

Improving the bond between steel and synthetic cable (MUCAS)

Summary

The use of synthetic cable among companies involved in timber harvesting and associated services is very low in Catalonia, as a result of the high abrasion suffered by the cable, which reduces its useful life and its high acquisition cost, up to 2 or 3 times higher than steel. The feedback we have from the sector is that this abrasion and subsequent breakage occurs mainly in the last few metres of the synthetic cable, so the hypothesis put forward is that if wear can be reduced only in these last few metres, this would increase its useful life. To make this possible, a synthetic-steel bond is proposed, with the steel located in the last few metres of the cable. In this way the abrasion would be concentrated to a large extent on the steel and not on the synthetic part.

The difficulty lies in creating a bond that is effective during timber harvesting work. It must be able to withstand the stresses applied, be adaptable to the machinery used, and be relatively easy to implement.

Objectives

The aim is to enhance synthetic cable by implementing new tools and techniques to improve its use.

Description of the actions planned in the project

- 1- Pilot tests to improve the manufacture of a synthetic-steel bond
- 2- Field tests and approval
- 3- Long-term study to assess the actual effectiveness and efficiency of the bond
- 4- Dissemination of the results of the study

Expected results and practical recommendations

The aim is to promote synthetic cable and its advantages that go beyond both its technical and economic limitations and to obtain positive results that ensure the synthetic-steel connection increases the service life of synthetic cable, further reducing the aforementioned limitations.

Leader of the Operational Group

ORGANISATION: SERRADORA BOIX, SL

Coordinator of the Operational Group

ORGANISATION: FOREST SCIENCE AND TECHNOLOGY CENTRE OF CATALONIA CONSORTIUM

Other members of the Operational Group (grant recipients)

ORGANISATION: FUSTES JANÉ, SL

ORGANISATION: SERRADORA FORESTAL DE CATALUNYA, SLU

Other members of the Operational Group (not recipients of the grant)

ORGANISATION: FOREST SCIENCES AND TECHNOLOGY CENTRE OF CATALONIA (CTFC)

ORGANISATION: ASSOCIATION OF CUTTERS AND SAWMILLS OF CATALONIA

Subject area(s) of application

<input type="checkbox"/>	Agricultural production system
<input type="checkbox"/>	Agricultural practice
<input checked="" type="checkbox"/>	Agricultural equipment and machinery
<input type="checkbox"/>	Livestock farming and animal welfare
<input type="checkbox"/>	Vegetable production and horticulture
<input type="checkbox"/>	Landscape / Territorial management
<input type="checkbox"/>	Pest and disease control
<input type="checkbox"/>	Fertilisation and nutrient management
<input type="checkbox"/>	Soil management
<input type="checkbox"/>	Genetic resources
<input type="checkbox"/>	Forestry
<input type="checkbox"/>	Water management
<input type="checkbox"/>	Climate and Climate Change
<input type="checkbox"/>	Energy management
<input type="checkbox"/>	Waste and by-product management
<input type="checkbox"/>	Biodiversity and environmental management
<input type="checkbox"/>	Food quality/processing and nutrition
<input type="checkbox"/>	Supply chain, marketing and consumption
<input type="checkbox"/>	Competitiveness and agricultural and forestry diversification
<input type="checkbox"/>	General

Geographical area(s) of application

PROVINCE(S)	REGION(S)
Lleida, Barcelona and Girona	Solsonès, Bages, Berguedà, Anoia, Osona, Ripollès, Pallars Sobirà, Cerdanya, Pallars Jussà, Alt Urgell and Alta Ribagorça

Dissemination of the project (publications, conferences, multimedia, etc.)

- Annual Technological Transfer Plan seminar 16/11/2022: Synthetic cable enhancement
- 5 informative seminars to transmit the generic advantages of synthetic cable and those of the synthetic-steel bond

Project website**More information on the project**

PROJECT DATES	TOTAL BUDGET
Starting date: July 2021	Total budget: €62,693.19
	DACC funding: €28,992.65
Current status: Under way	EU funding: €21,871.64
	Own funding: €11,828.90

With funding from:

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Order ARP/113/2021 of 20 May, approving the regulatory bases for grants for cooperation for innovation by promoting the creation of European Association for Innovation operational groups in the areas of agricultural productivity and sustainability and the execution of innovative pilot projects by those groups, and Resolution ACC/1660/2021, of 27 May, announcing the call for the grant.

