

Top4HoneyChains –Trustable and Sustainable Open Platform for Smart Honey Value Chains

MN Aydin (Mehmet), PhD



TOP4HONEYCHAINS

Trustable and Sustainable Open Platform
for Smart Honey Value Chains

EST. 2023

2022 Joint Call
Kick-off Projects Seminar
31st January 2024



Involved countries and partners

TURKEY: Kadir Has University, KHAS, Coordinator

TURKEY: Işık University, ISIKUN

TURKEY: Apiculture Research Institute, ARI, Türkiye Ministry of Agriculture and Forestry

POLAND: University of Economics in Katowice, UEKat

ARGENTINA: Instituto Nacional de Tecnologia Agropecuaria, INTA

ARGENTINA: Nexco S.A, NEXCOSA

ARGENTINA: Cooperativa Agropecuaria Y Apicola Norte Grande Limitada

ARGENTINA : Alimentos Naturales Natural Foods S. A., ALIMENTOS

LATVIA: Latvia University of Life Sciences and Technologies, LBTU



Duration and overall budget

36 months started Sept 2023

Argentina, €16K

Türkiye, €60K

Poland, €200K

Latvia, €200K



Focused Issues

- The honey business as an agri-food sector faces **sustainability challenges** to cope with **complex relations from farm to fork, climate change, increasing competitive pressures, varying consumer diets, and food safety**.
- Although Argentina and Türkiye are among the top three countries for the global honey producers, they have not been recognized **as higher value end honey products** globally.
- The **honey fraud**, which currently involves, among others, several Asian countries, has affected the international market and especially the American countries recognized for **the quality of their honey**.



TOP4HONEYCHAINS

Trustable and Sustainable Open Platform
for Smart Honey Value Chains

EST. 2023

Key Challenge

To generate a **smart value chain**,
driven by **market preferences and consumer demands**,
based on the quality that has been preserved from the apiary, with records and
transparency
throughout **the entire honey-food value chain** including the apiary and honey
processing,
building **trust** across the chain



Objective

- To develop **trustable, sustainable and adaptive open data platform (TOP)** that will enable efficient realization of the smart honey value chains in Türkiye and Argentina, which can be extended to other regions as well by leveraging a transnational approach along the Polish partner, UEKat and Latvian partner, LBTU;
- **To support** sustainability-aimed beekeepers, packaging organizations and consumers to increase the sustainability of higher value end-products by **providing innovative digital services** leveraging interconnected digital the state-of-the art technologies;
- **To increase the capacity and effectiveness** of beekeepers, associations and other authorities to better monitor performance, food safety across the processes of SVC.



Main project activities and challenges

- The selected **four pilot cases associated with the most demanded value chains** will be examined in Argentina and Turkey where beekeepers, beekeeper associations and cooperatives, wholesalers, packagers, retailers including consumers cooperatives will be involved.
- Design thinking and multi-actor approach will be employed to surface out relevant data points associated with **critical points of interests and events** across the chains
- The TOP4HoneyChains project will **design and develop an Open Data Platform** by employing the state-of-the-art technologies including dynamic data collection and semantic integration services enabled by a scalable, robust microservice architecture.
- We will **develop a novel ontology for TOP4HoneyChain** and conduct analysis and specification of data API's for external data sources and data consumers.



Expected results and potential impact

- **Transnational collaboration** across various discipline, significant scientific progress and outputs
- impact on **the increase in awareness and implications of the concept of smart honey value chain** not only for the consumers but also for food chains and society as a whole
- **To reach out a representative set of customers** along the selected four pilot cases.
- Contributing to **sustainability of apiculture** with **digitally supported open (data) platform** involves not only local beekeepers but also women, young people.
- Impact on **the society's awareness and confidence** with the idea that the transparency, traceability, trust in the honey food system can be achieved.





Next steps

New funded project (start Q2, 2024):

BEE-OPTECH4Honey: Bee Foraging Sites and Beekeeper Routes Optimization for Efficient Honey Production, funded by Türkiye and Malta bilateral research collaboration



Proposal for the Section: Sustainable Mediterranean agri-food value chain for regional and local development.

Destination 2: Fair, healthy and environment-friendly food systems from primary production to consumption

Horizon Europe Cluster 6 within the Farm2Fork:

FARM2FORK-01-4: Climate change and food security: effects of climate change on food security.

FARM2FORK-01-6: Citizen science as an opportunity to foster the transition to sustainable food.



TOP4HONEYCHAINS

Trustable and Sustainable Open Platform
for Smart Honey Value Chains

EST. 2023



Thank you for your attention!

LET'S KEEP IN TOUCH!

TWITTER – LINKEDIN – TWITTER

@top4honeychains

<https://www.linkedin.com/company/top4honeychains/>

<https://www.instagram.com/top4honeychains/>

WEBSITE

www.top4honeychains.eu

www.top4honeychains.isikkun.edu.tr

www.top4chains.khas.edu.tr

EMAIL

mehmet.aydin@khas.edu.tr