

Thematic area

Agro-food Value Chain



Section II

Topic 3.2 - Food safety in local food chains



Budget

872.973,00 €



Duration

36 months



Project

34/MILKQUA

Milk quality all along the dairy chain for a sustainable MILK

Context

Milk safety and quality are critical issues for human health and welfare of a community. MILKQUA is a cross-multidisciplinary project engaging five EU partners from four countries (France, Italy, Spain, and Portugal) that will team with five Tunisian partners representing research, development, extension and farmers. It aims at enhancing milk and dairy food quality and safety, and decreasing milk-associated health hazards, by reducing the use of conventional antimicrobial products in Tunisian farms to align with the concept of One Health approach.

Objectives

The main objectives of this project are the following:

1. to set up an extension-based national milk program (QMP) to reduce the incidence of mastitis, and the consequent use of antibiotics in Tunisia;
2. to explore the potential use of essential oils and plant extracts with antibacterial and anti-inflammatory activities on the udder and in diets of young and adult dairy cattle to reinforce immunity at adult age, increase feed efficiency, animal welfare and the burden of mastitis for a better sustainability of milk production system;
3. to improve milk quality, including the shelf life of dairy products.

Essential oils and plant extracts will be tested integrating in vitro and in vivo approaches with up-to-date OMICS analysis, within a system biology perspective. Synergy in communication and dissemination by the several Tunisian stakeholders will permit to reduce and monitor antimicrobial usage in livestock and improve both milk quality, quantity and safety.

Coordinating country

France

Participating countries/ 5



Partners/ 10



Coordinating institution

Institut de l'Elevage IDELE



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Expected impacts

MILKQUA ambition is to enhance the role of Tunisian dairy producers as providers of sustainable food supply to consumers. MILKQUA project will enhance milk and dairy food quality and safety, MILKQUA will intend to lay the foundation of an accountable and dynamic system that will stimulate the economy growth and promote prosperous and resilient communities across the country and elsewhere, providing new knowledge about the biological effects of natural compounds that will be extended to other Mediterranean countries.


9.1k t
 cow's milk in TURKEY
 (of which 1.5k t of drinking milk)
 Source: CLAL - data 2017
https://www.clal.it/?section=stat_Turkey



WORK PACKAGES

- In vitro biological affects of plant extracts (WP5)
- OMICS analysis (WP5)
- In vivo effects of plant extracts on cows' health and performance (WP4)
- QMP program validation (WP2), ICT (WP3)