



Producing wood chips and pine bark from recycled material

COUNTRY

Spain

PROJECT PROMOTER

Biocombustibles Forestales, S.L.

FUNDING

RDP 2007-2013, EUR 81583

RDP 2014-2020, EUR 23449

(LAG Asociación Tierras Sorianas del Cid.)

RDP MEASURE

M19 – LEADER / CLLD

DURATION

2018 – on-going

CONTRIBUTION TO

- mitigating climate change (by reducing greenhouse gas emissions, replacing fossil based materials, increasing biomass, etc)
- increasing efficiency of biomass resource use

KEYWORDS

GHG, biomass, climate change, entrepreneurship

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The initiative

The Biofuels Forestales S.L. (Biofor) company was set up to provide a new service: that of producing recycled woodchips from wooden pallets and packages. Recycled woodchips can provide livestock sector businesses with fuel for heating, while the pine bark - which is a by-product of the woodchip production process - can be used for gardening and ornamental decoration.

These types of woodchip tend to be quite varied in size, with a high percentage of fine particles, so they are typically only used by industrial facilities that have high-powered boilers or panel-board mills. With this project, the company used RDP support to set up a plant for screening and sorting the woodchip into different granulometries for different uses and clients. For example, the finest granules can be used by composting plants; the intermediate granules for gardening; and the largest ones can be reprocessed by the crushing machine.

RESULTS

- ✓ The use of pine bark in gardening reduces the consumption of water for irrigation.
- ✓ Using pine bark as a substrate or additive for organic matter in crops helps reduce the consumption of fertilizers. It also prevents the appearance of weeds and thus decreases the need for herbicides.
- ✓ Producing woodchips from used pallets prevents additional - valuable - material from ending up in landfill. This reduces the volume of waste generated by a company and creates a product of added value.
- ✓ Using recycled material as biomass fuel reduces the need to cut down trees. In addition to this, the facilities that use these woodchips have switched to biomass from fossil fuels (diesel, propane, natural gas), meaning that their CO2 emissions have been significantly reduced.
- ✓ Biofor signed a collaboration agreement with a Portuguese company (Madeca). The two partners aim to work together to develop an innovative new substrate product for the cultivation of orchids.



Context

In their search for a new professional endeavour, the two partners who started the Biofor company identified a gap in local industrial service provision: the processing and recycling of discarded wooden pallets and wood processing by-products.

The production of woodchips from recycled pallets would create a new and sustainable energy source for livestock sector companies (in the form of fuel for heating); and the by-product of pine wood processing (pine bark) could be used by gardening and ornamental decoration businesses.

Objective

The project promoters aimed to offer a new service that would bring added value to previously disposable by-products and combine financial benefits with environmental protection.

Activities

Biofuels Forestales S.L. (Biofor) received RDP support to set up a plant for screening and sorting pine bark and woodchips. Their recycled woodchip will be produced from crushing pallets and wooden packages.

This woodchip is characterised by a heterogeneous granulometry with a high percentage of fine particles, so it can only be used by industrial facilities that have high-power boilers. In order to add value to this product, Biofor decided to include a screening treatment in its production process. This enables them to sort the material into different homogeneous grades for different purposes, such as woodchips that can be used by medium-power biomass boilers (thus increasing the potential client base for the product)

Pine bark is used in gardening for decorative purposes and to improve the water retention capacity of ornamental landscapes. In order to use pine bark for gardening or composting, it must first be crushed and screened in order to obtain different granulometries: the finest of which can be used by composting plants; the intermediate for gardening; and the largest ones can be reprocessed by the crushing machine.

Environmental sustainability

The consumption of woodchips is on the rise, while wood itself is becoming more and more scarce; this results in rising prices. Biofor's initiative will contribute to increasing the amount of packaging wood that is recycled, rather than going to landfill. This will help to improve the environment and offer cheaper, alternative materials for a variety of purposes.

The use of pine bark in landscaped areas is environmentally beneficial as it improves the ground's water retention capacity. It also limits the number of weeds, which reduces the need to use phytosanitary products and other contaminants of the environment.

The company gathers raw material for recycling from various suppliers of wood packaging and pallets in the region. Their first goal is to produce enough woodchips to meet the needs of local companies. The company currently has three workers, who are all residents in the area.

The initiative is supported under the LEADER measure of the Rural Development Program of Castilla y León 2014-2020, implemented by the Asociación Tierras Sorianas del Cid Local Action Group. It serves Local Development Strategy objectives concerning the management and sustainable use of forest resources.