



## Development of an autonomous and digitalized feeding system for pigs of the Celtic trunk in Atlantic deciduous forests

### Introduction

In the last years, the abandonment of rural areas in regions such as Galicia and Asturias (NW Spain) has increased the surface of deciduous forest lands occupied mainly by chestnuts and oaks without management. Silvopastoral systems with pig breeds of the Celtic trunk (Porco Celta, Gochu Asturcelta) could be established on these abandoned forest lands due to the demand for this type of meat by the consumers. Moreover, it is important to be aware of the rusticity of these pig breeds which allows a perfect adaptation to the conditions of the Galician and Asturian forests, making that animals can be kept in an extensive regime, providing a product of exceptional quality.

### Objective

The objective of the FORESTCELTA operation group was to implement and evaluate an automated mobile system for the feeding and control of pigs of the Celtic trunk established in an extensive regimen in Atlantic forests of chestnuts, oaks, and other deciduous tree species. For this purpose, a partnership was created with 8 entities, including forest owners, research centers, farmer associations and advisors, having installed two demonstration areas in Galicia and Asturias where herds of 55 pigs were introduced in each demonstration area, during two fattening cycles of 11 and 13 months. In the demonstration areas, an evaluation of the environmental and forest characteristics was carried out to evaluate the incidence of the feeding and control system implemented on the forest environment. Moreover, the pigs were monitored by analysing productive aspects and physical, nutritional and organoleptic characteristics. An economic study of the farms was also carried out.

### Main results

The results of FORESTCELTA showed that the use of the feeding and control system implemented and evaluated by FORESTCELTA: i) reduces the production costs, ii) facilitates the management, recovery and maintenance of pig breeds of the Celtic trunk, iii) improves the product obtained that will be of high sensory

and food quality, iv) implies a sustainable use of the forest lands at the same time that the forest fire risk is reduced, v) favours the introduction of the obtained products in the distribution and consumption channels.



Figure 1: Automated mobile system for the feeding and control of pigs in Atlantic Forest lands.

## Lessons learnt

The development of this automated mobile system for the feeding and control of pigs in Atlantic Forest lands showed that there are forest land owners interested in implementing the system on their farms mainly because this type of system allows diversification of their income. Moreover, it is possible to obtain real data on the economic profitability of the farm, which can increase the rural population fixation. The development of this type of system is also very attractive for the younger generations who can maintain or incorporate into agricultural work. Finally, it is important to highlight that the dissemination activities increase the adoption of FORESTCELTA results by the owners of the forest lands.

The information presented in this factsheet was developed by the FOREST4EU partner, drawing on the innovations and knowledge generated by the indicated operational group with their explicit authorization.

## Further information

<https://forescelta.com/>



 <p><b>Funded by the European Union</b></p> <p>Funded by the European Union (Grant n. 101086216). Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or REA. Neither the European Union nor the granting authority can be held responsible for them.</p>	 <p>UNIVERSIDADE DE SANTIAGO DE COMPOSTELA</p>		 <p>FOREST4EU Project</p> <p>FOREST4EU Project</p> <p>info@forest4eu.eu</p>	<p>Website</p> 
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