AGRI Innovation summit 2017

MANAGEMENT OF FARMING, FOOD AND FORESTRY SYSTEMS & VALORIZATION OF THE TERRITORY

Valorization of the territory and use of endogenous resources

Parallel Thematic Session

MANAGEMENT OF FARMING, FOOD AND FORESTRY SYSTEMS
& VALORIZATION OF THE TERRITORY

Valorization of the territory and use of endogenous resources

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VALORIZATION OF THE TERRITORY AND USE OF ENDOGENOUS RESOURCES

Supported by:

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Operational Group:

BDMIRA - Sustainable and competitive sweet-potato at Mira irrigation zone: innovative practices and organizational dynamic.

BDMIRA - Batata-doce competitiva e sustentável no Perímetro de Rega do Mira: técnicas culturais inovadoras e dinâmica organizacional.

Practical problem

Sweet potato productivity at Mira region declined due to phytosanitary/cultural practices problems in nurseries/field, affecting, among others, Lira variety, a Protected Geographical Indication. Lack of free virus 'Lira' plant material lead to import others with economic/ecological constraints.fi

Partners

Type:	Name:
Research/ Teaching	INIAV, I.P. – Instituto Nacional de Investigação Agrária e Veterinária; ESA/IPS – Instituto Politécnico de Santarém/Escola Superior Agrária
Agri association	AHSACV – Associação de Horticultores do Sudoeste Alentejano e Costa Vicentina
Agri enterprise	ASF Portugal Unipessoal, Lda; Gemüsering Portugal Produção Hortícola Lda.

Project

Objectives:

Provide a production model to obtain virus and diseases free plant propagation material (in vitro culture) and production/post-harvest technologies better adapted to local soil and climatic conditions;
Increase, at national/international level the competitiveness of nurseries/producers through the adoption of a new organizational dynamic;
Implement environmental friendly cultural practices.

Expected results:

To obtain the Portuguese sweet-potato Lira variety (Protected Geographical Indication) of higher quality;
Transfer of methodologies (nursery, production and post-harvest) to increase between 30-50% of sweet potato yield;
Publish a practical guide.

Results so far/first lessons:

Build the project with the stakeholders since the idea arose.
Project will start soon but meanwhile project team knowledge includes: diseases and pest diagnostic; irrigation/fertilization/post harvest technologies (INIAV); in vivo, in vitro plant propagation techniques (ESA/IPS); production experience for national/foreign markets (ASF and Gemüsering); producers association experience in awareness rising and stakeholders engagement/participation (AHSACV).

Who will benefit:

Nurseries, famers and their associations, food industry, enterprises, research/development institutes and universities.

Start: November/2017
End: October/2020

Budget: 150.000 €

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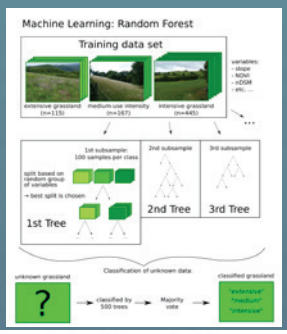

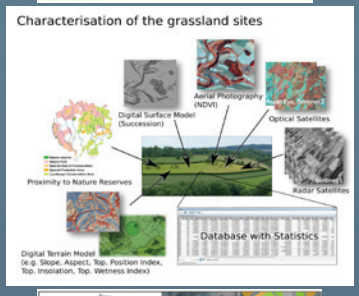

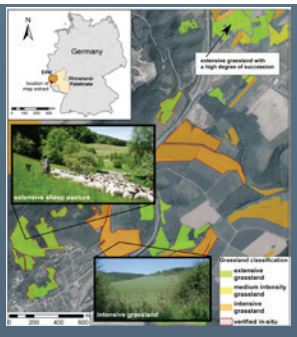

Start: 01/07/2016
End: 30/06/2018

Budget: 324.285 €

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Operational Group:

Connecting isolated terrestrial habitats (Biodiversity taxis 2.0)

Vernetzung verinselter Biotope (Biodiversitätstaxts 2.0)

Practical problem

Sheep farming needs landscapes rich on ecotones and permanent access to connecting pathways as corridors. These basic conditions are decreasing more and more because of intensification of agriculture, abandonment of unprofitable sites and climate change.

Partners

Type:	Name:
Research institute	Rheinland-Pfalz AgroScience GmbH Institut für Agrarökologie (IfA)
Farmer association	Bundesverband Berufsschäfer e.V.
Sheep farmers	Schäferei Czerkus and other local sheep farmers

Project

Objectives:

Project objective is the geodata-based assessment and mapping of biodiverse sites for sheep farming and for routing approaches to connect the sites in the western "Eifel" region (GER). As a result, the economic situations of the sheep farmers will improve, as well as biodiversity.

Expected results:

Identification of potential sites for sheep farming by machine learning approaches and following consultation by owners. The real sites will be classified by multi-criteria analysis of influencing parameters (e.g. degree of scrub encroachment) in respect to their suitability for sheep farming. In a second step, the suitable sites will be connected by GIS-based routings.

Results so far/first lessons:

Characterization of the grassland sites (e.g. relief, proximity to biotopes).
Classification by a machine learning approach: extensive grassland, grassland with medium use-intensity and intensive grassland - 727 grassland sites have been mapped in situ; 40.000 grassland sites were classified; > 6.000 were identified as potential grazing areas.
Comparison of GIS-based routing algorithm.

Who will benefit:

There will be positive effects on the economic situation of sheep farmers and biodiversity will be improved.

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VALORIZATION OF THE TERRITORYAND USE OFENDOGENOUS RESOURCES

Supported by:

NORTE2020 PORTUGAL 2020 UNIÃO EUROPEIA

Start: January/2017
End: June/2018

Budget: 701.391 €

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Colaborative Business R&TD Projects:

DEM@BIOFUMADOS – Biosmoked Demonstrator - Tradition vs Quality - production of Portuguese traditional cured and smoked Products

Dem@Biofumados - Demonstrador dos Biofumados - Tradição vs Qualidade - Produção de Enchidos e Fumados Tradicionais Portugueses

Practical problem

Validate the potential use of bacterial strains isolated from traditional cured smoked Portuguese products in the production of "safe" sausages, maintenance of the distinctive organoleptic characteristics of the smoked and cured products, produced by Minhofumeiro.

Partners

Type:	Name:
Agri enterprise	Minhofumeiro - Enchidos e Fumados à Moda de Ponte Lima, Lda.
Research/ Teaching	Escola Superior de Tecnologia e Gestão - Instituto Politécnico de Viana do Castelo; Escola Superior de Biotecnologia do Porto - Universidade Católica Portuguesa.

Project

Objectives:

Application of the results of a co-promotion project where various bacterial strains were applied to products, in combination with different Modified Atmosphere Packaging conditions, and effects in terms of microbiological safety and technological capacity for maintenance of the products were evaluated.

Expected results:

Here an autochthonous LAB strain which previously showed to be the best combination - antimicrobial capacity and maintenance of organoleptic characteristics of the tested products, will be used simultaneously with MAP. The technical and economic advantages of the tested preservation strategies in the production of traditional cured-smoked products will be demonstrated.

Results so far/first lessons:

Conditions of cultivation, drying and storage that allow the use of the strain as bioprotector have been identified. The spray application technology was defined, indicating how the spray will be placed in the products. A research was also carried out in the equipment market, necessary for the accomplishment of this activity, with the evaluation of technical data sheets.

Who will benefit:

Consumers;

Companies that use this kind of processes;

Educational institutions that see their research work recognized.

Contact: Manuela Vaz Velho
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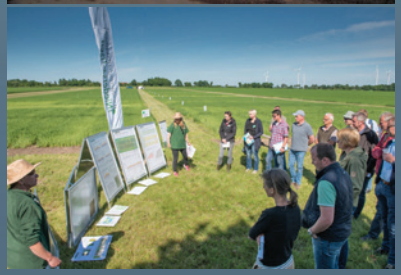
VALORIZATION OF THE TERRITORY AND USE OF ENDOGENOUS RESOURCES

Supported by:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement Nº 727482



Start: June/2017
End: May/2022

Budget: 11.188.942 €

AGRI Innovation summit 2017

Horizon 2020:

DiverIMPACTS: Diversification through Rotation, Intercropping, Multiple cropping, Promoted with Actors and value-Chains Towards Sustainability

Practical problem

Temporal and spatial diversification of crops is a key driver for resource-efficient farming systems that can deliver food, feed, industrial products as well as ecosystem services. However, crop diversification is hindered by technical and socio-economic barriers at farm and value chains levels.

Partners

Name:

ACTA (FR); Agrosolutions (FR); AIDER (RO); APCA (FR); ASR (IT); Baertschi (CH); Barwy Zdrowia (PL); BioForum (BE); Bionext (NL); CRA-W (BE); CREA (IT); ERF (NL); ESA (FR); FiBL (CH); FIRAB (IT); HS (SE); INAGRO (BE); INRA (FR); IT (FR); IUNG-PIB (PL); LEAF (UK); LWK (DE); Mühle Rytz AG (CH); NSF (RO); ÖMKi (HU); ORC (UK); SoCoPro (BE); SLU (SE); TI (DE); UCL (BE); UvA (NL); WUR-FSE (NL); WUR-PAGV (NL); Wal.Agri SA (BE).

Project

Objectives:

The goal of DiverIMPACTS is to foster crop diversification through rotation, intercropping and multiple cropping, by demonstrating benefits for farmers, value chains and society and by providing rural actors with innovations that remove existing barriers at farm, value chain and territory levels.

Expected results:

- Higher arable land productivity
- Diversified and increased farmers' revenues
- Lower environmental impact and reduced use of pesticides, fertilisers, energy and water
- Improved delivery of ecosystem services
- Organisation of resource-efficient downstream value chains
- Market provision of food, feed and industrial products
- Increased awareness and knowledge/data exchanges among actors"

Results so far/first lessons:

DiverIMPACTS just started with the implementation of 25 multi-actor case studies and 10 long-term field experiments.

Project website: http://www.diverimpacts.net/

Who will benefit:

Rural actors involved in the development of diversified farming systems at territorial level.

DiverIMPACTS

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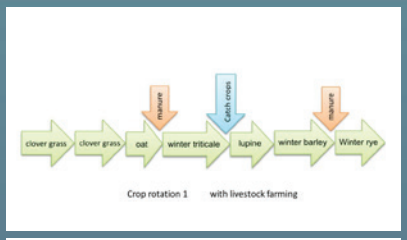

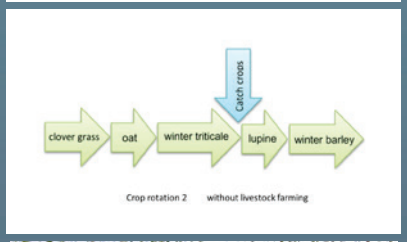

Start: 01/11/2015
End: 01/11/2019

Budget: 355.900 €

AGRI Innovation summit 2017

Operational Group:

Humus formation by legumes

Leguminosen zum Humusaufbau

Practical problem

In eastern and southern Mecklenburg-Western Pomerania there are many farms with poor soil conditions and yearly precipitation below 550 mm. Under these conditions, the traditional crops for humus formation don't grow, hence alternative legumes need to be identified.

Partners

Type:	Name:
Advisory service	Centre of Agricultural Advice Service GmbH, Rostock
Research institute	Mecklenburg-Vorpommern Research Centre for Agriculture and Fisheries, Gülzow-Prüzen
Farmer	Ökologische Landwirte Acker- und Grünlandbewirtschaftungs GmbH Plöwen, Plöwen
Organic farmers organisation	Biopark e.V., Güstrow

Project

Objectives:

Elaborate recommendations for cultivation of clover grass and grain legumes and generate demonstration examples on dry and sandy soils (< 550 mm precipitation).

Expected results:

Design two crop rotations, with and without livestock farming, including alternative legumes.

Test the cultivation suitability of alternative legumes in field trials.

Demonstrate cultivation of alternative legumes on organic farms with dry and sandy soils in Mecklenburg - Western Pomerania.

Results so far/first lessons:

Although humus formation is a process that needs time, we already had some results on our field trails with cover grass: (i) in crop rotation with livestock farming, Alfalfa with Red Fescue and *Festulolium* have the highest yield and fastest soil coverage; (ii) in crop rotation without livestock farming, Common Melilot has the highest yield; however Black Medick is fast in soil coverage.

Who will benefit:

Farmers with dry and sandy soils.

Contact:Carolina Wegner
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VALORIZATION OF THE TERRITORY AND USE OF ENDOGENOUS RESOURCES

Supported by:

AGRI Innovation summit 2017

PRODER:

Innovations and new technologies in the use of the *Arbutus* fruits

Inovação e novas tecnologias no aproveitamento do Medronho

Practical problem

There is little knowledge to cultivate arbutus (Arbutus unedo L.) in orchard. The need to supply the market with small fruits for consumption fresh or processed industrially encouraged the production of arbutus fruits.

Partners

Type:	Name:
Agri Enterprise	CEVRM – Centro de Excelência para a Valorização dos Recursos Mediterrânicos
Research/Teaching	INIAV – Instituto Nacional de Investigação Agrária e Veterinária I.P. Instituto Politécnico de Beja, I.P.
Agri Enterprise	Sugar Bloom, Lda
Farmers	Paulo Reis

Project

Objectives:

Promote innovation to obtain new products, processes and technologies. Promote the transfer of scientific knowledge among the diverse stakeholders of the sector. Encourage and optimize the productive efficiency and the creation of new value-added products.

Expected results:

Establishment of ordered orchards and definition of agricultural practices appropriate to the arbutus. Creation of arbutus crop account. Conservation and transformation of arbutus fruit. Market tests and consumption promotion.

Results so far/first lessons:

Increased installation of new areas with arbutus orchards. Better technical knowledge of the culture. Teaching of pruning techniques in the arbutus. Promotion of producers organizations. Increased supply of new products based on arbutus fruit.

Who will benefit:

Companies, entrepreneurs, producers and producer organizations.

Start: January/ 2012
End: December/ 2014

Budget: 801 691 €

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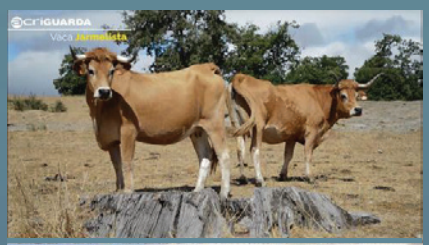
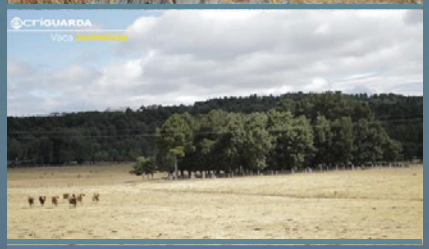
VALORIZATION OF THE TERRITORY AND USE OF ENDOGENOUS RESOURCES

Supported by:

PDR 2020 PROGRAMA DE DESENVOLVIMENTO RURAL 2014-2020 | PORTUGAL 2020 | UNIÃO EUROPEIA





Start: April/2017
End: April/2021

Budget: 465.967 €

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Operational Group:

Jarmelista Value - Territorial valorization by the genetic and identity preservation of the Jarmelist breed.

Valor Jarmelista -valorização territorial pela preservação da identidade e genética da raça Jarmelista.

Practical problem

No notability for meat production in sustainable and organic way and the importance of preserving regional biodiversity. Differentiation and high quality products stimulate rural activity in least-favoured regions and add regional value promoting sustainability and preserving breeding practices.

Partners

Type:	Name:
Research/Teaching	Instituto Politécnico da Guarda; Escola Agrária do Instituto Politécnico de Coimbra
Agri Association	Acriguarda – Association of Breeders of Ruminants in the Municipality of Guarda; Associação Qualifica, Origin.pt
Other company	Plataforma Jota – Business Company of Marketing and Communication; Moura & Sampaio Consultores Lda; ALSAI Empreendimentos Turísticos Hoteleiros Lda.

Project

Objectives:

Territory valorisation through Jarmelo meat, indigenous race, preserving its genetics, identity, production process. Highlight race identity as determining factor to biodiversity maintenance due to sustainable and organic production. Improve value chain from production to market offering new product

Expected results:

Increase meat production of 20%; meat characterisation of biochemical profile/rheological and nutrition; Evidence of territory biodiversity and sustainability due to beef production; new meat product; meat identity and quality standards; meat promotion as endogenous product enhancer of the economic activity and region recognition with impact in the final consumers

Results so far/first lessons:

So far we were able to characterize the effective (number of animals), farmers, production and nutrition management model, through a survey; analysed the average number of animals to slaughter so it is possible to define the sample for the physic-chemical analysis and for the development of maturation process model; created the image of the project and its marketing and communication positioning

Who will benefit:

Producers; services economic operators; Final consumers; Other associations for the preservation of native bovine breeds

Contact:Teresa Paiva
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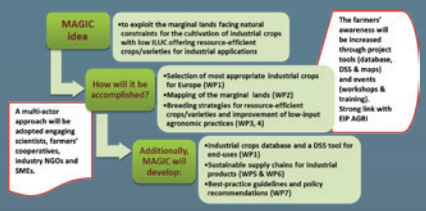

MagiC
Marginal lands for Growing Industrial Crops

Start: July/2017
End: June/2021

Budget: 6.000.000 €

AGRI Innovation summit 2017

Horizon 2020:

MAGIC - Marginal land for growing industrial crops: Turning a burden into an opportunity

Practical problem

Marginal lands are not necessarily suitable for food production. But they could be exploited for the cultivation of industrial crops with low indirect land-use change offering resource-efficient crops/varieties for industrial applications

Partners

Names:

Centre For Renewable Energy Sources And Saving Fondation (Gr); Alma Mater Studiorum-Universita Di Bologna (It); Stichting Wageningen Research (Nl); Wageningen University (Nl); Universitaet Hohenheim (De); Institut National De La Recherche Agronomique (Fr); Ifeu - Institut Fur Energie Und Umweltforschung Heidelberg Gmbh (De); Imperial College Of Science, Technology And Medicine (Uk); Nova-Institut Fur Politische Und Okologische Innovation Gmbh (De); Universita Degli Studi Di Catania (It); Universidade Nova De Lisboa (Pt); Faculdade De Ciencias E Tecnologiada Universidade Nova De Lisboa (Pt); Arkema France (Fr); Centro De Investigaciones Energeticas, Medioambientales Y Tecnologicas-Ciemat (Es); Cooperativas Agro-Alimentarias De Espana U De Coop Sociedad Cooperativa (Es); Krzyzaniak Michal (Pl) · Consiglio Per La Ricerca E Sperimentazione In Agricoltura (It); Instytut Wlokien Naturalnych I Roslin Zielarskich (Pl); B.T.G. Biomass Technology Group Bv (Nl); Agricultural University Of Athens (Gr); Bios Agrosystems · Institute Of Bioenergy Crops And Sugar Beet National Academy Of Agrarian Sciences Of Ukraine (Ua); Latvijas Valsts Mezzinatnes Instituts Silava (Lv); Internationales Institut Fuer Angewandte Systemanalyse (At); Novabiom (Fr); Vandinter Semo Bv (Nl); Bios Agrosystems Sa (Gr)

Project

Objectives:

Select the most appropriate industrial crops for Europe's marginal lands:

- Mapping of marginal land
- Breeding strategies for resource-efficient crops and improvement of low-input agronomic practices
- Building sustainable supply chains for industrial products
- Best-practice guidelines and policy recommendations

Expected results:

MAGIC will advance innovation in industrial crops research in particular in breeding, low-input practices, harvesting and logistics. It will improve databases and tools for mapping marginal land in Europe, upgrade farmers' awareness on alternative crops for their marginal lands and provide end-users with information on quantity and quality characteristics of the most promising crops for several industrial uses.

Results so far/first lessons:

The project has just started.

Who will benefit:

Farmers, who will be able to decide which alternative crops can grow in their marginal land, and end-users (industrials)

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VALORIZATION OF THE TERRITORY AND USE OF ENDOGENOUS RESOURCES

Supported by:

Programma di Sviluppo Rurale dell'Emilia-Romagna 2014-2020

UNIONE EUROPEA — L'Europa investe nelle zone rurali — Regione Emilia-Romagna

Start: 01/04/2016
End: 31/03/2019

Budget: 189.408 €

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Operational Group:

PROVITERRE - Guidelines for better agricultural practices for soil conservation in the main hilly vine areas, in Emilia-Romagna

PRO - VITERRE: Linee guida delle buone pratiche agronomiche per la conservazione dei suoli nei principali ambienti vitivinicoli della collina emiliano-romagnola

Practical problem

The grass in the inter row is optimal in wet seasons for soil preservation from erosion. In summer, it can affect crops' water stress, resulting in lower production. It is fundamental to analyze how, when and in which soils there's the need to adopt this technique.

Partners

Type:	Name:
Research institutes	I.TER - Territorial Investigations Università Cattolica del Sacro Cuore
Farms	Tenuta Pernice Società Agricola; Azienda Agricola La Tosa di Pizzamiglio Ferruccio e Stefano Società Semplice; Azienda Agricola Baraccone di Burgazzi Andreana; San Mamante Società Agricola; I Perinelli Società Cooperativa Agricola Sociale; Eredi Azienda Agricola Conte Otto Barattieri di San Pietro S.S. Società Agricola; Azienda Agricola Il Ghizzo di Anselmi Adele; Res Uvae Società Agricola a Responsabilità Limitata; La Sabbiona Società Agricola Piacentini Emanuel

Project

Objectives:

Elaboration of guidelines on good soil management techniques in order to match the environmental benefits, such as maintaining soil organic matter and promote soil preservation from erosion, associated to the improvement on the level of production, both in qualitative and quantitative terms.

Expected results:

Set up monitoring for objective data to understand the effect of vineyard soil management techniques on organic matter content, soil conservation from erosion and on the production in terms of quality and quantity. Involve winemakers and consultants in sharing data and guidelines.

Results so far/first lessons:

In a representative farm in hilly areas in Emilia-Romagna, 5 different agricultural practices are being tested between vine lines ("spontaneous grassing", "total work", "alternate rows total processing and spontaneous grassing" and "cover crop"), while monitoring the soil organic matter content and the effect on erosion and on the production performance of the vineyard.

Who will benefit:

The main beneficiaries will be vine growers farming hilly areas. The guidelines will be disseminated by agricultural advisers.

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VALORIZATION OF THE TERRITORY AND USE OF ENDOGENOUS RESOURCES

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PRODER

Wild Edible Mushrooms Processing Technologies

Tecnologias de Investigação Industrial aplicadas à Transformação e Comercialização de Cogumelos Silvestres

Practical Problem

Wild edible mushrooms are characterized by their seasonality and perishability. The distribution and marketing as fresh products is difficult. It is essential to develop appropriated packages to maintain product stability when commercialized in fresh and processing technologies to increase storage.

Partners

Type:	Name:
Other Association	CEVRM - Centro de Excelência para a Valorização dos Recursos Mediterrânicos, S.A.
Research	INIAV - Instituto Nacional de Investigação Agrária e Veterinária, I.P.

Project

Objectives:

Promote the relationship between scientific and technological knowledge to develop processing technologies (minimal processing and drying) and definition of packages and labels appellative and informative. Incorporation of new high quality products into the productive process of the company (CEVRM).

Expected results:

Transference of technological knowledge from INIAV researchers to CEVRM technicians. Creation of added value products of edible wild mushrooms with new methodologies and processing techniques. Publication of "Manual of Good Practices for the Implementation of the HACCP System". Participation in Wild Mushroom Fair, Workshops and in IX Iberian Symposium of Maturation and Post Harvest.

Results so far/first lessons:

The results had been encouraging due to the knowledge of new cold chains in food technologies, which have become possible, the storage of fresh mushroom packages with extended shelf-life. Since the final products had high quality and appropriated conditions, the use of minimal processing or drying seems to be the best methods for edible wild mushrooms storage and commercialization.

Who will benefit:

Local enterprises and mushroom pickers. Small and medium-sized enterprises of food industries.

Fresh wild edible mushroom storage in modified atmosphere package

Wild edible mushroom dehydration by convection drying

Start: February/ 2014
End: June/ 2016

Budget: 119 502 €

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www.aislisbon2017.com