THE TP ORGANICS PLATFORM AWARDS THE AGROFORESTRY DEHESA SYSTEM IN SPAIN

The <u>Mixed farming of sheep and pigs in the</u> <u>Dehesa agro-forestry system</u> presented by the University of Cordoba (Spain) has been one of the innovative systems awarded by the TP Organics Call For Organic Innovations *w*ithin the 3rd edition of the <u>Organic Innovation Day</u> held in Brussels on November 2017.

The innovative methodology of mixed farming of sheep and pigs with forage-based feeding and acorn-based finishing of pigs is framed in the Dehesa agro-forestry system implemented in the Southern areas of Spain. The innovation is the integration and adaptation of two traditional livestock systems based on autochthonous and robust breeds, Merino sheep and Iberian pig, to conserve a high value agro-forestry ecosystem, the Dehesa. From the farmers' point of view the

main objective is to produce organic lambs and pig fatteners in a sustainable way, making the highest use of grass, fodder and acorns, and reducing compound feed incomes.

The document presented to the Call describes the methodologies adopted to increase the use of resources in order to achieve maximum synergy and produce the best results from an environmental and economic point of view.

The Dehesa agro-forestry system is adopted in 3.5 million ha. in the southern areas Spain and 1 million ha. in the southern areas of Portugal. In these areas pasture lands are characterized by low production in winter months and no production at all during the summer. The Dehesa system represents the product of human action on forest areas usually not appropriate for other agricultural activities. It is based on a dispersed tree system that allows the establishment of pastures that graze freely at low density.

The Dehesa requires any species of domestic herbivore to maintain the balance of the vegetation and the production of pastures. The trees (mainly Holm oak, Quercus ilex) are viewed as an integrated part of the system, and as a result are planted, managed, and regularly pruned, in order to avoid the gradual decay of the tree canopy.

The Dehesa (called Montado in Portugal) is a unique agrosilvo-pastoral system where economic and social activity is generated in balance with the environment where these pastures develop favoring biodiversity of grazing animals and plants.

With its mixed farming of sheep and pigs the implementation of the Dehesa systems have the capacity to cope with the difficult









environmental conditions creating an effective ecosystem. Sheep is the ideal species because it doesn't damage the trees and allows their natural regeneration. The famous Iberian pigs are important actors in the Dehesa system and they are fed with the holm oak's acorns, which constitute most part of their diet.

Thanks to the Dehesa system is possible to produce organic lambs and pig fatteners in a sustainable way with multiple advantages. The system make the highest use of grass, fodder and acorns, reducing compound feed incomes. In ecological terms, forage resources are not just composed of herbs, but include trees that are used as a regulator of hydrological stress for the underlying herbaceous stratum.

This agro-system generates quality products on which meat industries depend. Among the various benefits there is the year-round employment, an increase of livestock diversification, the cycling of nutrients, the grow of grass for grazing the high value Iberian pigs that are a profitable component of the Dehesa system together with other economic activities of organic farming and rural tourism.

Like many extensive farming systems and despite its high natural, environmental and economic value, the Dehesa system risk to disappear if not properly preserved and protected. With the decline of the extensive pig raising in fact, farmers can lose the interest in the acorn crops from the holm oaks, hence the trees are neglected and ageing; new trees are rarely planted, and the intensification of grazing makes natural regeneration unlikely. Instead the quality of the water and the production of quality food, such as those produced by extensive cattle raising, depend on the maintenance of the complex system. In addition, the disappearance of these places would contribute to the abandonment of territories where there are hardly any other productive alternatives and would increase the risk for threatened species, such as the lynx, the black vulture or the Iberian imperial eagle.

The recognition of the Dehesa System received by the TP Organics Call for Innovations represents a great opportunity to draw attention to the importance of safeguarding and promoting these sustainable traditional ecosystems, to ensure that they influence the future of agriculture.

At the 3rd edition of TP Organics' Organic Innovation Days held in Brussels, Belgium, TP Organics launched its important position paper <u>Research and Innovation for Sustainable Food</u> <u>and Farming</u>. It contains TP Organics' recommendations for the 9th EU Research & Innovation Framework Programme. In particular the paper demands that the UN Sustainable Development Goals (SDGs) be the basis for the 9th Framework Programme's architecture.

To know more

Dehesa Document University of Cordoba

Dehesa system in intechopen.com

Dehesa Project in TP Organics website



Dehesasibericas.es website

TP Organics contribution 9th EU Programme

Article in link.springer.com

Article in Aftaweb.com

Libro verde Dehesa in eweb.unex.es

Dehesa en Wikipedia

