fulfillment of the requirement for the award of degree in master in project planning and management of the Nairobi, Department of extra mural studies, University of Nairobi.

[7] Bartel A.T., 1991, Productivity gains from the implementation of employee training program, Columbia university 710 uris hall, Nework, NY 10027 and NBER.

[8] Colombo E., L. Stanca, 2008, The Impact of Training on Productivity: Evidence fi-om a Large Panel of Firms, Available at SSRN

[9] Cramp D., 2008, A practical manual of beekeeping-How to keep bees and develop your full potential as an apiarist. Spring Hill House, Spring Hill Road, Begbroke, Oxford OX5 1RX, United Kingdom.

[10] Desalgne P., 2011, Ethiopian Honey: Accessing International Markets with Inclusive Business and Sector Development. SNV Ethiopia.

[11] Eforuoku F., K. Thomas., 2015, Effect of training on the use of modern beekeeping technologies in OYO, Nigerian Journal of Rural Sociology, 15, 2.

[12] Engeto E., 2017, The impact of raining and development on organizational performance. Case study: National Financial Credit Bank Kumba. Centria university of applied sciences, Business Management.

[13] Famuyiwa, B.S., S.A Adesoji, J.O Lawal, 2012, Training Needs of Smallholder cocoa farmers in Integrated pest Management Techniques: An antidote to sustainable cocoa production in Osun State, Nigeria. Int. J. Applied Res. Technol., 1: 37- 46.

[14] Gerster F., 2012, Plan de development durable de l'apiculture, rapport du Conceal general alimentation, agriculture etdese spaces ruraux (CGAAER) N° 11, Paris.

[15] Gwivaha F.A., 2015, Factors that impact agricultural extension training programs for smallholder women farmers in Njombe District, Tanzania.

[16] Haftu K., D. Daniel, B. Gebru , G.Tsegay, A. Guash, G. Guesh, Z. Mulualem , G. Gebrekiros, 2015, Analysis of Honey Bee Production Opportunities and Challenges in Central Zone of Tigray, Northern Ethiopia, International Journal of Scientific and Research Publications, (5):4, ISSN 2250-3153.

[17] Ibitoye S.J., J.A. Onimisi, 2013, Influence of Training on Farmer's Productivity in Poultry Production in Kogi State, Nigeria. 1Department of Agricultural Economics and Extension, Kogi State University, Anyigba, Nigeria 2Kogi State College of Education, Ankpa, Nigeria, International Journal of Poultry Science 12 (4): 239-244, 2013 ISSN 1682-8356 © Asian Network for Scientific Information.

[18] JAICAF - Japan Association for International Collaboration of Agriculture and Forestry, 2009, Development of Beekeeping in Developing Countries and Practical Procedures – Case Study in Africa .

[19] Joe A., 1989, The effect of training on the on-the-job performance of graduates of the centre for Management Development in Nigeria. Unpublished Ph.D Thesis, University of Ibadan.

[20] Kayoed T., 2001, The Role of Training in Management, J. Institute Personnel Manag. Nigeria, 10: 24-31.

[21] Konings J., S. Vanormelingen, 2010, The Impact of Training on Productivity and Wages:Firm Level Evidence. IZA DP No. 4731.

[22] Kumar A., 2018, Effectiveness of training in enhancing knowledge of beekeepers: A study in Bihar. Journal of Pharmacognosy and Phytochemistry, KVK, Gaya, Bihar, India; SP1: 320-324.

[23] Menon M.E., 2013, Productivity Gains from Training: The Views of Employers and Stakeholders. Educational Administration and Policy, University of Cyprus, Cyprus Journal of Education and Training Studies, (1):1 ISSN 2324-805X E-ISSN 2324-8068

[24] Ogboloagha F.N., 2002, Economic analysis of beekeeping in Enugu state of Nigeri, A Dissertation submitted to the development of agricultural economics university of Negeria, Nsukka, in partial fulfillment of the requirements for the award of Master of Science degree in agricultural economics.

[25] Patrignani P., G. Conlon, 2012, Estimating the Impact of Training on Productivity using Firm-level Data. Department for Business, Innovation and Skills (BIS) research number 72.

[26] Sani S., O.P., Chaudhary, V. Anoosh, 2018, *Apis mellifera* colony productivity and growth influenced by initial frame strength: Farmer's perspective. CCS Haryana Agricultural University, Hisar, Haryana 125 044, Indian Journal of Agricultural Sciences 88 (10): 1618–23.

[27] Singh R., M. Mohanty, 2012, Impact of Training Practices on Employee Productivity: A Comparative Study, Interscience Management Review (IMR) ISSN: 2231-1513, (2):2

[28] Singh T., 2015, Efficacy of Training and Development Programs on Employees Productivity at Bharat Heavy Electricals Limited. Ph.D. Research Scholar Faculty of Management & Commerce, Swami Vivekanand Subharti University, Meerut. International Journal of Allied Practice, Research and Review Website: www.ijaprr.com (ISSN 2350-1294).

[29] Victor A.M, J.E. Ogbuabor 2013, Training and Manpower Development, Employee Productivity and Organizational Performance in Nigeria: an Empirical Investigation, International Journal of Advances in Management and Economics, 2(5):163-177.

[30] Atta D.M., 2019, Intervew: Beekeeping in sulaimany city, (19.05.2019), Manger of bee dirctorate in sulaimani governorate.

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