



TREASURE -

Sustainable pig production

*short overview of H2020 RIA project on traditional resources
for agricultural diversity and the food chain*



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Funded by European Union
Horizon 2020
Grant agreement No 634476

Societal challenges/relevance

Traditional agricultural resources

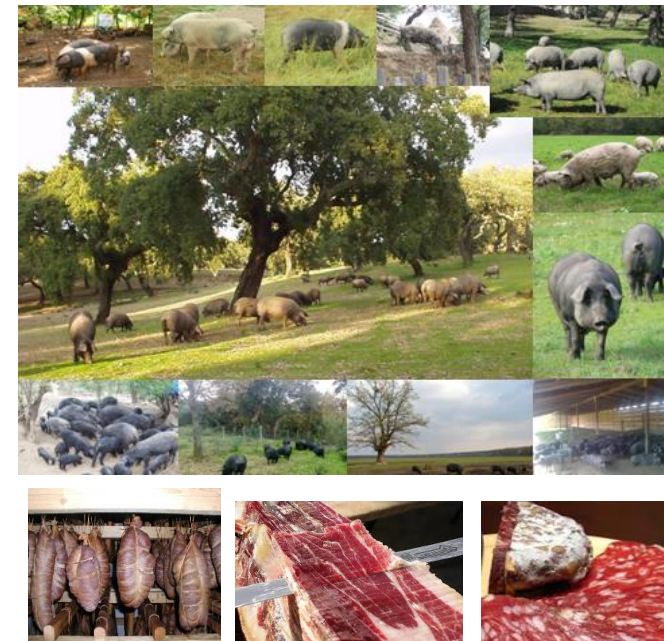
genetic diversity important for food security, diversification, productivity esp. in view of the changing environment



enhance their better use

- **Favourable characteristics** (robustness, adaptation to local, marginal conditions, special quality, healthiness)
- **Increased consumer interest** for products with regional identity
- **Not well exploited** i.e. less competitive as modern, high yielding varieties
- Progress in **local breeds** as opportunity for **economic development**

SFS-07a-2014 Traditional resources for agricultural diversity and the food chain

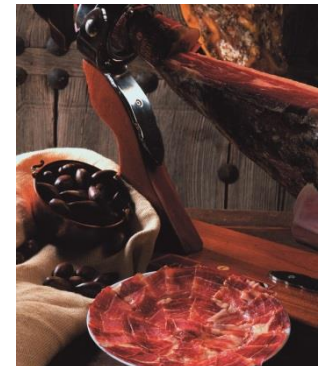


Expected impacts

- Adaptation to changing agro-climatic conditions
adaptive capacity, resilience robustness
- Enhanced quality/scope of *in situ* collections; **more on-farm use**,
- Improved **productivity, economic gain** of specialised farming systems
- **Promotion** of traditional resources (local pig breeds)
- **Identification of useful traits**
=> breeding programmes



- Increased awareness of their value
- Increased **availability of products**
- Enhanced **benefits for consumers**
- New products, markets



What did TREASURE propose?

How were project's objectives targeted to challenges/relevance



RATIONALE

Public opinion is not favourable to intensive pig production which is confronted with environmental and animal welfare issues.

Local pig breeds and their respective production systems meet high criteria and expectations of modern society in regard to the environment, animal welfare and food quality.

KEY CHALLENGE

CONCEPT

TREASURE is built on the inherent value encompassed in local pig breeds, their production systems and product qualities. The idea is a new paradigm of pig production that meets societal demands regarding environment, genetic diversity, ethical and social aspects and economic value.



The key challenge is a development of sustainable pork chains in geo-agro-climatically different regions of Europe by using the biodiversity resources encompassed in European local pig breeds.

What did TREASURE propose?

How were project's objectives targeted to needs, problems, opportunities of end-users?



„untapped“
genetic resources

Local breeds in Europe (majority) are conserved thanks to the support of public money (**gene banks**).

In order to be **sustainable** it is important to make them self-sufficient, **economically viable**

- **research** needed because there is a big void of scientifically proven evidence of their qualities (e.g. characterisation), comparative advantages, and of their needs (e.g. nutrition)
- **interaction** of different actors needed to build up „pork chains“

- Scientific challenges
- Exchange of knowledge/experience

Aim, main objectives



WP1

Genetic characterisation of local pig breeds, esp. untapped, and development of DNA tools (authentication, traceability, conservation and breeding programs)

WP2

Multicriteria evaluation of production systems, nutrition (nutritional requirements of local pig breeds, use of locally available feeding resources), innovative **management** strategies and **environmental impacts**

WP3

Quality and healthiness attributes of regional pork products in line with consumer demands including innovations in traditional products

WP4

Socio-economic perspective: Cost/benefit analysis at different levels of the chain and for the society, and research of market potential and strategies for regional high quality products

WP5

Measures to maximise impact – activities of dissemination and knowledge exchange between actors



Ambition - advance beyond state of the art

WP1

- ↪ Genetic basis for singularity, resilience, adaptive traits, robustness
- ↪ Gene expression as related to feeding, management
- ↪ DNA markers –(traceability, authentication)
- ↪ **Gut microbiota** characterisation (breed)

- ↪ Productivity in varying agro-geo-climatic conditions
- ↪ Nutritional requirements
- ↪ Multi-criteria evaluation of production analysis including LCA
- ↪ **Gut microbiota** (feeding, production system (organic), immunocastration)

WP2

WP3

- ↪ Toolbox for quality evaluation
- ↪ Quality and healthiness attributes of products from local pig breeds
- ↪ Consumer acceptability
- ↪ Links between production system and quality

WP4

- ↪ Cost/benefit analysis at farm society level
- ↪ Consumers' motives for consumption and purchase
- ↪ Marketing strategies (short chains)

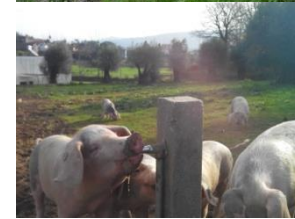
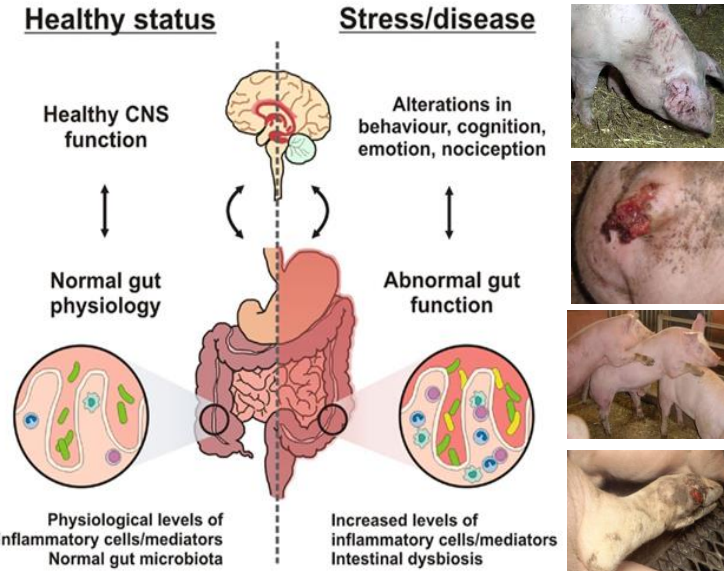
In view of today's discussion

- Pig as a model for human
- Pig meat as (healthy) food for human consumption



TREASURE – pilot study on characterisation of intestinal microbiota

- breed differences (fatty type breeds)
- Conventional, outdoor, organic farming
- immunocastration effect
- feeding resources (forages/antioxidants, acorns/tannins)



THANK YOU FOR YOUR ATTENTION



Diversity of local pig breeds and production systems for high quality traditional products and sustainable pork chains

Start of the action: 01/04/2015

Duration: 48 months

Budget: 3,395,986.75 EUR

25 partners from 9 countries

Coordinator: KIS - Agricultural Institute of Slovenia

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