

Report on beekeeping workshops

NUKUS, KARAKALPAKSTAN
30-31 MAY, 2024

**PROJECT 'ECOLOGICALLY ORIENTED
REGIONAL DEVELOPMENT OF THE ARAL
SEA REGION**

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Table of CONTENTS

01

**Report on final beekeeping workshops in Nukus,
Karakalpakstan**

02

Workshop summary

04

**Theoretical workshop for beekeepers
May 30, Nukus**

1. Agenda
2. Session details
3. Key findings and achievements

08

**Practical workshop for beekeepers in the apiary
May 31, Nukus region**

1. Agenda
2. Session details
3. Key findings and achievements

12

Results & Key Findings

Workshop results
Participant overview
Post-workshop survey results

SUMMARY

In support of Work Package 3's key objective to deliver an information package and training for local beekeepers, we organized the final round of workshops on May 30-31, 2024, in Nukus. The goal of these workshops was to provide regional beekeepers with theoretical knowledge, practical tips and localized, language-inclusive training materials and observe technology uptake (HiveTracks mobile application).

The workshop agenda was demand-driven, informed by key suggestions from the March workshop questionnaire answers and new developments in beekeeping as advised by local beekeeping experts. The workshop consisted of two parts: theoretical and practical. The first theoretical workshop was held at Nukus branch of the Samarkand State University of the veterinary medicine, livestock and biotechnologies (university). The second training was organized on the territory of the apiary of one of the workshop participants in Nukus region.

The implementing team included Gulnara Khudaybergenova – ICARDA intern and workshop facilitator, Otabek Goyipov and Farrukh Musaev – national beekeeping experts, and Abay Shabiev – local beekeeping assistant. All registered participants received written and electronic training materials in Karakalpak, electronic participation certificates and were offered a form of post-workshop survey. 10 active workshop participants received beekeeping kits and 40 first registered participants received beekeeping veils. Key stakeholder interviews on knowledge uptake were conducted with 3 participants.

The trainings held in March (before the start of the beekeeping season) and at the end of May (at the height of the beekeeping season in Karakalpakstan) served as an opportunity for local beekeepers to exchange experiences and get answers to their questions. Beyond the planned objectives to deliver training and digital and written materials, another key outcome of the workshop was the connection of experienced beekeepers, beginners, members of state veterinary committee and young generation of bee veterinary specialty students. The workshop participants increased their knowledge on beekeeping subjects like veterinary and sanitary rules, season diseases and preventive measures, honey export, bee breeding, local honey plants, commercial values of beekeeping products and were re-introduced to beekeeping mobile app. The workshops participants also improved their skills on hand-on beekeeping practice by attending field trip training.

All workshop participants received localized written and electronic draft training materials in Uzbek (March) and later in Karakalpak (May) after refining based on participant feedback and questions.

Overall, feedback from participants on relevance and benefits of workshops was positive. Most workshop participants pointed out networking, knowledge exchange, receiving language inclusive training materials and receiving the most relevant, localized information from the industry experts as the most helpful parts of the workshops.

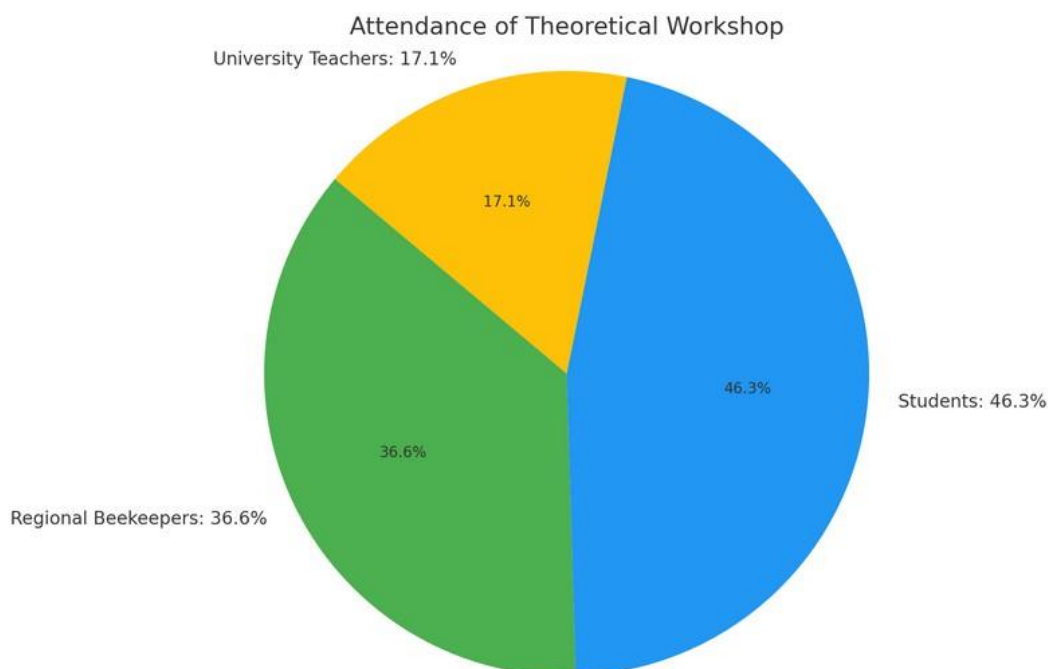
THEORETICAL WORKSHOP FOR BEEKEEPERS MAY 30, NUKUS

1. Agenda

9:00-9:30	Registration	Gulnara Khudaybergenova
9:30-9:45	Opening speech and welcoming participants: Workshop goals and objectives Introducing speakers Agenda overview	Gulnara Khudaybergenova
9:45-11:00	Beekeeper training topic 1: Modern veterinary sanitary measures in the prevention of seasonal diseases in bees beekeeping basics - getting started	Farrukh Musaev, Otabek Goyipov
11:00-11:30	Break & app download	All
11:30-13:00	Beekeeper training topic 2: Organization and implementation of breeding work in beekeeping	Farrukh Musaev, Otabek Goyipov
13:00-13:45	Lunch break	-
14:00-15:20	HiveTracks Mobile App training: ·creating a personal account ·setting up an apiary ·setting up a hive · doing an inspection ·HiveTracks Pro	Gulnara Khudaybergenova
15:20-15:30	Break	-
15:30-16:45	Beekeeper training topic 3: Separation of bee packages (family) and preparation for sale	Farrukh Musaev, Otabek Goyipov
16:45-17:00	Closing speech	Gulnara Khudaybergenova

2. Session details

The theoretical workshop was attended by 41 participants, including 15 regional beekeepers, 19 students of Nukus branch of the Samarkand State University of the veterinary medicine, livestock and biotechnologies (university) and 7 university teachers.



The meeting officially started at 10 AM, with a brief overview of project goals and team members. The first session on modern veterinary sanitary measures in the prevention of seasonal diseases in bees was a continuation of the topic from previous workshops, expanding on topics relevant to most of the audience. The session highlighted the problem of poisonous pesticide usage on cotton fields in Uzbekistan during honey harvesting season, and many participants exchanged their personal experiences of battling various bee diseases.

The second session on organization and implementation of breeding work in beekeeping was highly requested by participants of March workshops. Participants were actively involved in discussions, sharing experiences and advice with each other, which is critical given that queen bee breeding is very rare and underdeveloped in Uzbekistan. The session was continued by heated discussions on lack of help by the government and lack of opportunities for local farmers, beekeepers and agricultural specialists.

Some of the students shared their worries about getting a job after graduation. This year 23 students will graduate from the University with a degree in bee veterinary and due to specific specialization, some are worried about professional path in the beekeeping industry that is not very developed in the region.

Local television was invited by the University to make a report about the training. Experts and participants gave a short interview to journalists and talked about the project.

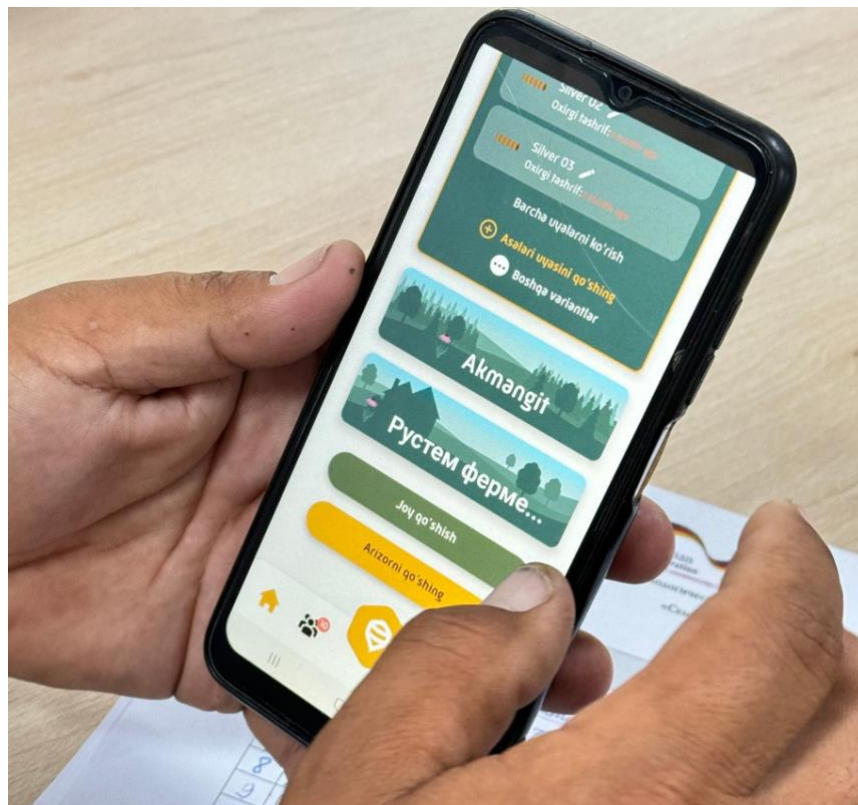


The third session of the day was about the HiveTracks mobile application for beekeepers, that was introduced two months prior during the March training. This time, most participants already had the app in their phones but were not actively using it yet. With hands on app demonstrations, participants were reminded of the application's functions. The first category of app users were students who are interested in the app but have zero or very little beekeeping experience to be able to fully explore all of the functions. The second category was elder beekeepers who have difficulties with using mobile technologies in everyday life. The session also covered the introduction of HiveTracks Pro - a desktop version of the app, that has not been previously demonstrated. The value add of the session was to give participants free access to beekeeping technologies and talk about ways to advertise your bee product through your own QR code and honey story.

The last session of the day was about sales of bee packages. Since the export of bee products from Karakalpakstan is almost non-existent, the session caught the attention of the participants and initiated a few discussions. From this session, participants learned about honey certification and export process step by step.

Participants were asked to fill out anonymous post-workshop survey forms and put their feedback on the relevance of the training. Participants were offered the chance to take printed training materials that have been developed by the experts and translated into Karakalpak: 1. Beekeeping guide for beginners, 2. Honey-producing plants of the Republic of Karakalpakstan, 3. Veterinary-sanitary rules in beekeeping, 4. Beekeeping products and their commercial features. Participants liked the format of the training materials and found them interesting, relevant and convenient. The workshop was concluded with a closing speech and reminder about the apiary trip for previously registered participants.





PRACTICAL WORKSHOP FOR BEEKEEPERS IN THE APIARY MAY 31, NUKUS REGION

1. Agenda

9:00-9:30	Registration	Gulnara Khudaybergenova
9:30-9:45	Departure to the apiary	All
9:45-11:00	Beekeeper training topic 1: Rules for placement of bee colonies in hives and control inspections	Farrukh Musaev, Otabek Goyipov
11:00-12:00	Beekeeper training topic 2: Rules and requirements for compliance with sanitary-hygienic standards in hives	Farrukh Musaev, Otabek Goyipov
12:00-12:30	Lunch break	-
12:30-13:30	HiveTracks Mobile App training: • doing an inspection	Gulnara Khudaybergenova
13:30-14:30	Beekeeper training topic 3: Rules for preparing beekeeping products for export	Farrukh Musaev, Otabek Goyipov
16:45-17:00	Closing speech. Congratulations and presentation of prizes	Gulnara Khudaybergenova



2. Session details

The apiary field workshop was conducted in Nukus region in the private apiary of one project participant. The day started with gathering for the shuttle near the gates of the veterinary university. At 9.30 the vehicle with the participants and team departed to the meeting point, which is 20 minutes drive away from the university. During the ride, participants were asked to register themselves.

The practical workshop that everybody was looking forward to started with the warm welcoming of host beekeepers who have carefully prepared hives, equipment and place for training. Bakhtiyar, known to participants as one of the beekeepers with the most experience in Karakalpakstan and frequently hosts practical seminars for university students, gave an introductory training on safety measures.

Before the training started, the first 40 registered participants were gifted beekeeping veils as gifts and were asked to put them on for the whole training period. Then, the host gave a tour of his apiary, where he showed hives with bees and other beekeeping attributes. Participants were excited to see the preparations for the beginning of the beekeeping season. Then, participants were offered to try the newly harvested honey made from locally grown plants like unabi (*Elaeagnus angustifolia*) and licorice (*Glycyrrhiza glabra*), which have many health benefits according to the host.



Afterwards, the first combined session on rules for placement of bee colonies in hives and control inspections started. The session was led by project beekeeping experts Otabek Goyipov and Farrukh Musaev along with the local hosting beekeeper.

The weather on the day of the workshop was very hot and sunny (34 C) and the lack of tall trees or shade made conditions difficult. Despite this, the participants and team continued the training, where they were shown various beekeeping tools to use for sanitary-hygienic measures in hives.



After the quick lunch, participants gathered for the HiveTracks practical inspection session, where Gulnara and Otabek practically showed how a beekeeper can make notes in real-time after a hive inspection. Participants were told that the 10 most active workshop participants with the most notes in the app will receive a beekeeping kit as a gift. It encouraged many to participate and be proactive.

The training ended with a Q&A session and group photo.





KEY FINDINGS AND ACHIEVEMENTS

Workshop Results

- The workshops participants **increased their knowledge on beekeeping subjects** like veterinary and sanitary rules, season diseases and preventive measures, honey export, bee breeding, honey plants, commercial values of beekeeping products and beekeeping mobile app.
- The workshops participants **improved their skills in hand-on beekeeping practice** by attending field trip training.
- Participants **received localized and relevant written and electronic training materials in Uzbek and Karakalpak.**
- All workshop presentations and training materials were sent to the **Telegram** group chat and involved parties for further distribution.
- Some participants met beekeepers from other regions for the first time and were able to **network.**
- **Beginner beekeepers** were able to communicate with industry experts and ask questions.
- University representatives and students expressed their interest in **future collaborations** with ICARDA and HiveTracks.

Workshop participant overview

- **The geographical coverage** of the workshop participants is very diverse compared to the workshops in March. The workshop was attended by participants from 8 regions of Karakalpakstan.
- **Number of participants:** Total number of Day 1 attendees: 40, Total number of Day 2 attendees: 43. Of these attendees, 19 people attended both days and therefore the total number of unique participants of May workshops is 65 people.
- **Gender:** 29% of workshop participants were women (19 female participants and 46 male participants)



- **Participants background:** 34 out of 65 unique workshop participants were students (52,3 %)

Post-workshop survey (N=25)

Survey Questions

25 workshop participants submitted anonymous surveys which included 12 questions and a section for open-ended responses.

open comments. Survey questions included:

1. Where are you from?
2. What is your age?
3. What is your gender?
4. What is your beekeeping experience? (in years)
5. How was our communication prior to the workshop? (1-5)
6. How comfortable did you feel to ask questions and participate in discussion? (1-5)
7. How do you feel about the time you spent at today's workshop? (1-5)
8. Were the topics covered in today's workshop relevant to your needs as a beekeeper? (1-5)
9. How relevant do you think the HiveTracks app will be to your needs as a beekeeper? (1-5)
10. What did you learn during this project?
11. Were you able to take action to implement what you learned? Why or why not?
12. Which of the following channels do you find helpful to learn new beekeeping techniques and skills?
 - Family member
 - Neighbor
 - Professional beekeeping association
 - Telegram group chats, channels
 - Internet
 - Written Training materials from this project
 - Other written training materials/books
 - HiveTracks app
 - In-person powerpoint presentations
 - In-person apiary visit

Survey Results

- **The average age** of respondents is 36.44 with oldest being 71 and youngest at 21
- Most respondents have 0 to little (2 years) of **beekeeping experience**, while the most experienced respondent has 22 years of beekeeping experience.
- Many of the respondents highlighted the introduction of HiveTracks mobile app as a **new thing they learned** during the workshop.
- Respondents mainly noted Telegram group chats and channels, Internet, Written Training materials from this project, and Other written training materials/books as a main **source to learn new beekeeping techniques and skills**.

The majority of survey respondents rated workshop communication, relevance of the covered topics and relevance of the mobile app positively and expressed interest in participating in workshops organized by ICARDA in the future.



Note: The grade system for questions # 5-9 is 1-5, where 1 is for “very bad” and 5 is for “excellent”.