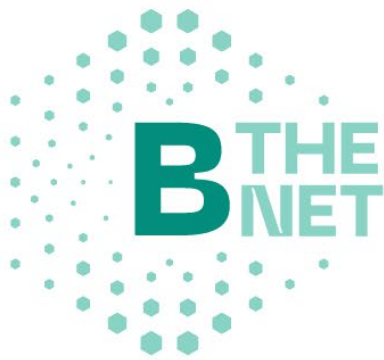




D4.2

Guidelines for training of advisors in beekeeping

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Istituto Zooprofilattico Sperimentale
del Lazio e della Toscana *M. Aleandri*



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info@bthenet.eu

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Author(s)	Lotta Fabricius Kristiansen (SLU), Aranzazu Meana (UCM), Francesca Santaniello (APRE)
Editor	Andrea Gyorffy (IZSLT), Marco Pietropaoli (IZSLT), Giovanni Formato (IZSLT)
EC Project Officer	Angela Guarino

Abstract	This deliverable is the first version of the guidelines for training of advisors in beekeeping and the Open Educational Resource training in advisory services for beekeeping advisors.
Keywords	Certification, beekeeping advisory services, guidelines, International B-THENET Centres

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Contributors

NAME	ORGANISATION
LOTTA FABRICIUS KRISTIANSEN	SLU
MARIA ARANZAZU MENA MANES	UCM
FRANCESCA SANTANIELLO	APRE
ANDREA GYORFFY, MARCO PIETROPAOLI	IZSLT

Peer Reviews

NAME	ORGANISATION
ANDREA GYORFFY	IZSLT
MARCO PIETROPAOLI	IZSLT
GIOVANNI FORMATO	IZSLT

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The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the European Union. Neither the European Union institutions and bodies nor any person acting on their behalf.

Table of Abbreviations and Acronyms

Abbreviation	Meaning
OER	Open Educational Resource
SLU	Swedish University of Agricultural Sciences
TN	Thematic Network
UCM	Complutense University of Madrid
WP	Work Package

Index of Contents

Setup of the guidelines, OER and practical training.....	13
3.1 The online Open Educational Resource	13
3.2 The practical training of advisors in beekeeping.....	17
3.3 Competence test and evaluation	18
Program of the First international training of advisors in beekeeping 2024	19
Program for the Second international training of advisors in beekeeping 2026.....	21
Conclusion	22

Index of Tables

Table 1. Guidelines for the training of advisors, OER platform

Index of Figures

Figure 1. Map of International B-THENET Centres. The international Centres for advisors in beekeeping are in SLU, Sweden and in UCM in Spain.

Figure 2. OER training modules at the platform Canvas, SLU

Executive Summary

The present deliverable is the first version of the Guidelines for Advisors in Beekeeping and an Open Educational Resource (OER), developed by the Swedish University of Agricultural Sciences (SLU). The proceedings of the two transnational training-of-trainers events organised by SLU and the University Complutense of Madrid (UCM) will be published and available on the website of the thematic network (TN).

The complete training of advisors in beekeeping consists of two parts, one online training and one practical training. These two parts together make the complete basic training for advisors in beekeeping.

The OER is the digital platform for self-study, supporting the online part of the training of advisors in beekeeping, focusing on the topic of communication for advisors in beekeeping. It can be completed at the participant's own pace but shall be finalized and approved before the practical training session.

The content of both the OER and the practical training session will be evaluated in practice, during the two planned international B-THENET training occasions due in 2024 and 2026.

The final version of the Guidelines for training of advisors in beekeeping will be a TN outcome that serves for further implementation in the European countries.

Introduction

B-THENET aims to modernize the beekeeping sector by sharing the knowledge ready to be put into practice and fostering Best Beekeeping Practices exchanges. The project's ambition is to create a European network to collect, organize, share, disseminate, and store valuable knowledge on beekeeping practices, as well as on ready-to-use research solutions at national and international level.

In particular, the project pursues the following objectives:

- To modernize the EU beekeeping sector by establishing a multi-actor network with complementary knowledge that connects: beekeepers, researchers, advisors, and the other actors in the apiculture sector.
- To collect, categorize ("Inventory") and select good practices and new research findings ready to put into practice or not sufficiently known using a bottom-up methodology.
- To create a digital knowledge platform ("Exchange") to increase the flow of practical information in the EU.
- To create a digital knowledge platform ("Repository") to collect, share and store knowledge on best beekeeping practices, for the long term.

To the best knowledge of the authors, the present Guidelines is the first attempt to reach a common understanding of the need and quality of the level of competences to achieve a proper training of advisors in beekeeping on international EU-level.

B-THENET is based on a multi-actor approach through the participation of Consortium Partners and Collaborating Partners with different backgrounds (scientific, social sciences and humanities, policy-making, etc.) with the potential to reach the heterogeneous target audiences. Meanwhile, it addresses several target groups to respond to the diverse needs (economic, geographical, and social) that characterize the beekeeping sector.

Consequently, the communication, dissemination and exploitation activities have a fundamental role in B-THENET, in sharing the TN results as well as boosting the innovation in the beekeeping sector at the national and international level, and in encouraging interaction and adoption of new knowledge in daily beekeeping practices.

International B-THENET Centres for Advisors

Tool for advisors: set-up of educational programs that include new capabilities and skills to be highly competent for beekeepers' education.

Task 4.5 (International B-THENET Centres) and deliverable 4.2 (Guidelines for Advisors in Beekeeping) establish the methodology for the training of advisors, including a competence boosting scheme for improved training and dissemination skills to showcase practices to beekeepers as an integral part of the communication within the extension services. The target audience, advisors in beekeeping (for the educational programs and for the methodology to teach beekeepers), are seen both as users of the developed tools obtained by the implementation of the mentioned B-THENET tasks, as well as valuable contributors who will provide input and feedback to fine-tune the educational programs and methodologies. The educational programs will include an online educational platform (Open Educational Resource) that will constitute the web-based part of the advisor's training and is summarized in the present Guidelines.

Activities and outputs

Over the four years of the project, the International B-THENET Centre for Advisors is in charge of organizing two transnational "training of trainers" events, and a web-based certification where advisors are educated on how to train beekeepers effectively on the Best Beekeeping Practices identified by the TN. SLU, in collaboration with UCM for veterinary aspects, developed guidelines to define quality criteria and a code of conduct for advisors, and one advisor per country (identified by Consortium Partners) will participate in the web-based training and the two transnational events, where he/she will receive certification of competences. These events will be held in English and are foreseen to be held after M18 (focusing on skills and abilities for teaching), and month 36 (focusing on skills concerning how to apply best practices at the international level). The Guidelines and all the outputs and documentation concerning the advisors' training on the different best practices will be available open access in the B-THENET Repository Platform. In terms of outputs, a total of 26 advisors will receive training on the B-THENET Best Beekeeping Practices in English.

International Exchange activities

At the national level, advisors will participate in the National B-THENET Centres exchange activities, cooperating with the local Beneficiary and Collaborating Partner/s involved. At the international level, advisors will participate, in collaboration with beekeepers, in the activities coordinated by the International B-THENET Centre for Advisors (in English) to set up and discuss the Best Beekeeping Practices identified across the different nations involved in the project. Beekeepers will be invited by the National B-THENET Centre providing the in-person training. Stakeholders are continuously informed about the developments and achievements of the B-THENET project through the B-THENET communication channels that invite stakeholder engagement and participation. A final document in English, comprising the above-mentioned knowledge exchanges on how Best Beekeeping Practices are carried out in the different Countries, will be produced by the coordinating partners of the international trainings for

advisors (SLU and UCM) and placed in the B-THENET Repository Platform. From the Repository platform, results will be disseminated widely using multiple means, including teaching tools, journals, brochures, trainer's training events, conferences, and workshops at the National B-THENET Centres.

Training and certification of advisors

SLU will apply the Guidelines for training of advisors in beekeeping and will issue an international certification for advisors, including veterinarians, in collaboration with UCM. Advisors from different countries, identified by the Consortium Partners and the National B-THENET Centres will be invited for the trainings. All tools available (e.g. B-KIS) will be adopted to facilitate dissemination of the Guidelines and other project's outputs. SLU is adapting the training materials, including the dissemination of best practices, to the advisors' professional interests with the ambition to issue a certification at the end of training, in collaboration with UCM. The related activities will be performed at Uppsala, in conjunction with the Swedish Reference laboratory for honey bee health and the University Complutense of Madrid (for veterinary aspects).

Setup of the guidelines, OER and practical training

Within the TN, three International B-THENET Centres will be established: **one at the Swedish University of Agricultural Sciences (SLU) for advisors**, one at the International Federation of Beekeepers' Association (APIMONDIA) for beekeepers, and one at the European Beekeeping Coordination (BEELIFE) for the other stakeholders. SLU will develop Guidelines to pre-define quality criteria for certified beekeeping advisors and specify a code of conduct. Advisors will be selected by partners (one or two per Country) and will participate in two transnational training-of-trainers events organised by SLU and UCM to verify and certify the competencies of EU beekeeping advisors to international standards. The cross-institutional fostering will more tightly link research facilities with advisory services and beekeepers, helping to disseminate the opportunities and capacity available at the different institutions. Each National B-THENET Centres needs to identify the advisors in beekeeping registered/practicing in their country.



International
B-THENET CENTRES

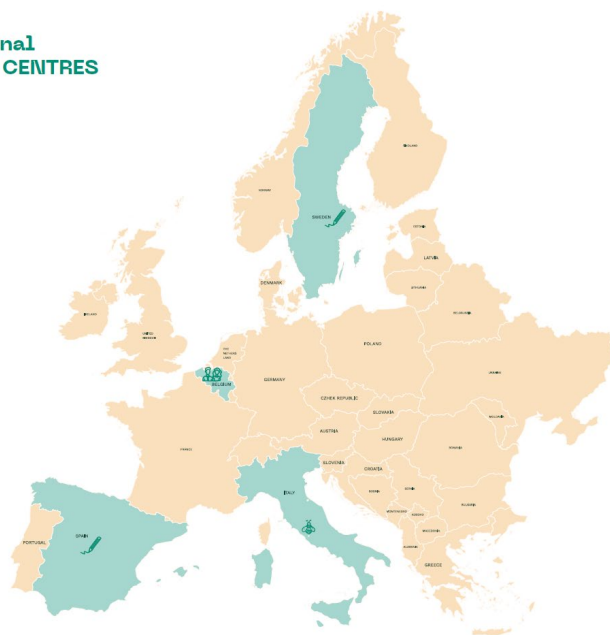


Figure 1 - Map of International B-THENET Centres. The international Centres for advisors in beekeeping are in SLU, Sweden and in UCM in Spain.

3.1 The online Open Educational Resource

An online educational platform, Open Educational Resource, OER, will constitute the web-based part of the advisors' education.

The OER can be found at this link: <https://slu-se.instructure.com/courses/7826>



Figure 2 – OER training modules at the platform Canvas, SLU

Guidelines for training of advisors in beekeeping, OER	
Main topics	Main Activities
Communication	• What are Advisory Services in beekeeping? • Roles • Weaving dialogue • Context • Relation • Support techniques • The solution is called learning • Basic needs • Body language • Communicative competence • Communicative skills • Communication models • To develop one's own ability • Short Quiz
Group Dynamics	• Definition of groups • About groups • Groups – Learning • Groups – Experiential learning • Rational decision-making • Groups – Process design

	• Group dynamics, FIRO theory • Business circles and beekeeper groups • Facilitation and process management • Short Quiz
Behavioral Change	• Advising and behavior change • Communication as an incentive • Interventions • Our ambition to influence • The hindrance model • Understanding behaviors • Different decisions • From technology transfer to sustainable development • The K-A-B model • The K-A-B model and the classic communication model • Simple versus complex behaviors • Communication planning • The habit change model • Short Quiz
Tools and Methods	• Understanding advisory services • Guiding principles • The choice of method is governed by what you want to achieve • Back to communication models • What is good advising? • The purpose of good advising and the advisor's various roles • A range of advising methods and tools • Modern mass media create new opportunities • News journalism and newspapers • Press releases and press meetings • Newsletter and other targeted subscriptions • Videos • Radio, audiobooks and podcasts • The textbook and the Internet • Campaigns and social marketing • Course activities • Study tours and fairs • Individual advice • Advisor teams • Enabling group learning

	• Traditional advisory services • Experience Groups • Apiary visits • Study circles • The role of coaching • The role of mentoring • A comparison of some roles • Information and Communication Technology (ICT) • Social Media as part of advisory work • SWOT of social media as part of advisory work • Apps • Remote communication • Remote advising • Websites • Open educational resources (OER) • Decision support systems • Field trials and school apiaries • Participant-driven research • Innovation groups EIP-Agri • The beekeeper's information search • Back to the toolbox • Short Quiz
Process Management	• Communicative challenges • Complexity • Process management is multidisciplinary • Why is collaboration seen as so important today? • Communication makes cooperation successful • The importance of the approach • To create sustainable development processes • Designing learning processes • When are you a process manager? • Success Factors • What makes process management successful? • Process management skills • Designing a process • Checklist: the planning phase • Checklist: Concrete design of the implementation phase • Back to the importance of the approach • Short Quiz

Coaching	• What is coaching? • Coach, mentor or supervisor? • Purpose and goals • An optimistic view of humanity • Coaching is not advising • A coaching approach • Who needs a coach? • The contract – literally and figuratively • Body language • Empathy and EQ • Curiosity • Intuition • Courage, credibility and patience • The art of listening • The art of asking questions • As you ask, you get the answer • A query library • Capture the moment • Methods and tools • Get to know the beekeeper – value mapping • The wheel of life • Metaphors • Feedback • Miracle questions/hypothetical questions • Roll with resistance • Internal and external obstacles • Short Quiz
Final Quiz!	• Test with random questions
Certificate	• A certificate is generated by the platform after successful testing at the quiz.

Table 1 – Guidelines for the training of advisors, OER platform

The links to “Good Beekeeping Practices” and “Biosecurity Measures” will bring advisors to a dedicated manual in English where best practices are deeply described highlighting differences among countries of B-THENET project. The above-mentioned document will be developed by the International B-THENET centre for Advisors as output of the training activities carried out for the training of international advisors.

3.2 The practical training of advisors in beekeeping

Two transnational training events will take place during the project time span. The first one in Madrid, Spain from 13th to 14th of June 2024 and the second one in Sweden, during summer 2026. The events will involve one or two senior advisors from each National B-THENET centre to spread and cross-fertilize innovations in the EU, for a total of 26 to 52 trained senior advisors. It is expected that the trained advisors in the B-THENET project will be able to spread innovations to at least 10 beekeepers each. All practical aspects of the physical training such as lists of

needed equipment for the training, security measures and evaluation schemes will be provided as a complement to the guidelines in the final version at the end of the project.

The national and international centres will foster a system for vertical integration of actors and stress the necessity of formative evaluation for continuously improving preconditions and methods when scaling up and out best practices.

3.3 Competence test and evaluation

Each advisor from the 13 National B-THENET Centres will show their colleagues their competences on training as well as specific material prepared for them, about 2-3 practices (randomly assigned one month before the activity).

A monitoring table (previously approved by all participants) will be fulfilled by all assistants to evaluate the activities presented by each centre.

The monitoring table and the randomly assigned practices will be sent by SLU two months before the activity.

One month before the event, all participants should send questions related to all the practices to be used in the test.

All participants will receive all the questions 3 weeks before the trial to study them.

Evaluation of competence achievement: method to be decided later.

Program of the First international training of advisors in beekeeping 2024

Time	Main Activities
March	Formal invitation to the training. Distributed to the coordinators of the National B-THENET Centres.
April	Online meeting with all participants in the training, SLU.
April	SLU will send all quality-assured beekeeping practices in the platform from all countries translated into English, to the participants.
April to June	The online course can be done at the participants' decided pace. A requirement is that it must be completed and passed before the practical training.
mid-May	All participants send questions about the practices to be included in the final test to SLU.
13 th -14 th June	Practical training at SPANISH B-THENET CENTRE in Madrid (UCM).
13 June	13:00 Welcome participants at Spanish B-THENET Centre. 13: 30 Activities for Advisors in Beekeeping from the Open Educational Resource. some exercises will be done to reinforce the acquired competencies. Exercises to be decided later. 16:00 Coffee break 16:30 AVESPA (Spanish Veterinary Association for Beekeeping) presentation and discussion on the Spanish Integral Beekeeping Health Program and the role of veterinarians under RD 364/2023 and (UE) 2016/429. 18:00 End of session
14 June	7:30 Dividing participants into two groups and verifying the equipment required to go to apiaries is fulfilled, as well as signatures for the access. Instructions on the activity will be given in a document to each B-THENET centre. Group 1 with 12 trainers from 6 centres to Apiary 1 Group 2 with 14 trainers from 7 centres to Apiary 2 8:00 Transport to UCM apiary and B-THENET partner apiary (30 min). 8:30 Equipment to visit to apiary will be checked and instructions will be clearly given.

	9:00 Each group will go to a different apiary and will execute the designed activity in the given document (video recording will be done for further analysis by the communication expert leader). Once at the apiary, the two trainers of each Centre will act individually teaching the assigned practice in English to 1-2 new beekeepers. The teaching will be no more than 10-20 minutes and will be recorded. According to possibilities, about 2-3 Centres will be teaching at the same time in each apiary. The organization will supply all the material needed for the corresponding practice. 10:30 Transport to Veterinary Faculty 11: Coffee break 11:20 Welcome participants and presentation of the training team. 11:30 Competence activities by Leader Borja Manero (Communication expert). 13:00 Lunch 14:15 Competence activities by Leader Borja Manero. 18:00 End of session
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Program for the Second international training of advisors in beekeeping 2026

Time	Main Activities
March	Formal invitation to the training. Distributed to the coordinators of the National B-THENET Centres.
April	Online meeting with all participants in the training, SLU.
April	SLU will send all quality-assured beekeeping practices in the platform from all countries translated into English, to the participants.
April to June	The online course can be done at the participants' decided pace. A requirement is that it must be completed and passed before the practical training.
Mid-May	All participants send questions about the practices to be included in the final test to SLU.
June	Practical training at the Swedish International B-THENET CENTRE at SLU (location to be decided later).
June Day 1	Activities for Advisors in Beekeeping from the Open Educational Resource. some exercises will be done to reinforce the acquired competencies. A meeting with veterinarians will be held as previously. Exercises to be decided later.
June Day 2	Dividing participants into two groups and verifying the equipment required to go to apiaries is fulfilled, as well as signatures for the access. Instructions on the activity will be given in a document to each B-THENET centre. Group 1 with 12 trainers from 6 centres to Apiary 1 Group 2 with 14 trainers from 7 centres to Apiary 2
June Day 2	Transport to the B-THENET partner apiary. Each group will go to a different apiary and will execute the designed activity in the given document (video recording will be done for further analysis by the communication expert). Once at the apiary, the two trainers of each Centre will act individually teaching the assigned practice in English to 1-2 new beekeepers. The teaching will be no more than 10-20 minutes and will be recorded. According to possibilities, about 2-3 Centres will be teaching at the same time in each apiary. The organization will supply all the material needed for the corresponding practice. Competence activities are led by a communication expert.

Conclusion

The purpose of this deliverable is to establish the first version of the Guidelines for training of advisors in beekeeping, coupled with the Open Educational Resource (OER), for improved awareness about the importance of communication for advisors in beekeeping. During the project time, the Guidelines will be fine-tuned based on the experiences from the two planned international trainings for advisors and the feedback from the participants.

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Istituto Zooprofilattico Sperimentale
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info@bthenet.eu