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Medical beekeeping for beekeepers (MEDI-BEEB)

Project No: 2021-1-TR01-KA220-VET-000034632

MEDI-BEEB General needs analysis report



Aydın Adnan Menderes Üniversitesi-Türkiye



Çanakkale Onsekiz Mart Üniversitesi--Türkiye



Aydın İli Ari Yetiştiricileri Birliği-Türkiye



Vytauto Didziojo Universitetas - Lithuania



Wrocław University of Environmental and Life Sciences – Poland



Confederazione Italiana Agricoltori Regionale Umbria - Italy

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NEEDS ANALYSIS REPORT IN TÜRKİYE



Aydın Adnan Menderes Üniversitesi-Türkiye



Çanakkale Onsekiz Mart Üniversitesi--Türkiye



Aydın İli Ari Yetiştiricileri Birliği-Türkiye

2022-TURKİYE

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Needs Analysis Report in Türkiye - Authors



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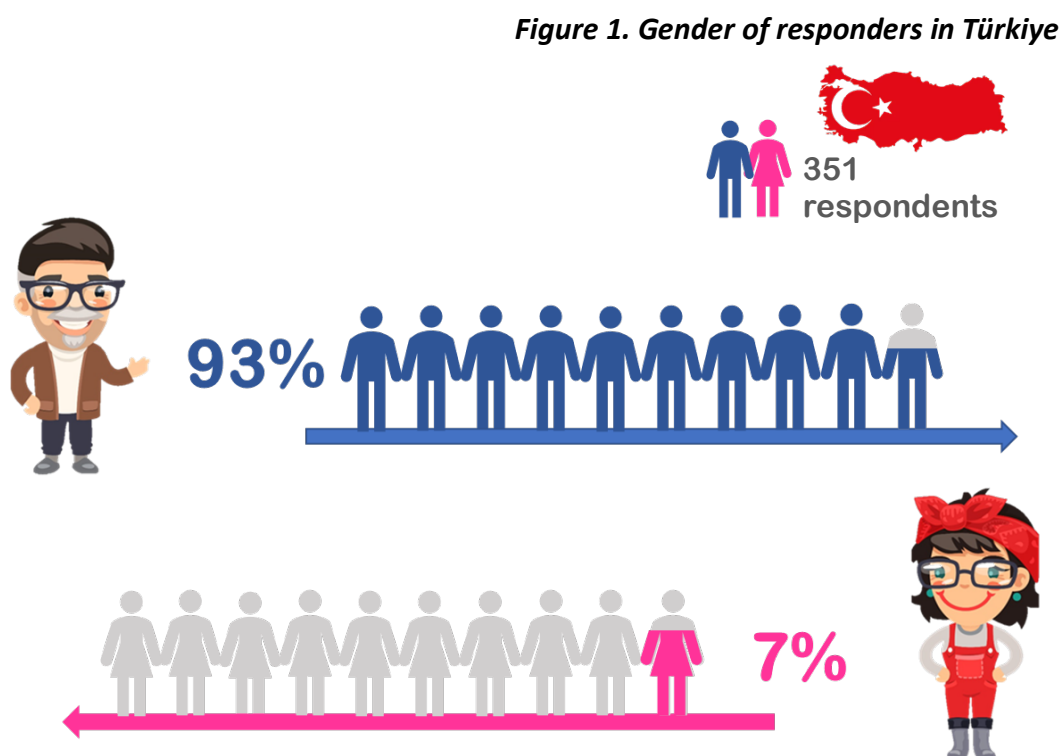
Needs Analysis Report in Türkiye – General information

In Türkiye , a face-to-face survey was conducted with 351 beekeepers operating in region of Aydın Adnan Menderes University, Aydın Province Beekeepers' Association (248 questionnaires) and Canakkale Onsekiz Mart University (103 questionnaires) . The survey results were analysed and interpreted by Aydın Adnan Menderes University and Canakkale Onsekiz Mart University.

Needs Analysis Report in Türkiye – Responders' profile

Question No. 1. Your gender?

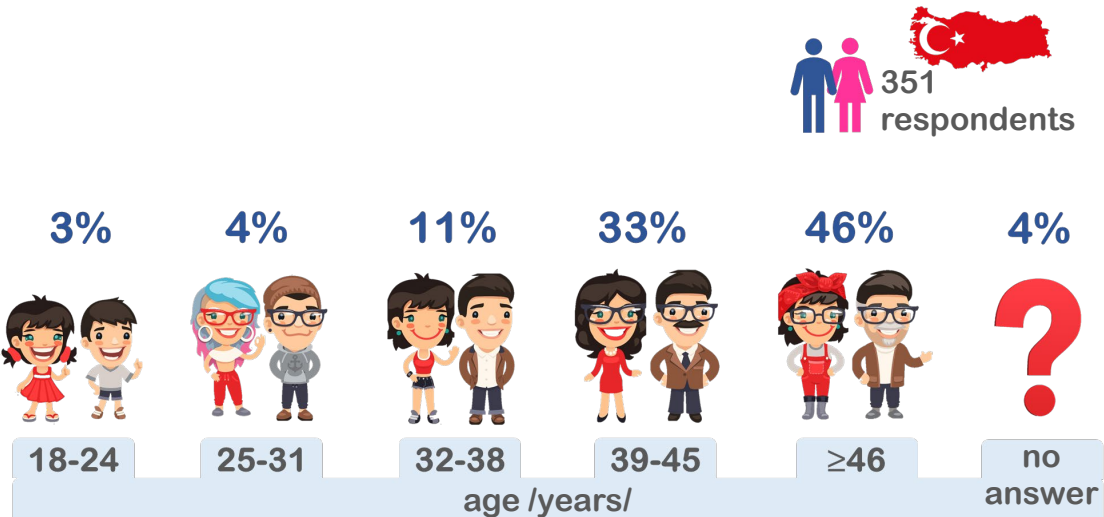
The vast majority of respondents were men (97%).



Question No. 2. Your age?

Three percent of the respondents were between the ages of 18-24, 4% were between 25-31, 11% were between 32-38, 33% were between 39-45, and 46% were aged 46 and over. Four percent of the participants did not want to report their age.

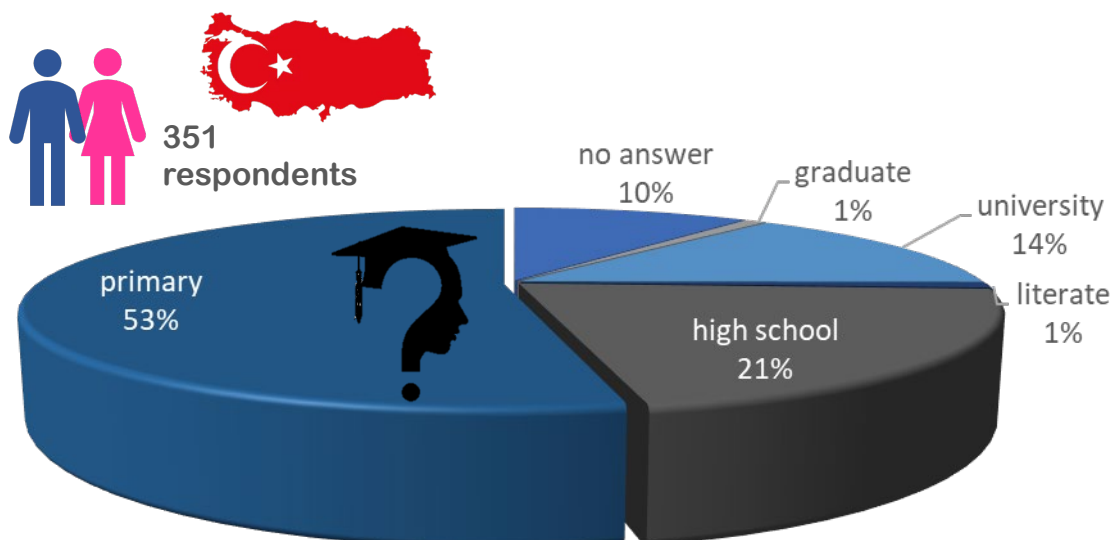
Figure 2. Age of esponders in Türkiye



Question No. 3. Your education?

Of the respondents, 187 were primary school graduates, 3 were graduates, 73 were high school graduates, 2 were literate and 49 were university graduates. Ten percent of the participants did not want to give information about their educational status.

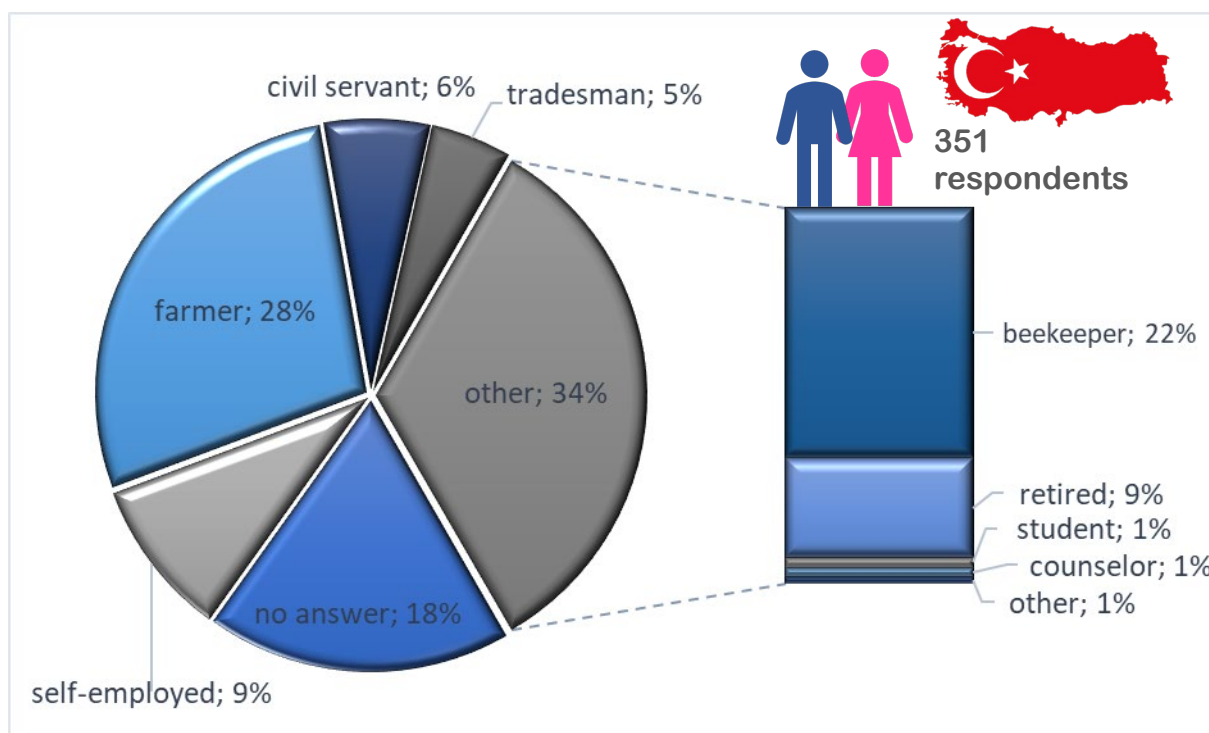
Figure 3. Education of responders in Türkiye



Question No. 4. Your profession?

Of the respondents, 28% were farmers, 9% were self-employed, 5% were tradesmen, 6% were civil servants, 22% are beekeepers, and 8% are retired. Eighteen percent of the participants did not want to report their profession.

Figure 4. Profession responders in Türkiye

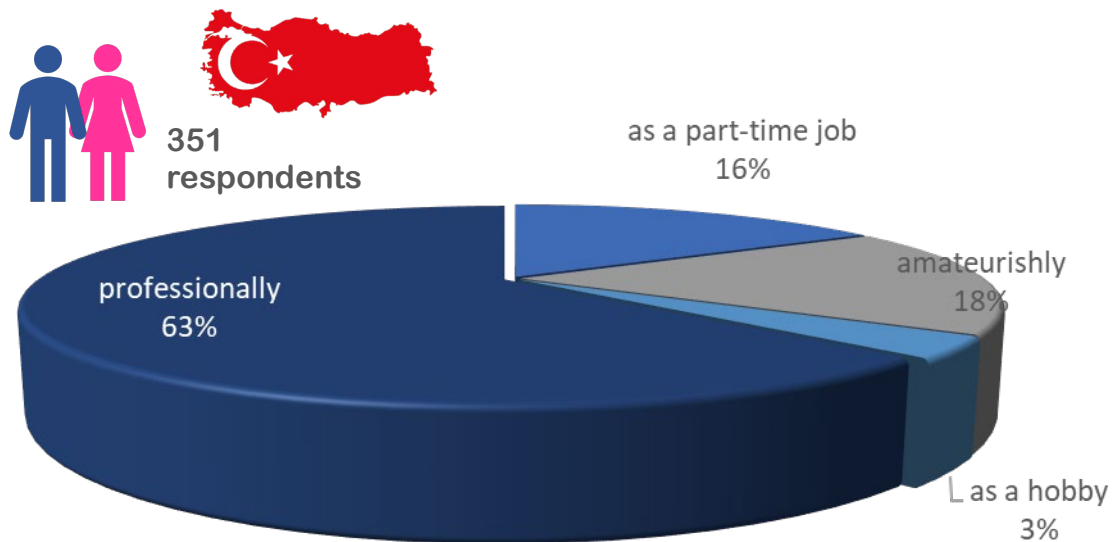


Needs Analysis Report in Türkiye – Responders’ beekeeping profile

Question No. 5. How do you do beekeeping?

Sixty six percent of the beekeepers participating in the survey reported that they do beekeeping professionally, 18% as an amateur, 16% as a side job and 3% as a hobby.

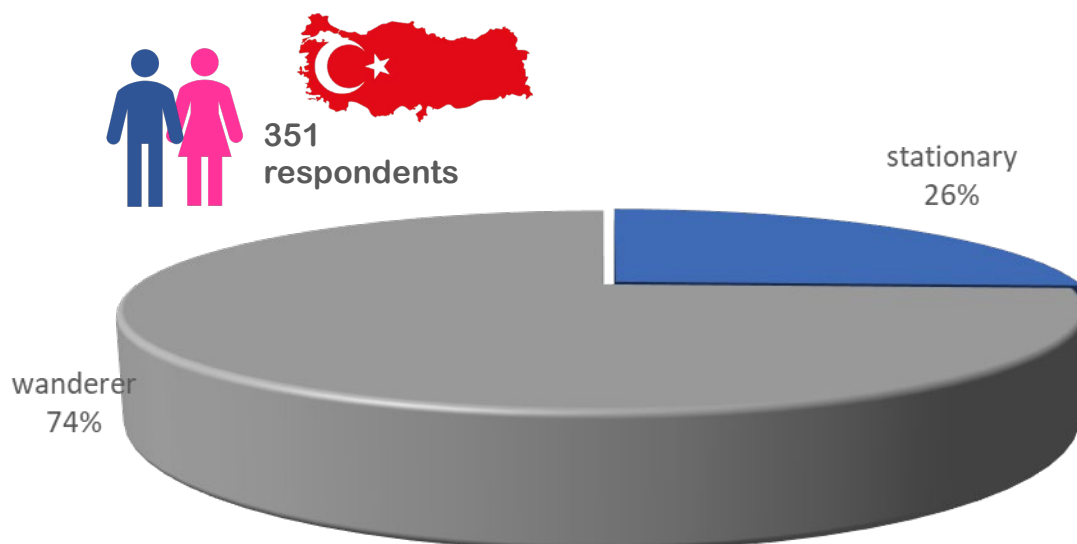
Figure 5. Beekeeping type of responders in Türkiye



Question No. 6. What is your beekeeping style?

Of the beekeepers participating in the survey, 74% reported that they have wanderer apiaries and 26 declared to be stationary beekeepers.

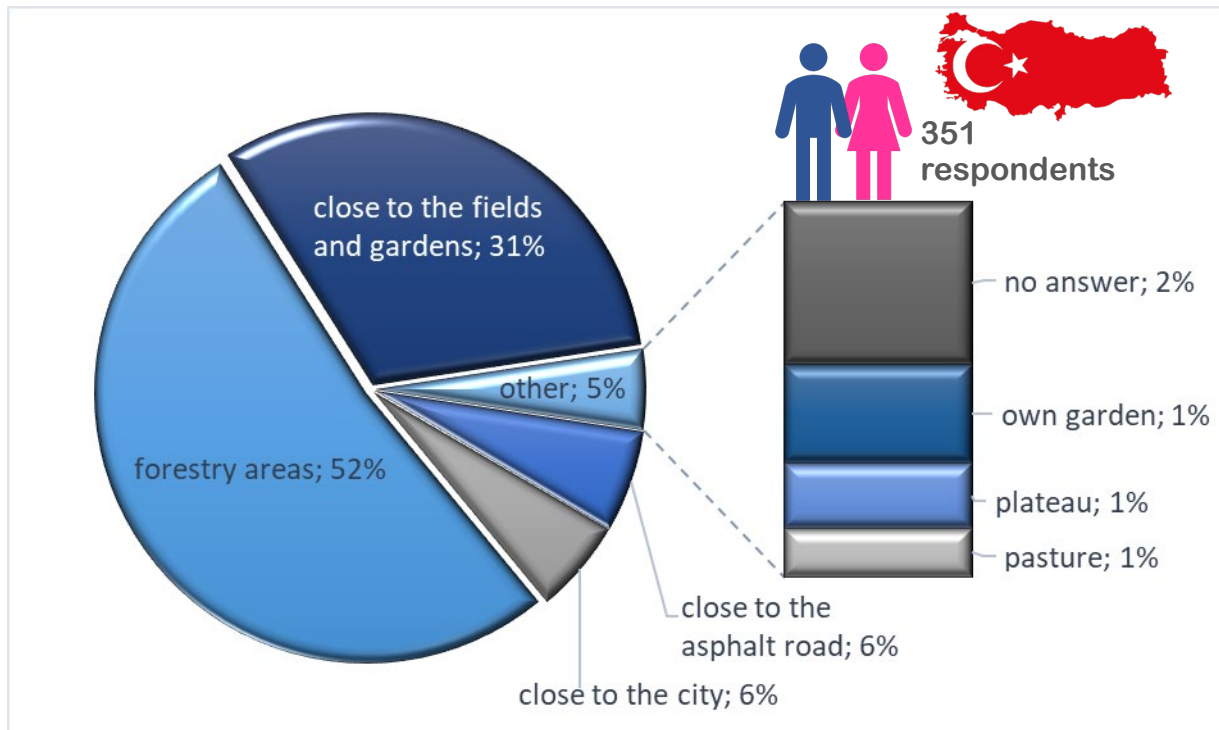
Figure 6. Apiary form of responders in Türkiye



Question No. 7. Where do you locate your bee hives?

The beekeepers participating in the survey reported that 6% of them positioned their bee hives close to the asphalt road, 6% close to the city, 52% in the forest areas, and 31% close to the fields and gardens.

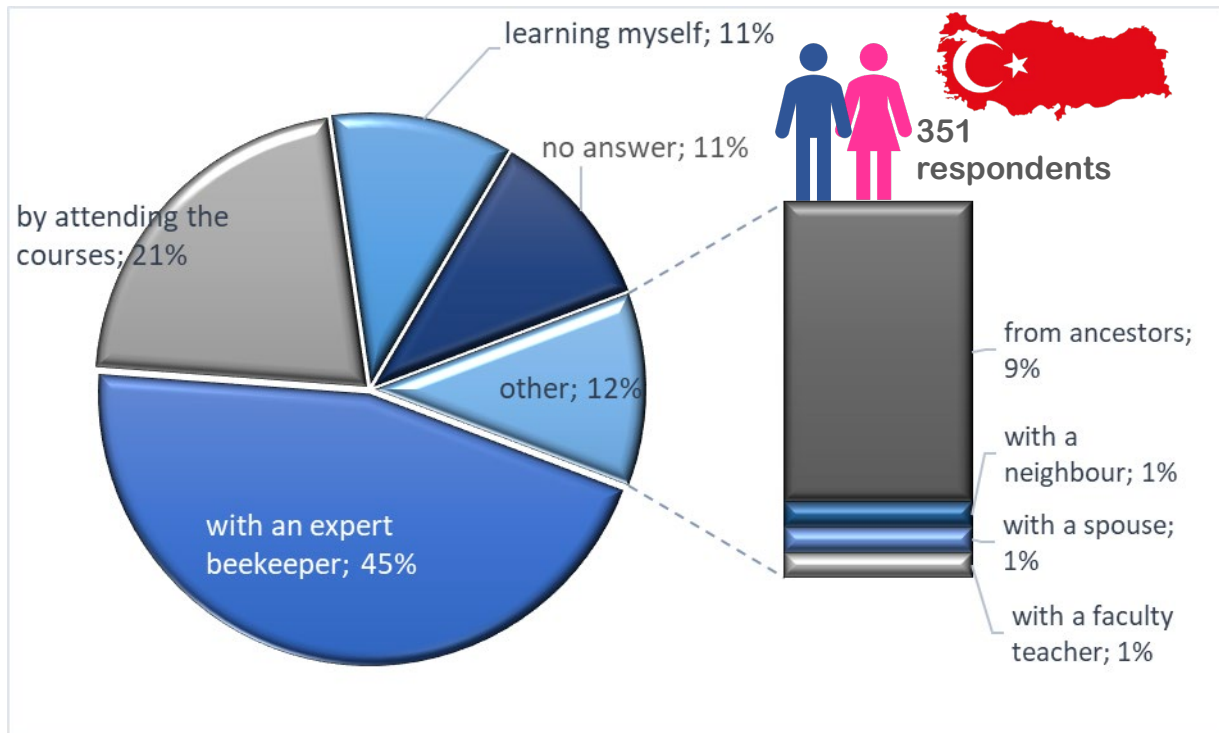
Figure 7. Responders' bee hives localization in Türkiye



Question No. 8. How did you start beekeeping?

Of the beekeepers who participated in the survey, 45% reported that they learned about beekeeping with an expert beekeeper, 21% took a course, 11% learned it by themselves, and 9% learned it from their ancestors. However, 11% did not give any answer.

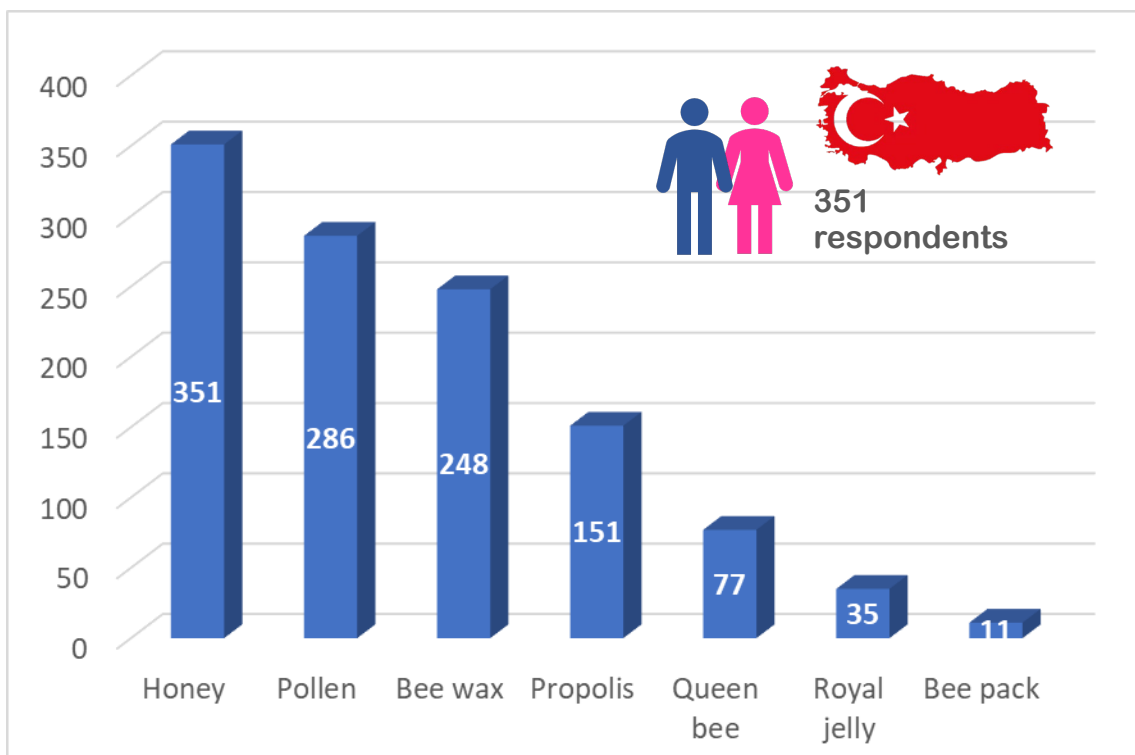
Figure 8. Start with beekeeping of responders in Türkiye



Question No. 9. Which bee products do you produce?

351 of the beekeepers participating in the survey reported that they produce honey, 151 propolis, 11 packet bees, 286 pollen, 35 royal jelly, 248 bee wax and 77 queen bees.

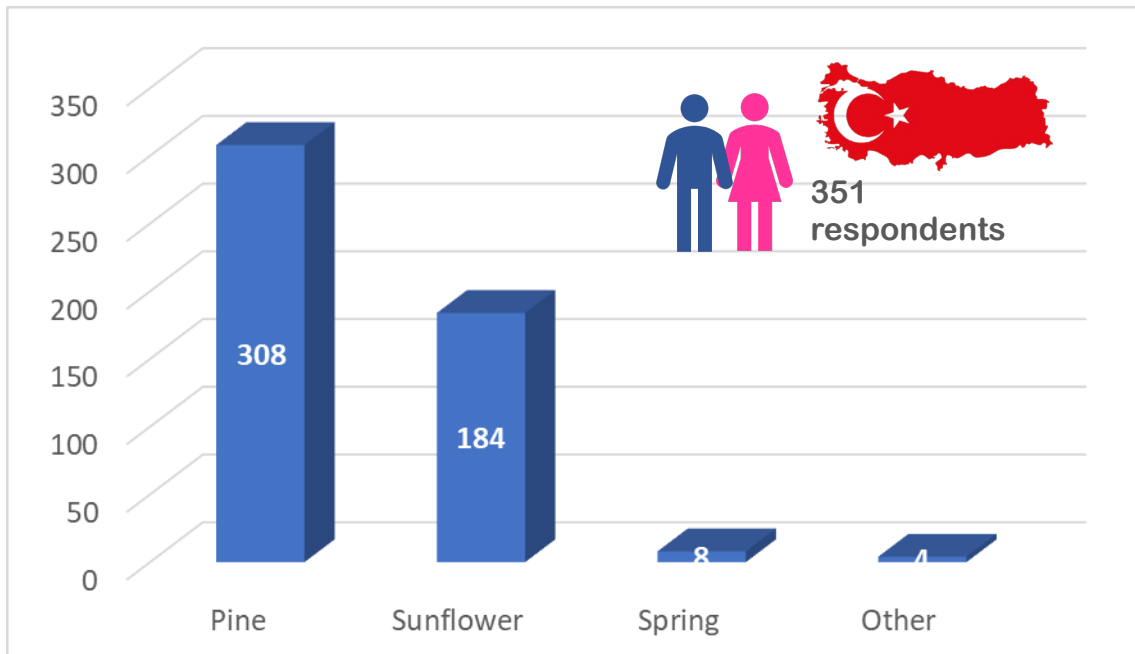
Figure 9. Bee products produced by responders in Türkiye



Question No. 10. Which honey types do you harvest?

Of the beekeepers participating in the survey, 308 reported that they produced pine, 184 sunflower, and 8 spring honey.

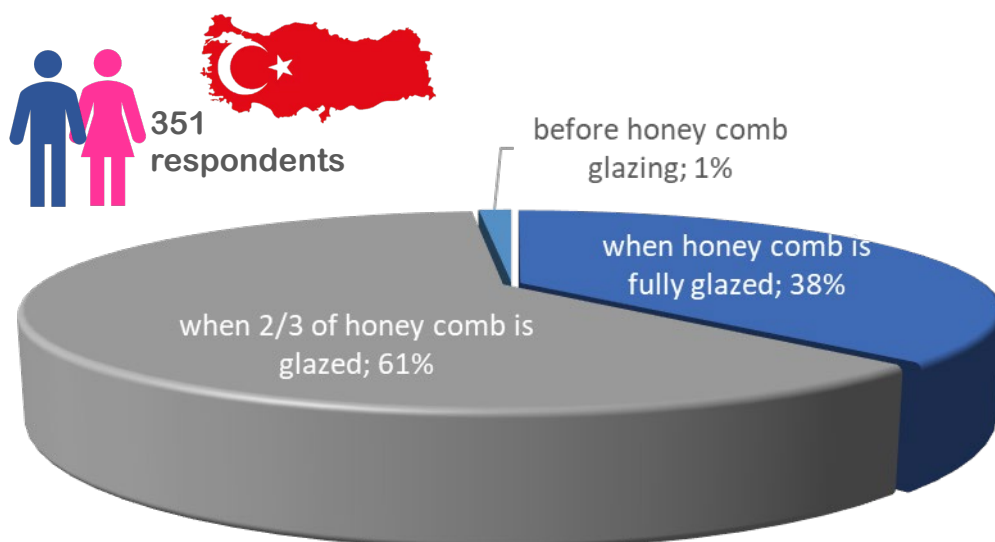
Figure 10. Types of honey harvested by responders in Türkiye



Question No. 11. During which period do you harvest flower honey?

Five of the beekeepers who participated in the survey reported that they harvested secretion honey such as floral honey before the comb was glazed, 133 when the comb was fully glazed, and 215 when 2/3 of the comb was glazed.

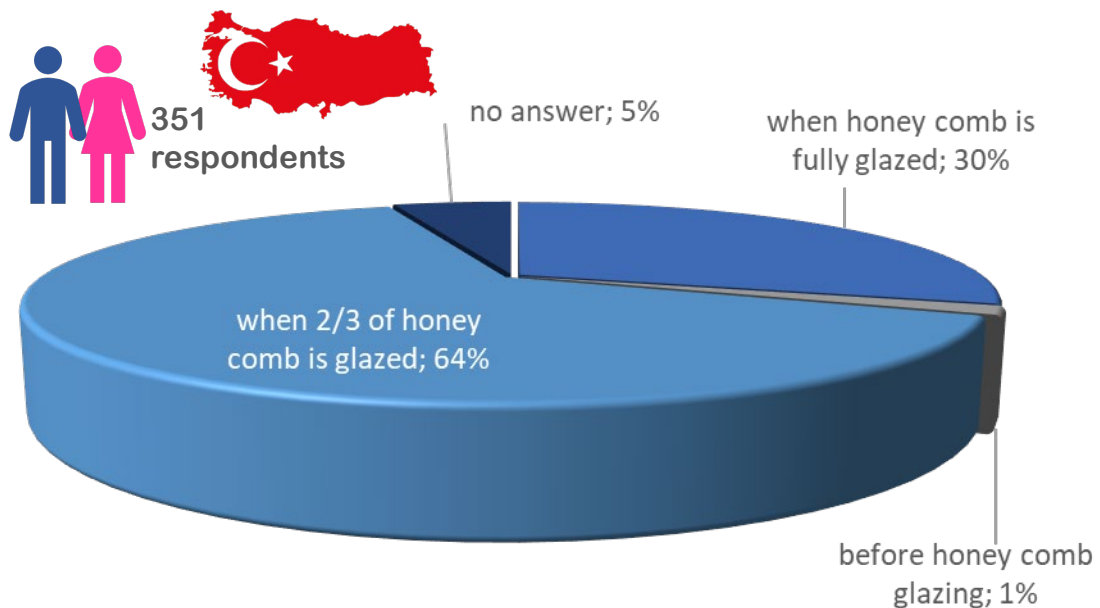
Figure 11. Period of floral honey harvesting by responders in Türkiye



Question No. 12. During which period do you harvest secretion (e.g. pine, honeydew) honey?

Five of the beekeepers who participated in the survey reported that they harvested secretion honey such as floral honey before the comb was glazed, 105 when the comb was fully glazed, and 225 when 2/3 of the comb was glazed

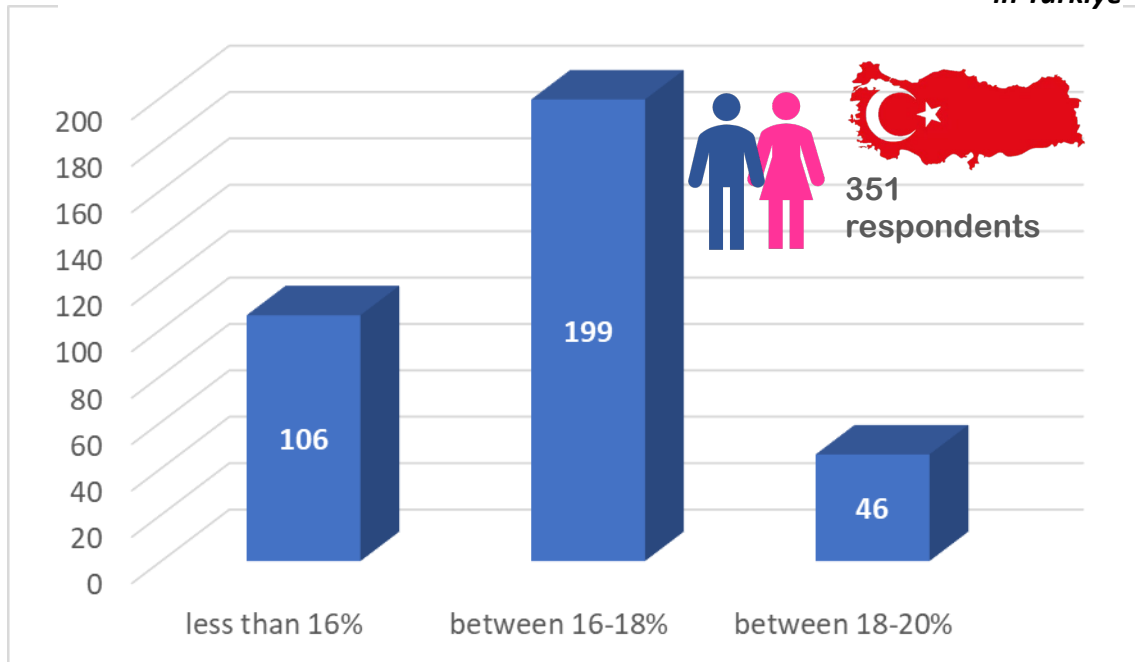
Figure 12. Period of secretion (e.g. pine, honeydew) honey harvesting by responders in Türkiye



Question No. 13. What must the water ratio be in the honey harvested?

199 of the beekeepers who participated in the survey stated that the water ratio in the harvested honey should be between 16-18%, 106 said it should be less than 16%, and 46 said it should be between 18-20

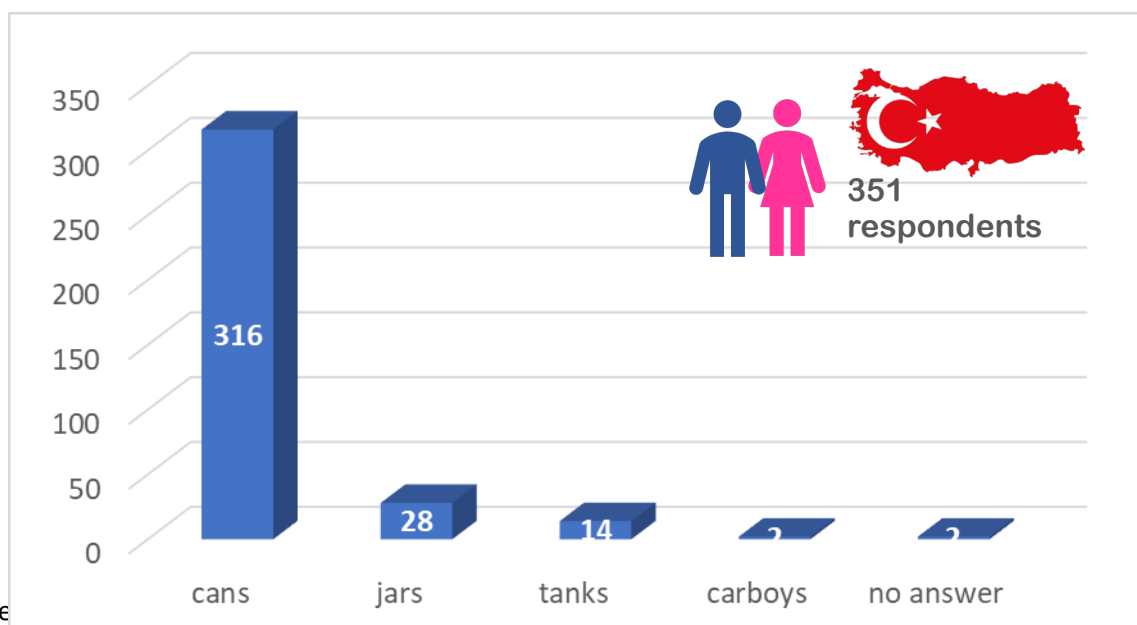
Figure 13. Required water content in harvested honey according to responders in Türkiye



Question No. 14. How do you store honey?

316 of the beekeepers who participated in the survey reported that they store honey in cans, 28 in jars, 2 in carboys and 14 in tanks. 2 participants did not give any answer to this question.

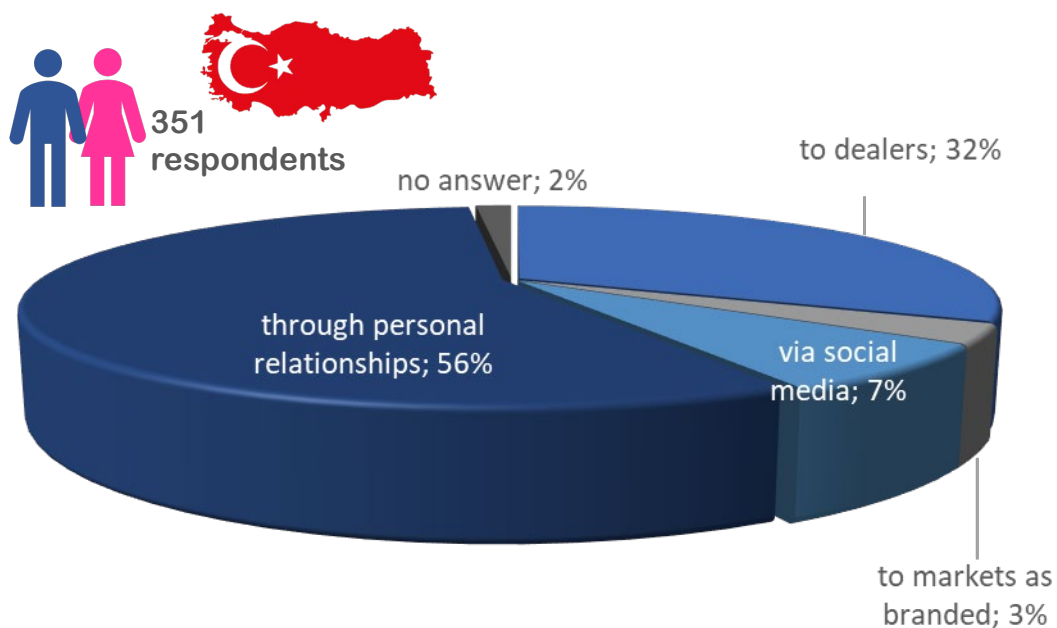
Figure 14. Methods of honey storage according to responders in Türkiye



Question No. 15. How do you market the honey?

Fifty six percent of the beekeepers participating in the survey reported that they market their honey to friends, 7% via social media, 3% to markets as branded, and 30% to dealers. Two percent of responders did not answer this question.

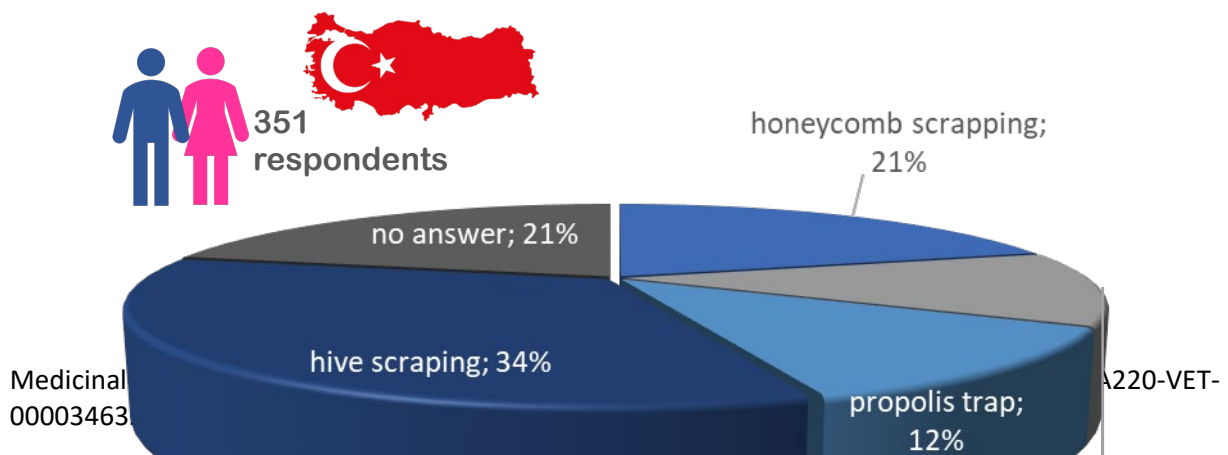
Figure 15. Ways of honey sale according to responders in Türkiye



Question No. 16. How do you produce propolis?

Thirty four percent of the surveyed beekeepers reported that they produced propolis by hive scraping method, 21% by comb scraping, 12% by flight hole cleaning and 12% by using propolis trap. Twenty one percent of the participants did not answer this question.

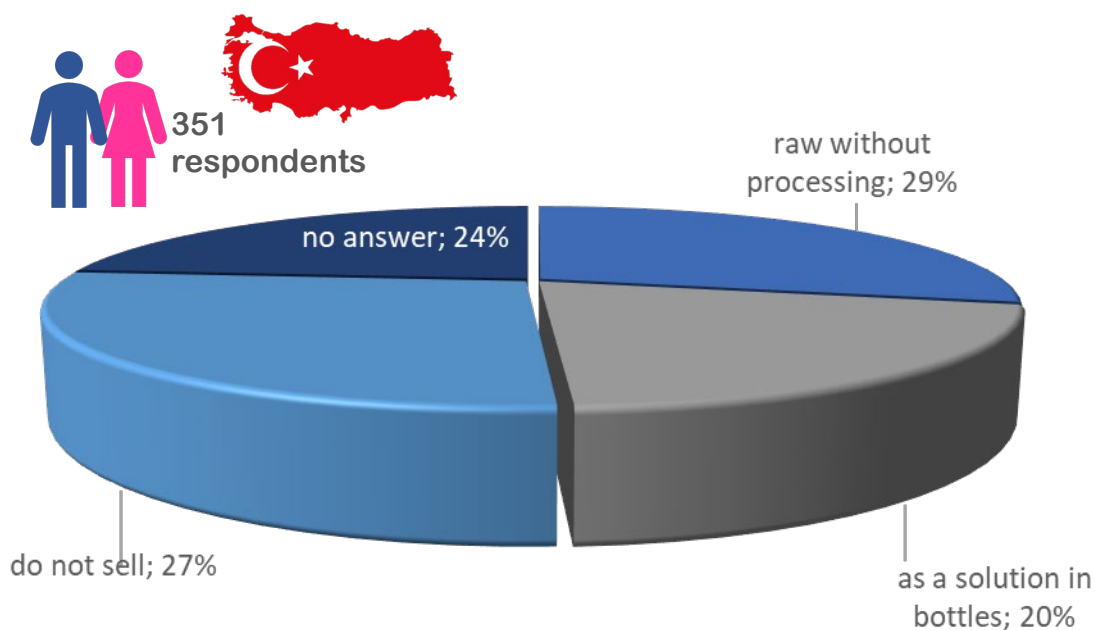
Figure 16. Methods of propolis harvesting according to responders in Türkiye



Question No. 17. How do you market propolis?

Twenty nine percent of the surveyed beekeepers reported that they marketed propolis as raw-without processing and 20% as a solution in bottles. However, 27% of the participant beekeepers stated that they did not sale it. 24% of the participants did not answer this question.

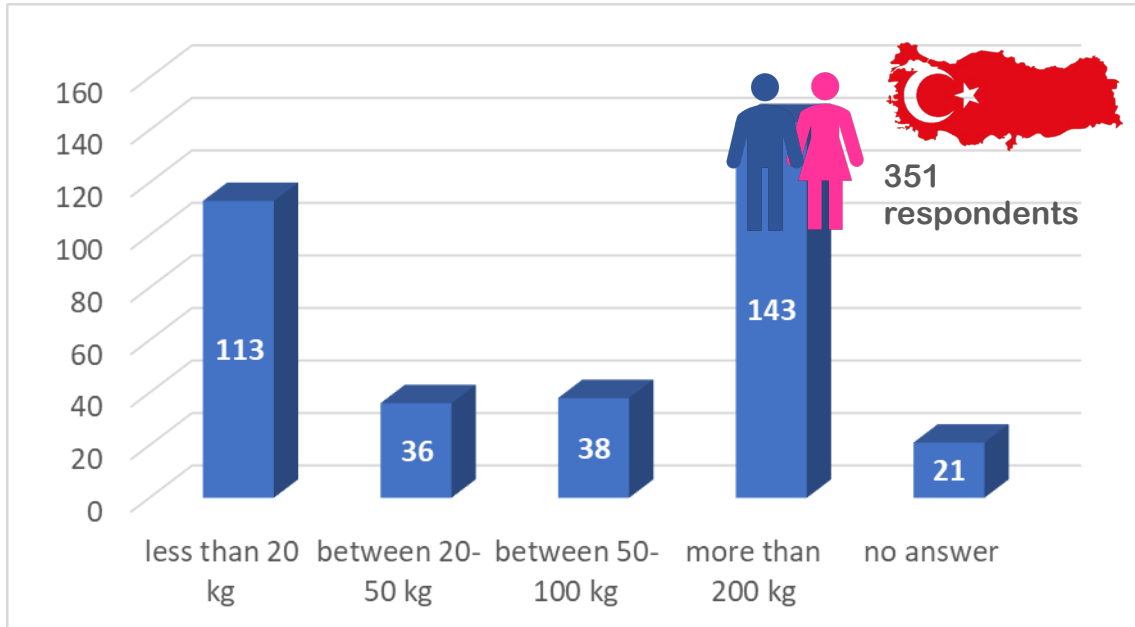
Figure 17. Propolis marketing according to responders in Türkiye



Question No. 18. How much is your annual pollen production?

One hundred and thirteen of the surveyed beekeepers reported that their annual pollen production amount was less than 20 kg, 36 of them between 20-50 kg, 38 of them between 50-100 kg and 143 of them more than 200 kg. Twenty one participants did not answer this question.

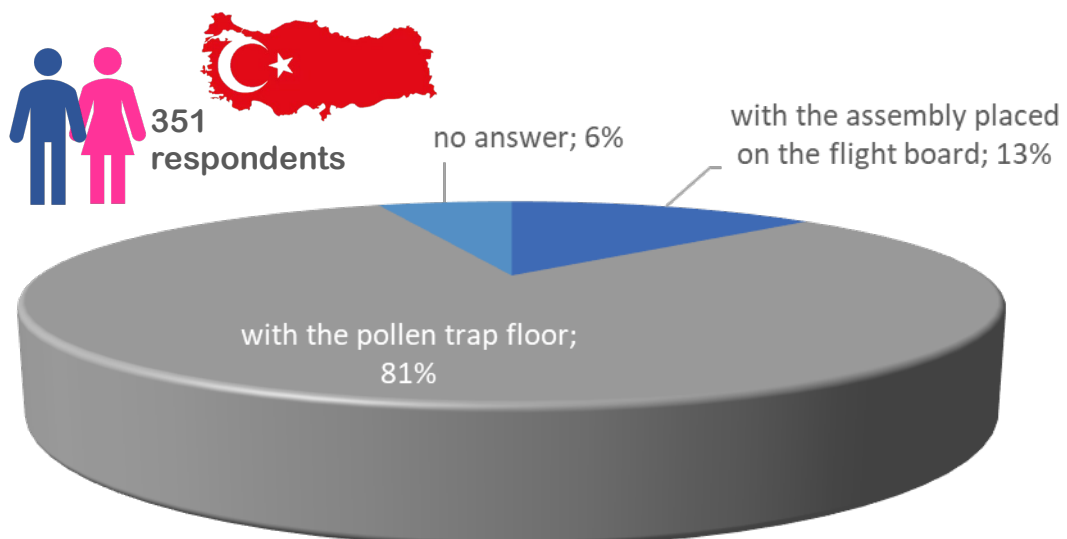
Figure 18. Annual production of pollen by responders in Türkiye



Question No. 19. How do you collect pollen?

Thirteen percent of the surveyed beekeepers reported that they collected the pollen with the assembly placed on the flight board and 81% with the pollen trap floor. Six percent of participants did not answer this question.

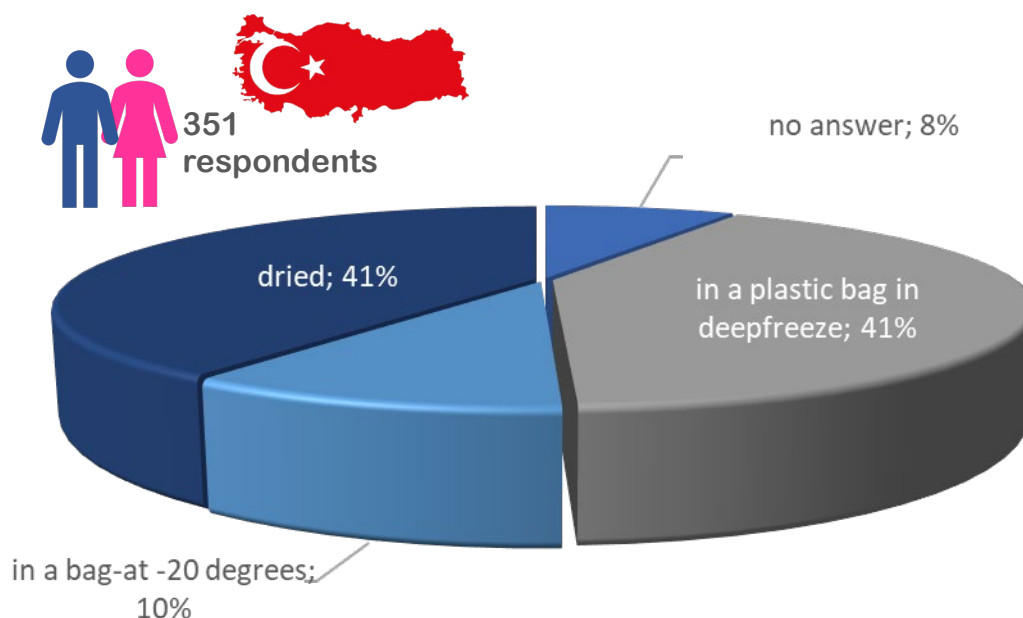
Figure 19. Methods of pollen collection according to responders in Türkiye



Question No. 20. How do you store pollen?

Forty one percent of the surveyed beekeepers stated that they stored the pollen by drying and 41% said that they kept the pollen in a plastic bag and deep freeze. Ten percent participants reported that they stored the pollen in the bag at -20 degrees. Eight percent of participants did not answer this question.

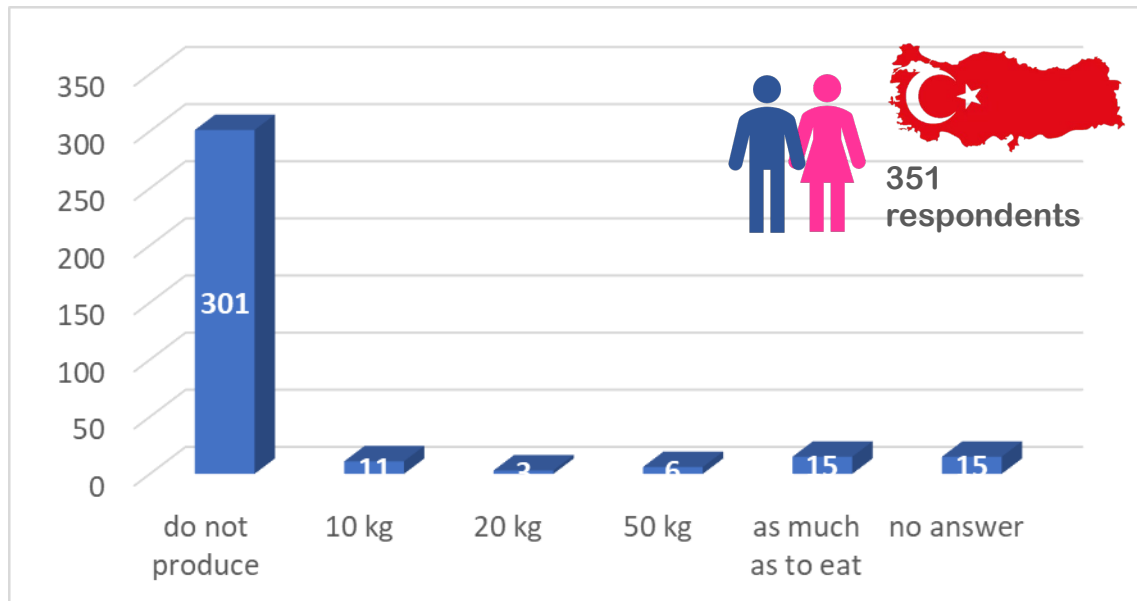
Figure 20. Methods of pollen storage according to responders in Türkiye



Question No. 21. If you produce bee bread, how much is your annual production?

Three hundred and one of the beekeepers participating in the survey reported that they do not produce bee bread. 15 of them stated that they produced as much as their food, 11 of them 10kg, 3 of them 20kg and 6 of them 50kg. 15 participants did not answer this question.

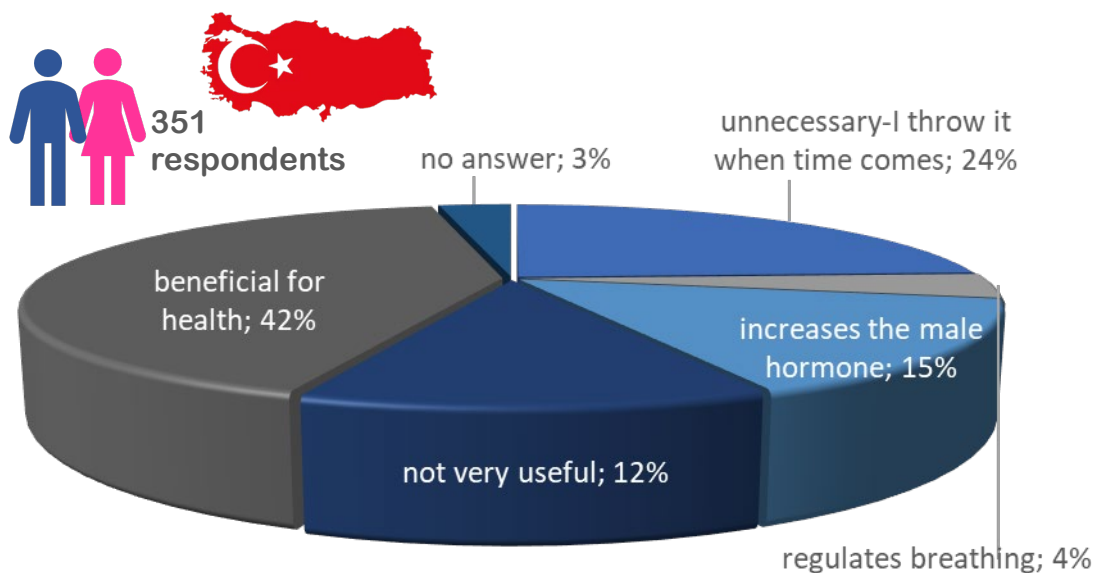
Figure 21. Annual bee bread production by responders in Türkiye



Question No. 22. What is drone larvae used for?

Forty two percent of the beekeepers who participated in the survey said that drone larvae are beneficial for health, 4% of them said that it regulates breathing, and 36 of them stated that it increases the male hormone. However, 12% of the participants evaluated it as "not very useful". 24% participants stated that this larva was unnecessary and therefore it was thrown out of the hive when the time came. 3% participants gave no answer to this question.

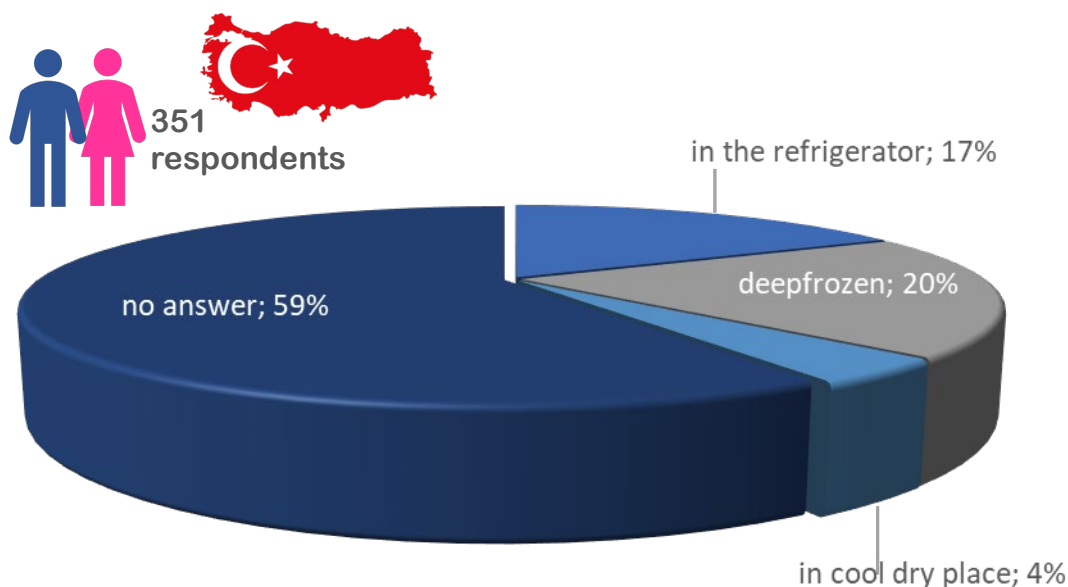
Figure 22. Possibilities of using the larvae according to responders in Türkiye



Question No. 23. If you are producing royal jelly, how do you store it?

Seventeen percent of the beekeepers participating in the survey reported that they kept the royal jelly they produced in the refrigerator, 4% in a cool dry place and 20% in the deep freezer. 59% of them did not report any answer on this question.

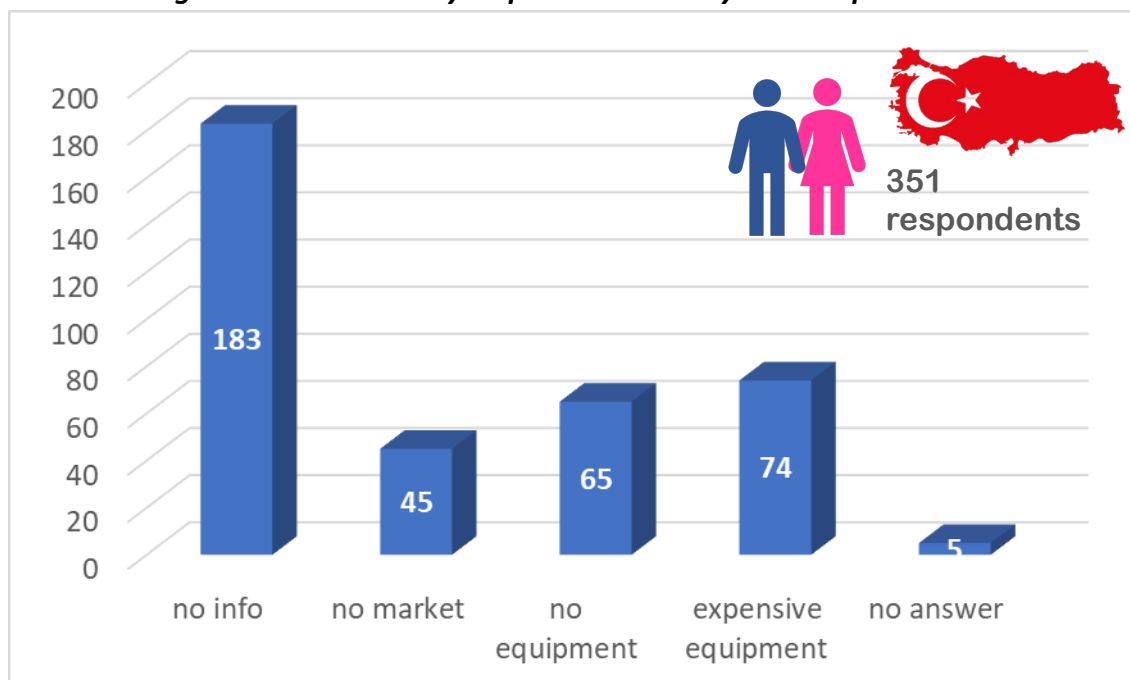
Figure 23. Methods of royall jelly storage according to responders in Türkiye



Question No. 24. Why don't you produce bee venom?

183 of the beekeepers who participated in the survey explained the reason why they did not produce bee venom on the grounds that they did not know about it. 45 participants stated that there was no market for this product, 65 participants stated that there was not enough equipment for this product and 74 participants stated that this equipment was expensive and they did not produce it for these reasons. 5 participants did not answer this question

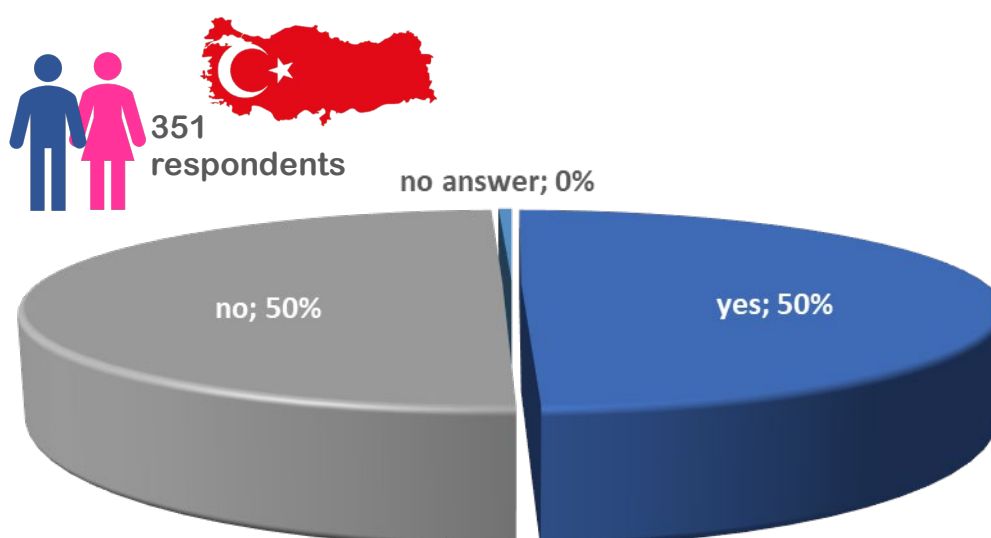
Figure 24. Reasons why responders in Türkiye do not produce bee venom



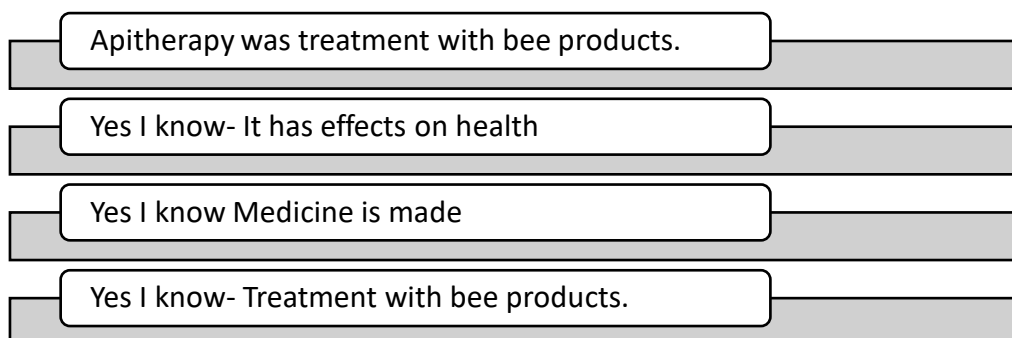
Question No. 25. Do you know what “apitherapy” is?

50% of the beekeepers who participated in the survey reported that they did not know about apitherapy and 50%. One person did not answer the question.

Figure 25. Knowledge of responders in Türkiye on apitherapy



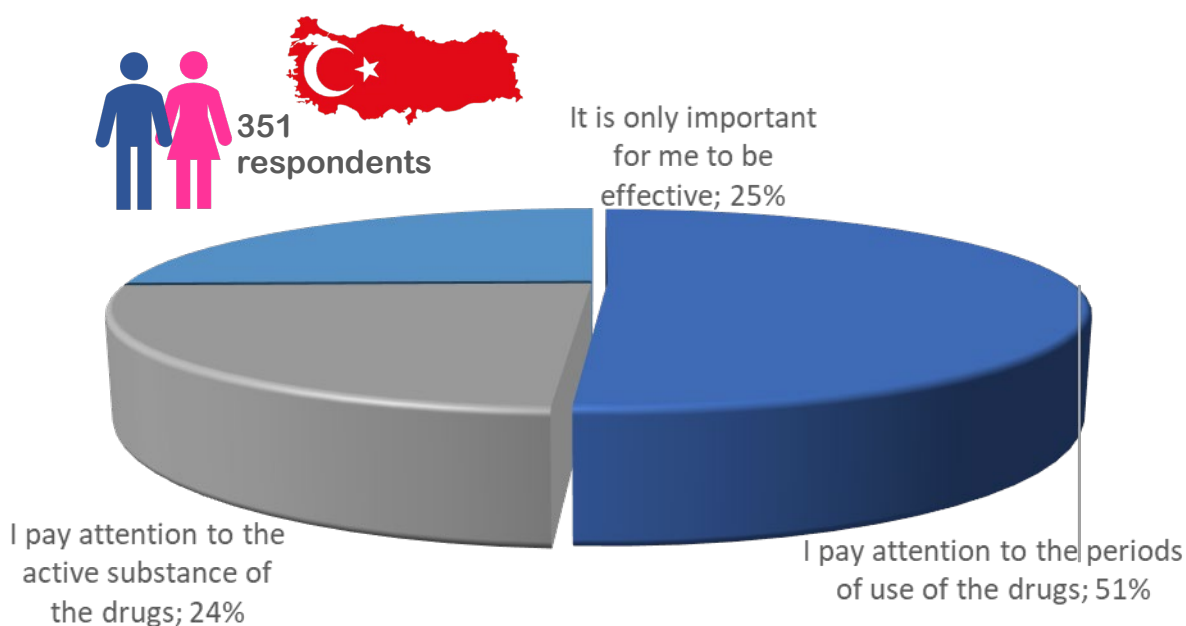
Most often suggested by responders definitions:



Question No. 26. What are your thoughts on the use of drugs in the hive?

Beekeepers participating in the survey expressed their opinions about the use of drugs in the hive. While 24% of the participants said "I pay attention to the active substance of the drugs", 51% said "I pay attention to the periods of use of the drugs" and 25% answered that "it is only important for me to be effective".

Figure 26. Attitude of responders in Türkiye to the use of drugs in the hive



Needs Analysis Report in Türkiye – Summary

- * It can be said that young people do beekeeping, albeit in a small number, but people aged 45 and over do more beekeeping. In general, many beekeepers are primary school graduates. It is an important finding that 122 out of 351 people who participated in our survey are high school and university graduates
- * 22% of the 351 people who participated in the survey only make beekeeping as a profession. It has been observed that the rest of the people consist of different occupational groups or retired individuals.
- * 220 of the beekeepers participating in the survey stated that they do beekeeping professionally, 62 as an amateur, 57 as a part time job and 12 as a hobby.
- * Most of the beekeepers in Türkiye are mobile beekeepers. 6% of beekeepers keep their hives near the asphalt and 6% of them keep their hives in the area close to the city settlement.
- * It has been observed that 21% beekeepers has taken courses on beekeeping.
- * Beekeepers engaged in beekeeping reported that they also produce other bee products besides honey. All beekeepers do beekeeping to produce and sell honey. However, different information is given about the harvesting form and harvesting period of honey.
- * Only 12% of the beekeepers surveyed reported that they produced propolis using propolis traps.
- * 46 of the beekeepers who participated in the survey reported that they collected the pollen with the mechanism placed on the flight board and 285 with the floor with the pollen trap.
- * 143 of the beekeepers who participated in the survey stated that they dry the pollen, 146 of them stored it in a deep freeze in a plastic bag and 36 in a bag at -20 degrees.
- * It has been observed that the majority of bee producers participating in the survey do not have sufficient knowledge about the production and use of bee bread, royal jelly, bee venom and bee larvae.

***As one of the facts revealed in this study, it is a very important result that the majority of beekeepers do not know what APITHERAPY is.

- In conclusion, as a result of this survey, it can be said that beekeepers do not know what apitherapy is and they need to receive serious training on the use of bee products in apitherapy.

It has been concluded that beekeepers focus on honey production and they do beekeeping to make money from honey and they do not have enough information about the properties of other bee products and especially for the use of these products in the field of health, production, storage and marketing.

This project has been prepared with the aim of informing beekeepers about the importance of apitherapy in the field of health and the correct and healthy production of bee products to be produced for apitherapy and with the aim of educating them on this subject. As a result of this survey, it has been seen that the outputs of this project will be very important in terms of teaching beekeepers that focus only on honey production, apitherapy and the production of products to be used in apitherapy.

It can be said as a result that:

Beekeepers should be trained on apitherapy, on the properties of bee products to be used in apitherapy and the correct production, storage and marketing principles of bee products to be used in the field of health.

Consumers and especially doctors should be informed that the healthy production of bee products to be used in the field of health and the proper storage conditions are of great importance for apitherapy.

Awareness should be raised about the rules and legislators, especially in Turkey, the relevant units of the ministry of agriculture to bring some standards and certification studies for beekeepers that will produce and market bee products for apitherapy.