



Alexandre GONÇALVES<sup>1\*</sup>, Ermelinda SILVA<sup>1</sup>, Adnane EL- YAACOUBI<sup>2</sup>, Oren SHELEF<sup>3</sup>, Frane STRIKIC<sup>4</sup>, Outghouliast HAKIM<sup>5</sup>; Rosalina MARRÃO<sup>6</sup>; Valeria BORSELLINO<sup>7</sup>; Lillian BARROS<sup>8,9</sup>

<sup>1</sup>MORE - Laboratório Colaborativo Montanhas de Investigação, Bragança, Portugal; <sup>2</sup>University Sultan Moulay Slimane, Morocco; <sup>3</sup>Agricultural Research Organization - Volcani Institute, Israel; <sup>4</sup>University of Split, Croatia; <sup>5</sup>National Institute of Agronomic Research, Morocco; <sup>6</sup>CNCFS - Centro Nacional de Competências dos Frutos Secos, Bragança, Portugal; <sup>7</sup>Università degli Studi di Palermo, Italy; <sup>8</sup>Centro de Investigação de Montanha (CIMO), Portugal; <sup>9</sup>Instituto Politécnico de Bragança, Portugal

\*agoncalves@morecolab.pt

## Introduction

Almond is a Mediterranean crop well adapted to diverse edaphoclimatic conditions. In the Mediterranean region, almond orchards are on a mono-cropping system with long tree spacing for rainfed farming or intensively cultivated (intensive irrigation, fertilization, and plant protection practices), which increase cultivation costs with high yields expectations. However, the soil management practices and the current climate change scenario, have led to decreased soil organic matter, soil erosion, water scarcity and biodiversity loss.

## Objective

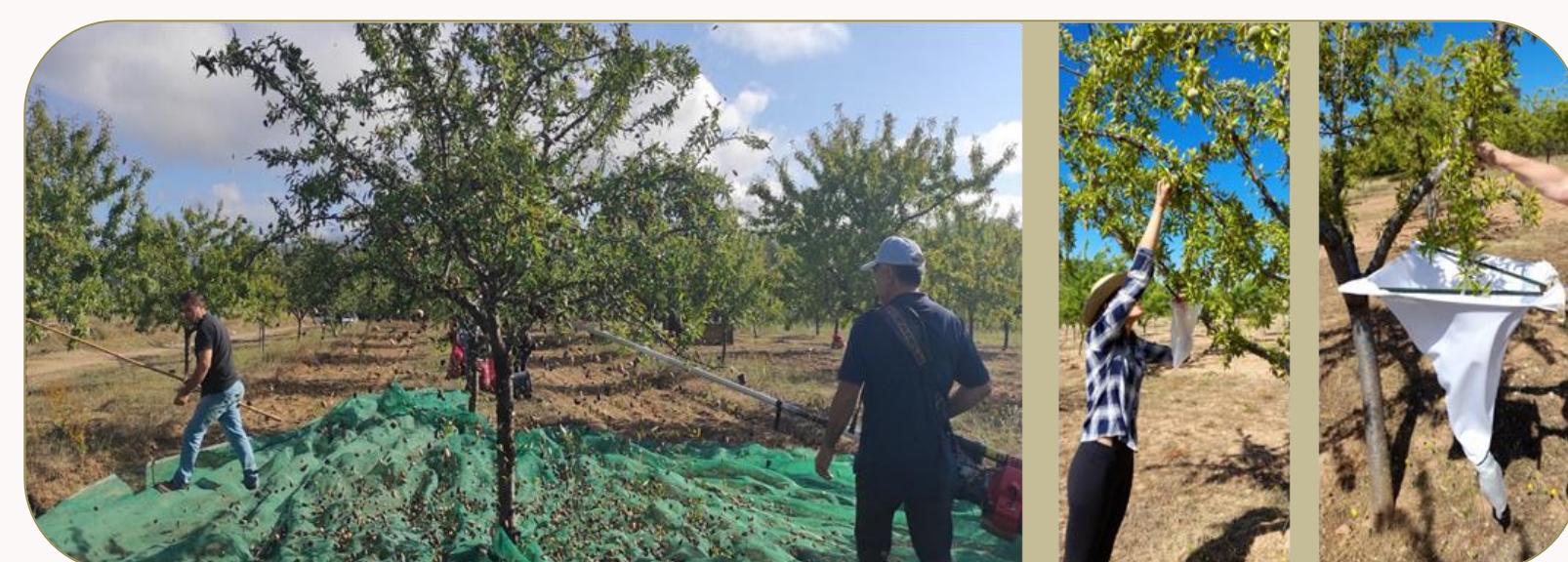
Implementation of intercropping practices as an integrated strategy aligned with economic and social aspects, as well as sustainable principles towards an adaptation to climate change.

## Methodology

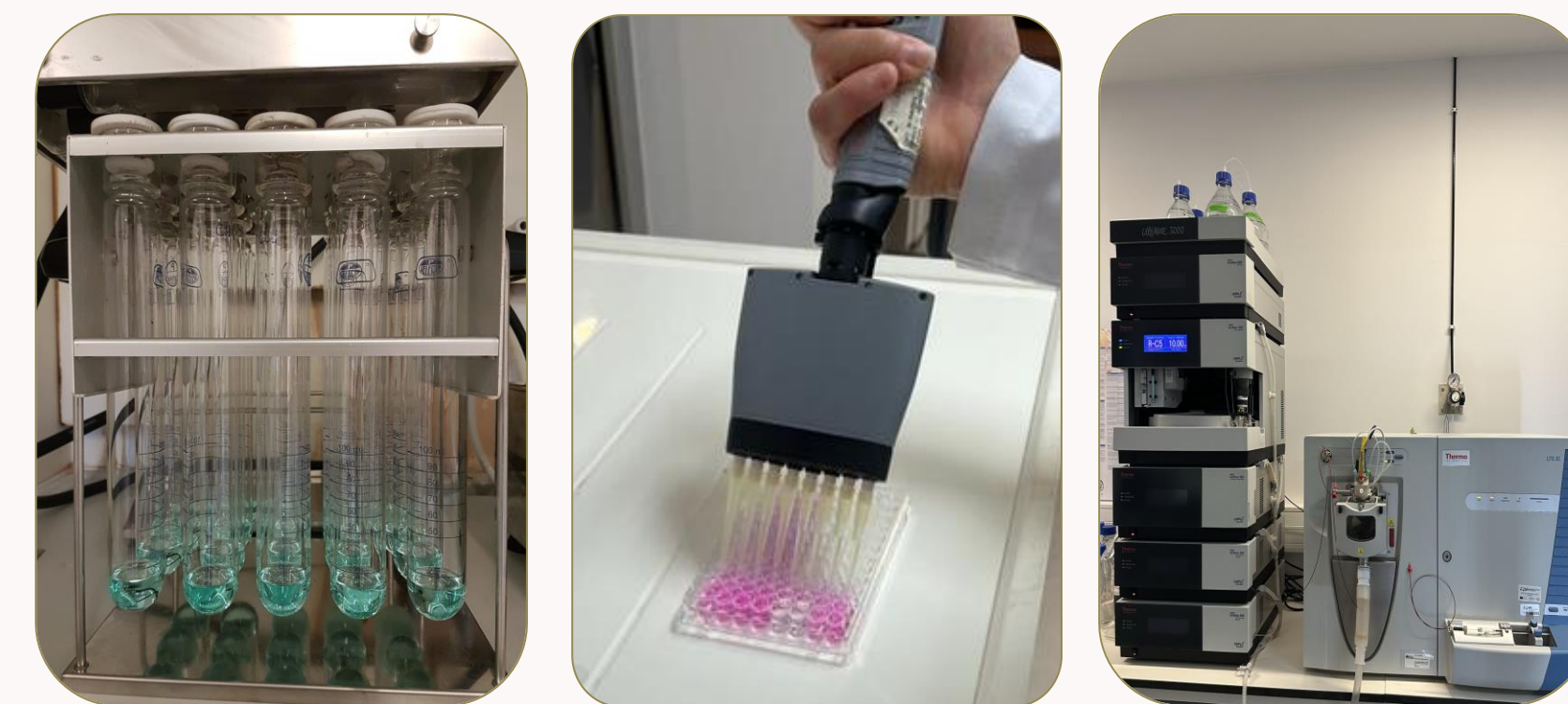
### Implementation of demsites



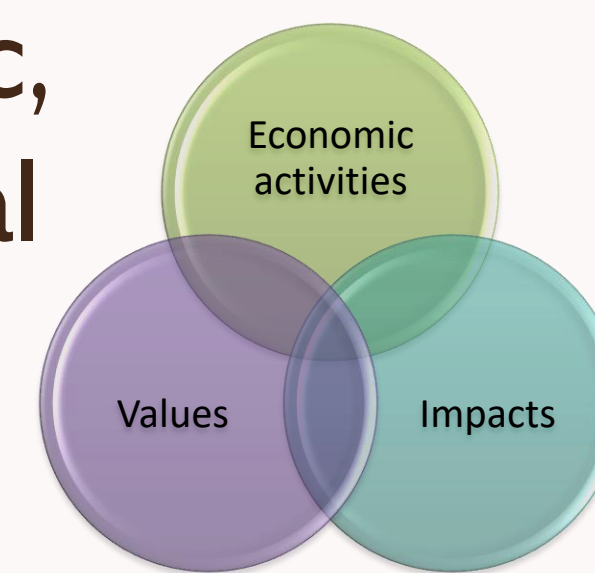
Evaluation of the impact of intercropping on almond and intercrops production, as well as in pests and weed control



### Nutritional and chemical characterization



Assessment of economic, social and environmental impacts



### Training and knowledge transfer



## Key Exploitable Results

- Develop innovations in farming systems using intercropping-related strategies in traditional and intensive irrigated almond orchards, coupled with different plant intercrops;
- Promote events oriented to farmers, namely young and women, in order to share knowledge and supply local farmers with tools to increase and diversify their productivity;
- Include other agricultural-linked income sources, ensuring transparency and fair pricing structure along the value chain, creating socio-economic impact for local farmers;
- Ensure access of local producers to distribution channels and markets, providing the general population with healthy and sustainable products;
- Promote the reduction of food losses within the production and supply chains through sustainable agricultural practices, valorizing post-harvest losses and waste generated.

