



Egyptian Beekeepers' Practices and Challenges

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ABSTRACT

This study aimed to determine the characteristics of Egyptian beekeepers, to analyze the internal and external environment related to beekeeping sector in Egypt, To measure the level of their practices, and identify the relationship between beekeepers' practices and characteristics in addition to the role of agricultural extension and other organizations concerned in supporting beekeepers. The study sample included 178 randomly selected beekeepers, in addition to 37 senior beekeepers and exporters who were intentionally selected. Data were collected using a face to face and an online questionnaire which included the main topics of SWOT analysis related to the beekeeping sector in Egypt.

The top points of the four topics of SWOT were "Crops diversity and continues blooming" which came as main strength of the internal environment of beekeeping sector, "Death of exported bee packages as a result of airline negligence" representing the most vital weakness. "Ability to produce early swarms making us competitive" was the most important opportunity in beekeeping sector, while "Random and irrational use of agricultural pesticides" represented the most significant threat.

It was also found that there is a statistically significant relationship between level of beekeeper' practices and each of, the number of years of experience, the ownership of apiaries, amount of produced honey, connections with foreign beekeepers, beekeeping information source, encouraging others to work in beekeeping sector, and membership of beekeeping associations. Finally, almost two-thirds of beekeepers reported the absence of official extension services related to beekeeping sector.

KEYWORDS: Beekeeping sector– SOWT analysis – Beekeeper' Practices - Agricultural extension

1. INTRODUCTION

The government's interest in agricultural sector development is attributed to the fact that agriculture is one of the most significant development pillars. The government is currently implementing several initiatives to develop the rural sector, and one of the most significant initiatives produced by the current policy is

encouraging opportunities to establish numerous projects that are compatible with the local environment (Khattabi, 2016).

Along with crop pollination, beekeeping is a significant agricultural sector that contributes significantly to increasing agricultural output in terms of both quantity and quality as a sizeable portion of agricultural production worldwide is

comprised of beekeeping and honey production, it also contributes to the sustainability of environmentally friendly agriculture (Singh, 2000; Monga and Manucha, 2011; Al-Khafaji and Al-Badri, 2016). Modern beekeeping has improved, making it necessary to pay attention to this significant aspect of productivity, particularly in Egypt, has massive crop diversity (Affognon et al., 2015; Hamed, 2018).

It is well acknowledged that one way to advance rural society in general is to encourage entrepreneurship among rural residents. Many people consider entrepreneurship to be essential to the creation of environment friendly goods and practices. In addition to promote sustainable development, entrepreneurship can assist in resolving a variety of social and environmental problems (Popa *et al.*, 2011 and 2012).

Beekeeping has valuable economic income that encourages rural residents to start their own businesses, increasing their income and social capital (Narang *et al.*, 2022). Since nectar and pollen are provided by nature, honey bees neither need complex technology, significant financial investments, or extensive infrastructure, nor raw materials in the traditional sense (Sharma and Dhaliwal, 2014).

Singh in 2021 mentioned that beekeeping is a less labor-intensive activity, required less technical activity, had a good return on investment, self-employed, and gave farmers a second source of income. These advantages all encouraged farmers to start beekeeping enterprises. The preservation of the hives required less time than other agricultural activities and did not interfere with the primary crop or endanger livestock (Singh *et al.*, 2018; Jaiswal and Shaymrao, 2019).

The World Food Organization claims that the honey bee industry is one of the most important sectors in the global economy because of the honey bees' significance to the agricultural sector as bees pollinate about 35% of the world's food (FAO, 2018). According to Amer and Al-Shayeb (2015) and Borisov *et al.* (2019), one of the key aspects in achieving the sector's competitiveness is favorable natural and climatic circumstances.

Egypt has nearly two million beehives that

produce between 15,000 and 20,000 tons of honey each year and bring in around 300 million American dollar. Beekeeping contributes to the growth and prosperity of the national economy by reducing poverty, preserving biodiversity, and supporting food security. The only source of income for up to 25,000 households in this industry is beekeeping, and beekeeping initiatives are regarded as one of the state's instruments for attaining sustainable development. For beekeepers to maintain beekeeping and honey production projects that benefit the national economy, various governorates' beekeeping and honey production initiatives serve as successful models. (Ministry of Agriculture and Land Reclamation, 2021)

Agricultural extension has not given beekeeping the priority it deserves despite the fact that it is a profitable agricultural economic activity that is integrated with the other farm activities, which is in line with its economic and agricultural importance to farmers in Egypt. Agricultural extension can play a significant role in increasing the efficiency of agricultural production, including beekeeping sector, by supporting beekeepers. So in an effort to provide scientific responses that can aid in the development of extension programs designed to assist beekeepers in Egypt, this research aims to identify and determine the following:

- 1- The internal and external environment factors related to the beekeeping industry in Egypt.
- 2- The level of beekeepers' practices.
- 3- The relationship between the practices of beekeepers and their studied characteristics.
- 4- The role of agricultural extension and concerned organizations in supporting beekeepers.

2. MATERIALS AND METHODS

2.1. Statistical hypothesis:

The statistical hypothesis "There is no significant relationship between the practices of the beekeepers surveyed and the beekeepers' characteristics" was formed to achieve the fourth research objective. Those characteristics were: age, experience years, number of family members, number of hives at the start of the

project, ownership of apiaries and hives, amount of honey produced, occupancy of apiary's land, membership in beekeeping associations, connection with foreign, role of the beekeeper in beekeeping associations, beekeeping financial profits, source of information about beekeeping, and recommending beekeeping to others .

2.2.Population and sample of the study

Two hundreds beekeepers were chosen randomly with whom contact information was available, regardless of whether beekeeping was their primary or secondary profession, due to the difficulty in reaching the total beekeeper population who are geographically dispersed all over Egypt. Only 178 people were included in the study sample overall since 22 respondents were disqualified for providing incomplete information. To reach the factors of the internal and external environment connected to the area of beekeeping in Egypt using the SWOT analysis approach, 37 major beekeepers and exporters were also intentionally chosen.

2.3.Data collection tools

Data were collected during May 2022 using a face to face and online questionnaire that was designed according to study objectives. Prior to collecting the research data, the questionnaire was tested on 20 respondents to make sure that the questions are well-written, clear, and secure, and that sending and receiving forms online is safe. After reviewing its components and contents with the participating respondents, a questionnaire including the main subjects of SWOT analysis related to the sector of beekeeping in Egypt was created and circulated.

2.4.Statistical Analysis Tools

Frequencies and percentages were used to present the data, while mean, standard deviation, and range were used to describe the study sample and categorize some variables. The Pearson correlation coefficient and Chi-Square tests were used to determine the significance of the relations between the surveyed beekeepers' practices and the characteristics that were the subject of the study.

2.5.Variables quantitative treatment

1. **The level of practices of the beekeepers surveyed:** It indicates that beekeepers follow the advised procedures for raising honey bees and selling their products. It was evaluated using a scale of 27 terms that included the key aspects of beekeeping, honey production, and marketing. Responses received a score of 1 or 0 for Yes, and No, respectively. The degree of practices for each researcher is the total of his response scores, and the degree of total practices was split into three groups based on the real degree of each respondent's total scores: High, Medium, and Low. The scale terms were chosen from technical reports and beekeeping advice, then delivered to a group of professionals and researchers with expertise in beekeeping, honey production, and marketing.
2. **Age of the respondent:** It was calculated using the respondent's actual age at the time of data collection.
3. **Number of experience years:** It refers to the number of years the beekeeper worked in the marketing, production, and beekeeping industries. The actual number of experience years was used to calculate it.
4. **Family size:** It refers to the respondent's number of family members, and the actual number of family members was employed.
5. **Hives possession at the beginning of the project:** It refers to the number of honey bee hives with which the beekeeper initially began his project; the raw number of hives was used to measure it.
6. **Possession of apiaries at the time of data collection:** When gathering data, it refers to the total number of apiaries the beekeeper owned or managed; in order to calculate this number, the actual number of apiaries was used.
7. **Possession of hives at the time of data collection:** It refers to all of the honey bee hives that the beekeeper owned or was in charge of at the time that the data was collected. To count them, the raw number of hives was used.

- 8. Produced honey quantity:** It refers to the total amount of honey harvested from all hives owned or maintained by the beekeeper throughout the previous calendar year prior to the time of data collection and is measured using the raw number of the amount of honey in Kg/Year.
- 9. Apiary land occupation:** It refers to the respondent's kind of apiary land occupation, and to measure it, the replies of ownership, rent, and partnership, respectively, were coded 1, 2, and 3, respectively.
- 10. Associations membership:** This means that grades 1 and 2 were utilized for responses as members and not members, respectively, to measure the researcher's membership in beekeeping associations.
- 11. Relations with foreign beekeepers:** It refers to have connections and relationships with individuals or groups operating outside of Egypt who are engaged in beekeeping and the sale of their products. To gauge this, the replies I know, and I don't know were denoted by the symbols 1 and 2, respectively.
- 12. Role of the beekeeper in the associations:** Assigned codes 1, 2, 3, 4, 5, and 6 to the responses of the Chairman of the Board of Directors, Vice Chairman of the Board of Directors, Board Member, Secretary of the Association, Media Coordinator, and Ordinary Member, respectively, indicate the type of membership the beekeeper holds in the association in which he participates.
- 13. Making profits from beekeeping:** Gains and profits from beekeeping, honey production, and marketing effort are intended, and in order to quantify them, symbols 1 and 2 have been assigned to the responses. Both "yes" and "no" respectively.
- 14. Source of information about beekeeping:** The symbols 1, 2, 3, and 4 were assigned to the responses of beekeeping associations, agricultural extension, social media, relatives and friends, and inheritance from parents and grandparents, respectively, in order to measure it as the source of the researcher learning about beekeeping for the first time.
- 15. Encouraging others to work in beekeeping:** Its goal is to advise the beekeeper to gain

further skills so that they can pursue a profitable career in beekeeping, honey production, and marketing. In order to assess it, the responses were given codes 1 and 2 for Yes, I do recommend them, and no, I do not recommend them, respectively.

2.6.SWOT analysis method

The SWOT analysis was used to identify the internal environment's strengths and weaknesses as well as the external environment's opportunities and threats as they pertained to Egypt's beekeeping industry. Responses that were very important, important, moderately important, or insignificant received scores of 3, 2, 1, or 0. The weighted average of each statement will then be determined based on the overall scores that the participating respondents have given it.

The use of the four-dimensional environmental analysis (SWOT) method, which is used in setting strategic goals and choosing a strategy for the development of the organization, represents the strengths and weaknesses as well as opportunities and threats for the development of beekeeping are among the most popular in the scientific literature. (Nikolov *et al.*, 2014; Stoeva and Marinov, 2015; Popova, 2019)

In order to thoroughly analyze each individual aspect that affects an organization both directly and indirectly, SWOT analysis technology requires knowledge of all of those factors (Borisov and Behluli, 2020). The current research supports the idea that farmers are the only ones who completely understand the internal aspects (agricultural) of the business environment that control how their projects will evolve in the future (Petrov and Borisov, 2021). As a result, farmers are the primary source of information utilized to determine the advantages and disadvantages of small farms. Opportunities and dangers resulting from the external environment are anticipated by an expert council (made up of professionals who are familiar with the environment) and are discussed by farmers in specially designed focus groups.

3. RESULTS AND DISCUSSION

3.1. Beekeepers characteristics

Quantitative measurement of beekeeper’s characteristics in Table 1, showed that the average age of the beekeepers was 38 years with an average of approximately 16 years of experience, which means that there are different experiences among the respondents in the beekeeping sector, and that some of the respondents did not complete their first year in this field. Collected data agreed

with Güneşdoğdu and Akyol, 2019 who found that the average age of beekeepers was 47.77 years with 19.22 years of experience.

Family members average number was 5 members approximately, and average number of owned hives at the beginning of beekeeping was 121.85 hives. Beekeeper managed apiaries average number was approximately 2.43 apiaries contained an average hives number of approximately 317.13 hives. The average quantity of yearly produced honey was 2119.94 kg.

Table 1. Distribution of respondents according to their studied quantitative characteristics (n = 178)

Characteristics of respondents	Average	Standard deviation	Range	Lowest value	Highest value
Age	38.19	11.315	43	20	63
Number of experience years	15.56	10.952	46	1	47
Family members number	4.81	1.205	6	2	8
Number of owned hives at the beginning of the project	121.85	325.025	499	1	500
Managed apiaries number	2.43	1.365	5	1	6
Managed hives number	317.13	336.516	970	30	1000
Yearly produced honey	2119.94	3665.457	6500	50	7000

The results contained in Table (2) showing the distribution of respondents according to their qualitative measurements, data showed that the majority (90%) of beekeepers make profits from beekeeping, and about 80.9% recommend others to work in beekeeping. More than two-thirds of the respondents (69.7%) have connection with foreign beekeepers, but less than half of them (43.3%) are members of beekeeping associations, the vast majority of them are ordinary members and a few of them occupy roles related to the board of directors. Relatives and friends were the main source of information about beekeeping with ratio of 52.8% meanwhile, most of beekeepers rent apiary’s land, at a rate of 41.0%.

3.2. SWOT analysis

Strengths, Weaknesses (internal factors that beekeeper control and can change or manage), Opportunities and Threats (external

factors derived from the environment, market that do not depend on beekeeper decisions) varied in their relative importance and weighted average values, as well as the ranking of each phrase based on the weighted average.

Strength points that consisted of 16 elements according to the respondents point of view are showed in Fig (1), arranged in descending order according to their weighted average.

"Cultivation diversity and continues blooming" with a weighted average of 2.86 degrees was on the top of strength points, which indicates the premium quality of Egypt's climate, that allows succession flowering throughout the season, due to the characteristics of the climate and soil. Most of these plants are attractive to bees, allowing bees to collect both nectar and pollen during pollination process.

Table 2. Distribution of respondents according to their studied qualitative characteristics (n = 178)

Characteristics		Frequency	%	Characteristics		Frequency	%
Making profits from beekeeping	Yes, I make profits	161	90.4	Connection with foreign beekeepers	I know	124	69.7
	No, I don't make profits	17	9.6		I do not know	54	30.3
Recommending others to work in beekeeping	Yes, I recommend beekeeping.	144	80.9	Membership of beekeeping associations	Member	77	43.3
	I do not recommend beekeeping	34	19.1		Not a member	101	56.7
Beekeepers role in the association	Member	70	90.9	Source of beekeeping information	Relatives and friends	94	52.8
	Association secretary	2	2.6		Social Media	22	12.4
	Chairman of the Board of Directors	2	2.6		Agriculture extension	21	11.8
	Media Coordinator	2	2.6		Inheritance from parents and grandparents	23	12.9
	Vice President	1	1.3		Beekeeping associations	18	10.1
Apiary land ownership	Owner	71	39.9				
	Renter	73	41.0				
	Partner	34	19.1				

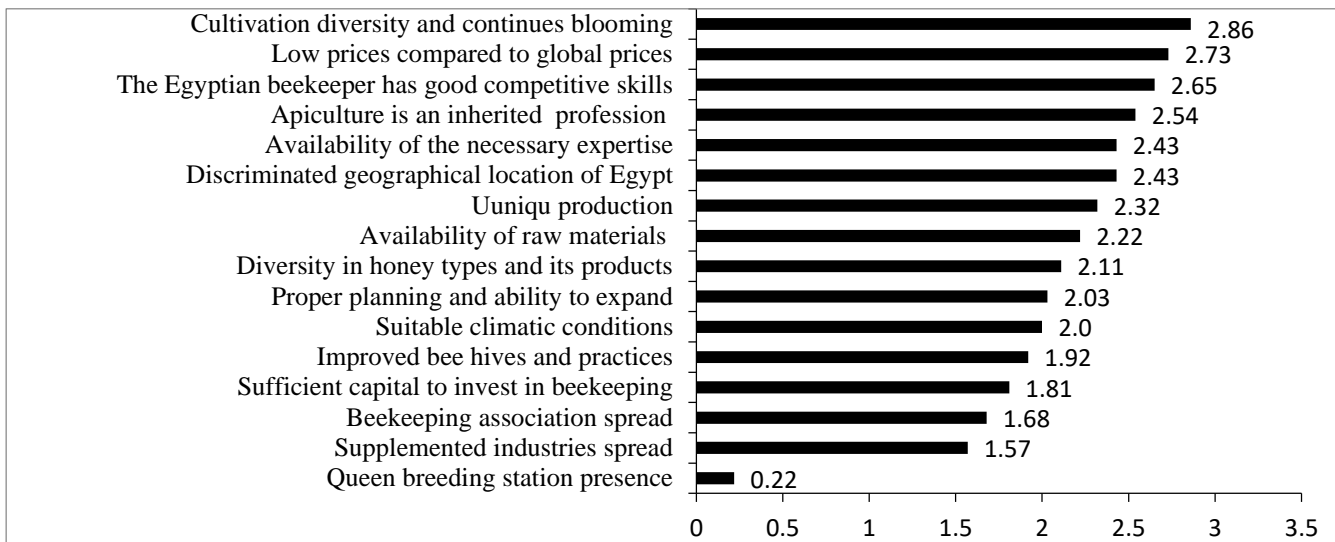


Figure 1. Strength elements for the internal environment of beekeeping sector

Weakness elements were illustrated in Fig. (2), which represents the other aspect of the internal environment, which consisted of 13 elements, arranged in descending order according to the weighted average. (Death of exported bee packages as a result of the negligence of airlines) with a weighted average of 2.81 degrees was in the first order within the statements of the side of

weakness, as bee packages are the main exported product in Egypt. The success of this process depends mainly on airlines companies as bee packages can remain at airports for days instead of hours. Poor ventilation, and handling of bee packages leads to the death of bees and a huge loss for exporters.

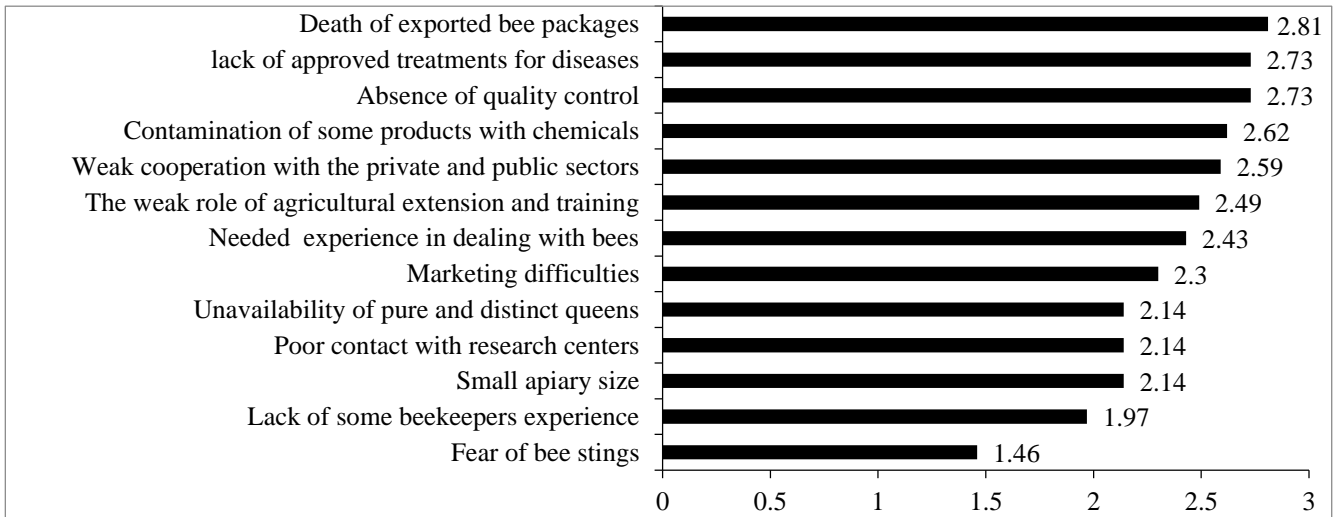


Figure 2. Weakness elements for the internal environment of beekeeping sector

The results in Figures (3 and 4) showed that the analysis of the external environment elements for opportunities and threats that varied in the weighted average values as well as the ranking of each statement. It is clear from the data that the opportunities elements contained 11 elements. (Early packages production makes us

competitive) got a weighted average of 3.0 degrees ranking first, that prove the impact of the good climate the highly skilled Egyptian beekeeper that boost the production of early bee packages, which is one of the main opportunities to increase the income of beekeepers.

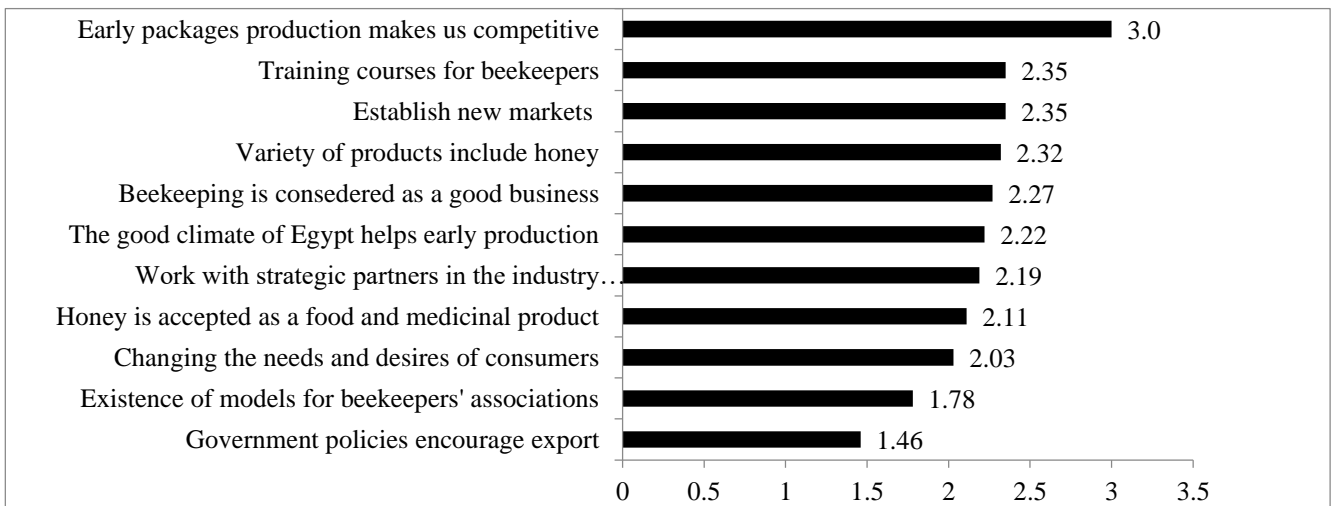


Figure 3. Opportunities in the external environment of beekeeping sector

Results in Fig. (4) showed that the threat axes, had 20 elements and the statement (Random use of agricultural pesticides) had 2.92 degrees to be in the first order among the statements, which confirm that the indiscriminate use of pesticides,

especially neonicotinoid pesticides, leads to "colony collapse disorder" phenomena which means the disappearance of bees for no known reason. That is why it is so important to avoid the intensive use of chemicals in agriculture.

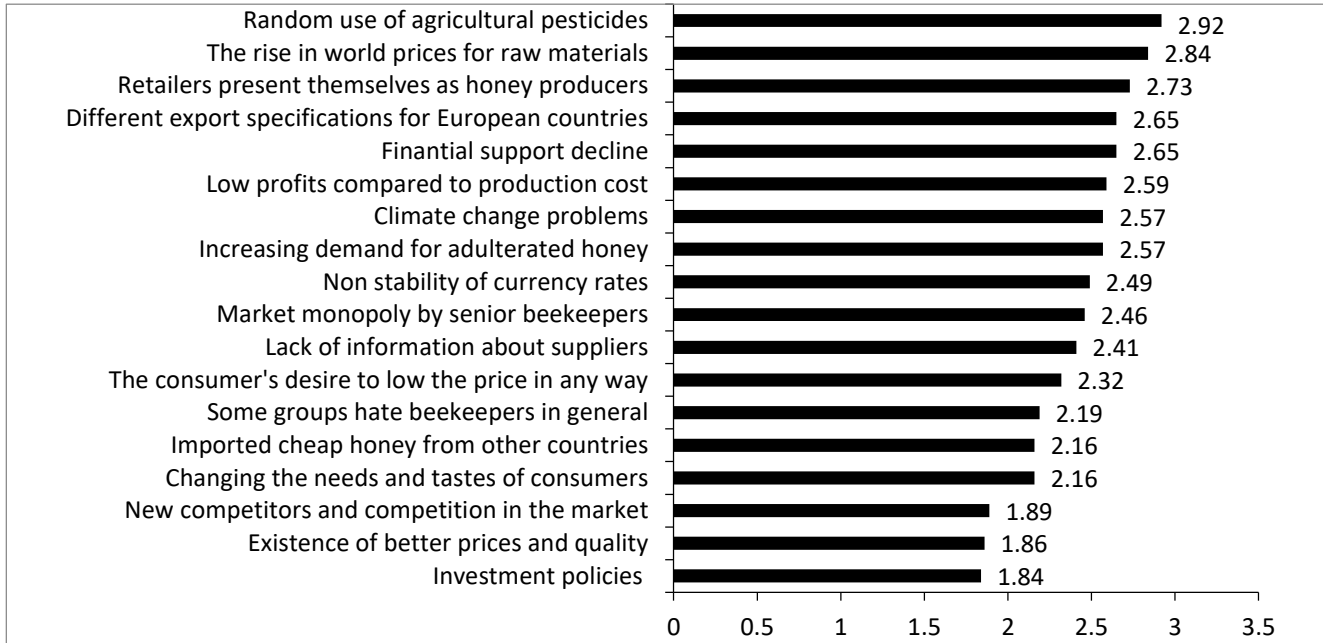


Figure 4. Threats in the external environment of the field of beekeeping

Beekeeping is a growing field in agriculture that is worth investing in since it has high-profit margins and requires little monetary input. Anyone may perform it, regardless of age, prior knowledge, or land availability.

These previously showed results are in harmony with those of many others, as it should be known that the increase in crop yields of plants provided by bees through pollination is 10-12 times, even 20 times of the monetary value gained from apicultural products. Also, there are many studies regarding the benefits of bees on pollination (EFSA, 2013; Goulson, 2013; IUCN, 2013). The inexpensive initial investment required to start beekeeping is one of the crucial factors that motivates farmers to adopt it (Singh *et al.*, 2021). The land area required for beekeeping is extremely limited; hence, farmers with no or limited land mass can also under-take this activity (Narang *et al.*, 2022)

The honey production season shorter than three months means a low income for the beekeeper and it causes them to spend the rest of the year actively and makes it necessary for them

to deal with other works. This prevents the desired specialization in beekeeping and causes people to consider beekeeping as a hobby (Korkmaz *et al.*, 2015).

El-Tatawy *et al.*, 2019 revealed that the process of education is compatible with the high level of education, which enables access to some information and practices needed by this process. It was also found that nearly two-thirds of the sample belong to the part-time category of the bee profession, representing about 66.98% of the total sample, which indicates that this activity does not require full time, which gives flexibility in the possibility of practicing it and thus the possibility of practicing it even for part-timers. In a study conducted in Japan and South Korea (Kohsaka *et al.*, 2017) on this subject, it was emphasized that the combination of traditional methods of beekeeping with modern methods would be important for beekeepers.

Recommendation was given that each beekeeper should be aware of the advantages of being members in an association which could protect their interests and help them with advice

to increase efficiency along honey market chain. (Grigoras, 2018 and Osman *et al.*, 2022)

The problem of difficulty in marketing bee products came in the third place according to Osman et al (2022), representing about 12.77% of the total opinions of producers, Absence of assembled marketing structure due to a lack of marketing facilities and transportation choices, beekeepers must rely on intermediate broker to sell their products on the market, incurring significant losses (Nath *et al.*, 2019). The price of apicultural products varies from time to time; it is neither stable nor constant, and the presence of brokers in the chain is the main problem, as this makes beekeepers sell their produce at very low prices, who in turn sell the same product at a very high rate in the market, earning huge benefits (Nath et al., 2019)

Problem of bee infection with diseases is a critical one, and occupied the problem of lack of services (Osman *et al.*, 2022) they also gave an advice about educating farmers not to randomly use pesticides because of their great harm to bees. In the same trend Suleiman and Mahjoub in 2022 stated that the most important problem of beekeeping was the spread of diseases and the spread of wasps.

Both of Grigoras, 2018 and Chaudhary *et al.*, 2021 reported that imports of honey should be reduced or eliminated, as well as fake honey should be identified and the producers and traders punished according to the legislation in force.

Finally El-Tatawy *et al.*, 2019 endorsed to increase the number of bee hives and expand the role of agricultural extension to spread information about diseases that can affect bees and reduce productivity.

3.3.The level of practices of the beekeepers surveyed.

Respondents were divided into three categories based on the actual range of 17 degrees in Table 3 as it shows the distribution of respondents according to their level of practice, with a minimum of 10 degrees and a maximum of 27 degrees. The mean was 19.96 degrees, and the standard deviation was 4.05 degrees. Majority (approximately 88%) of the respondents fell into the medium and high categories, and this indicates that beekeeping is one of the entrepreneurial projects that depend on practices that are easy to learn and implement by beekeepers, especially if they are members of beekeeping associations that provide them with integrated technical support.

Table 3. Level of practices of beekeepers surveyed.

Response	Frequency	%
High (27-22) degrees	72	40.4
Medium (21-16) degrees	85	47.8
Low (15-10) degrees	21	11.8
Total	178	100.0

Lowest value = 10 Greatest value = 27 Range = 17 Arithmetic mean = 19.96 Standard deviation = 4.05

3.4.The relationship between the practices of the surveyed beekeepers and their studied characteristics.

The statistical hypothesis states that: There is no relationship between the practices of the beekeepers surveyed and the independent variables studied was assumed. To test the validity of this hypothesis, Pearson's simple correlation coefficient was used with quantitative variables, and the Chi-square test with nominal variables, and the results were as follows:

Regarding the relationship between the degree of practices of the surveyed beekeepers and their

personal characteristics with a quantitative level, the results contained in Table (4) show the following:

- The existence of a statistically significant positive correlation at the level of 0.01 between the degree of beekeepers' practices and each of the number of years of experience, possession of apiaries land, and the amount of honey produced, where the values of the simple correlation coefficient were 0.322, 0.266 and 0.253 respectively.
- There was no statistically significant correlation between the degree of beekeepers'

Table 4. Results of Pearson's simple correlation test between the degree of practices of the surveyed beekeepers and their studied characteristics

Characteristics of respondents / independent variables	Pearson Simple Correlation Test Results	
	Pearson's coefficient value Simple correlation (r)	Calculated significance Level (Sig)
Age	0.106	0.158
Experience years	0.322**	0.000
Family size	0.052	0.487
Hives possession at the beginning of the project	0.080	0.286
Apiary possession at the time of data collection	0.266**	0.000
Possession of hives at the time of data collection	0.118	0.115
Produced honey quantity	0.253**	0.002

** Significant correlation at 0.01 * Significant correlation at 0.05

practices and each of the age, family size, number of hives at the beginning and the number of owned hives.

With regard to the relationship between the level of practices of the surveyed beekeepers and their personal characteristics with a nominal and ordinal level of measurement, the results contained in Table (5) show the following:

- The existence of a statistically highly significant relationship between the level of beekeepers' practices and each of: connection with foreign beekeepers, the source of information about beekeeping, encourage others

to work in beekeeping, where the calculated Chi-square values were 16.226, 30.302, and 14.596 respectively.

- There was a statistically significant relationship at the level of 0.05 between the level of beekeepers' practices and the role in the beekeeping association, where the calculated Chi-square value was 17.174.

- There is no statistically significant relationship between the level of beekeepers' practices and both apiary land ownership, association membership, and making profits from beekeeping

Table 5. Chi-square test results between the level of respondents' practices and their studied characteristics

Characteristics of respondents / independent variables	Chi-Square Results		
	Calculated chi-square value	Degrees of freedom (r)	Calculated Morale Level (Sig)
Apiary land ownership	5.144	4	0.273
Membership of beekeeping associations	0.541	2	0.763
The role in the beekeeping association	17.174*	8	0.028
Connection with foreign beekeepers	16.226**	2	0.000
Making profits from beekeeping	2.573	2	0.276
Source of information about beekeeping	30.302**	8	0.000
Encourage others to work in beekeeping	14.596**	2	0.001

** Significant correlation at 0.01 * Significant correlation at 0.05

3.5. The role of agricultural extension and concerned organizations in supporting the surveyed beekeeping sector

Regarding the role of agricultural extension and concerned organizations in supporting the beekeeping sector, the results contained in Table (6) showed that less than half of the respondents (43.26%) are members of beekeepers' associations, who revealed that the most important advantages of joining beekeepers' associations is meeting beekeepers, benefiting from experiences, and acquiring new skills and information. The percentage of respondents who received assistance from beekeepers' associations was only about a

third (34.8%) and this assistance was represented as technical assistance, training, and updated information about beekeeping. The respondents said that beekeeping associations came at the top of the sources of support and assistance to them, followed by the Arab Beekeepers Union and then the Agricultural Research Center with percentages of (75.8%), (19.4%) and (4.8%) respectively. While almost two-thirds of the respondents reported the absence of local official extension services (68%), which indicates the weakness of the official extension services directed to beekeepers at the level of Egypt and requires more attention in the field of beekeeping and more extension support for beekeepers.

Table 6. Distribution of respondents according to their studied descriptive characteristics (n =178)

Characteristics		Frequency	%	Characteristics		Frequency	%
Membership of beekeepers associations	Yes	77	43.26	Receiving assistants from beekeepers' associations during the last year	Yes	62	34.8
	No	101	56.74		No	116	65.2
Advantages of joining the association	Meeting beekeepers	41	53.2	The associations that provided assistance during the last year	Beekeeping associations	47	75.8
	Benefit from experiences	21	27.3		Arab Beekeepers Union	12	19.4
	Gain new skills and information	15	19.5		Agricultural Research Center,	3	4.8
Type of assistance provided by associations	Technical assistance	58	36.5%	Availability of official extension services in the field of beekeeping	Yes	57	32.0
	Training,	52	32.7%		No	121	68.0
	Up-to-date information	49	30.8%				

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الملخص العربي

ممارسات النحالين المصريين والتحديات التي تواجههم

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استهدف البحث التعرف على خصائص النحالين، والتوصل إلى عناصر البيئة الداخلية والخارجية ذات الصلة بمجال تربية النحل في مصر. وتحديد مستوى ممارسات المبحوثين، والتعرف على العلاقة بين ممارسات المبحوثين، وخصائصهم. والتعرف على دور الإرشاد الزراعي والمنظمات الأخرى المعنية في دعم النحالين. وشملت عينة الدراسة ١٧٨ مبحثًا تم اختيارهم عشوائيًا، إضافة إلى ٣٧ من كبار النحالين والمصدرين تم اختيارهم عمديًا. جمعت البيانات بواسطة استمارة استبيان تم إرسالها إلكترونيًا للمبحوثين، واستمارة خاصة بالموضوعات الرئيسية لتحليل البيئي SWOT المتعلقة بمجال تربية نحل العسل في مصر. تم استخدام التكرارات والنسب المئوية ومعامل الارتباط البسيط لبيرسون واختبار كا^٢ لعرض النتائج.

ويتضح من النتائج أن "التنوع في الزراعات ومواصلة التزهير" جاءت على رأس عناصر القوة الخاصة بالبيئة الداخلية لمجال تربية النحل بمتوسط مرجح بلغ ٢,٨٦ ، وأن "موت النحل المصدر للخارج نتيجة إهمال شركات الطيران" مثلت أهم نقاط الضعف، بمتوسط مرجح ٢,٨١. في حين كانت "القدرة على إنتاج الطرود المبكرة مما يجعلنا قادرين على المنافسة" أهم الفرص المتاحة بمتوسط مرجح ٣، بينما مثلت "استخدام المبيدات الزراعية بشكل عشوائي" أهم التهديدات بمتوسط مرجح ٢,٩٢.

كما تبين وجود علاقات معنوية احصائيا بين ممارسات النحالين وكل من عدد سنوات الخبرة، حيازة المناحل وقت جمع البيانات ، وكمية العسل، معرفة نحالين خارج مصر، مصدر السماع عن تربية النحل، توصية الغير بتربية نحل، وعضوية. واخيرا أفاد ثلثي المبحوثون تقريبا بغياب الخدمات الإرشادية الرسمية المتعلقة بنشاط تربية النحل

الكلمات المفتاحية: قطاع النحالة في مصر - تحليل SOWT - ممارسات النحالين - الإرشاد الزراعي