

EXtraction of BIOproducts from OPuntia Ficus indica Scraps

Riferimenti

Tipo di progetto

Gruppo Operativo

Acronimo

EBioScart - GO FICO

Tematica

Gestione dei sottoprodotti agricoli

Information

Time frame

2020 - 2023

Durata

33 months

Partners (no.)

9

Regione

Sicilia

Comparto

Frutticoltura

Localizzazione

ITG12 - Palermo

ITG14 - Agrigento

ITG17 - Catania

Costo totale

€499.699,00

Fonte di finanziamento principale

Programma di sviluppo rurale

Programma di sviluppo rurale

2014IT06RDRP021: Italy - Rural Development

Programme (Regional) - Sicilia

Parole chiave

Farming/forestry competitiveness and diversification

Waste, by-products and residues management

Farming practice

Sito web

<http://ebioscart.eu>

Project status

ongoing



Objectives

The project aims at the enhancement and reuse of by-products and waste from Sicilian prickly pear production, to obtain new bioproducts with high added value such as pectins, betanins and oils that can be used in different sectors as cosmetics, nutraceuticals, pharmaceuticals, detergents, food and beverage. In addition, the aim is to guide the partner farms in a management modernization process and to introduce an innovative process for traceability. With a view to circular economy, the reuse of prickly pear scraps for the creation of new products can generate an increase in company profit.

Activities

The project, with joint marketing mix and economic validation actions, aims to introduce and develop a green industrial extraction process of bioproducts such as pectins, betanins and oils from fresh prickly pear waste (peel and seeds), through new production methods for the sector, with a real "Shared transformation laboratory". In addition, farms will be guided and involved in a process of managing modernization of product traceability and of environmental sustainability by the introduction of innovative irrigation management with the use of residual mucilage as natural fertilizers.

Context

Pectins, betanins and essential oils are a recent opportunity for the valorisation of prickly pears waste, a production around 90% localized in Sicily and currently mainly oriented towards fresh fruit consumption. The extraction of pectins, dyes and oils constitutes a concrete opportunity to support the profitability of the regional production system, as it can offer

new opportunities for enhancing the fruits of low market value, otherwise intended to become waste.

No industrial process is available which, starting from a discarded or unsuitable product for marketing, generates with a "pig like" criterion the extraction of all the useful elements suitable for an exchange market.

Partenariato

Role	Azienda	Address	Telephone	E-mail
Leader	Parco Scientifico e Tecnologico della Sicilia S.c.p.a.	Z. I. Blocco Palma 1 - Stradale Vincenzo Lancia, 57 95121 Catania CT Italy	095292390	presidente@pstsicilia.it
Partner	Giacomo Abruzzo	Via C.da Cannitello SNC 92018 SANTA MARGHERITA BELICE AG Italy		giacomoabruzzo@libero.it
Partner	Lucia Bonanno	Viale Sicilia,14 90020 ROCCAPALUMBA PA Italy		rosolinoromano1964@gmail.com
Partner	Azienda agricola Mulino Fiaccati di Laura Bonanno	VIALE SICILIA, 2 90020 Roccapalumba PA Italy		laura12bonanno@gmail.com
Partner	O.P La Deliziosa Società Cooperativa Agricola	C.da SCIRFI S.N. 95033 BIANCAVILLA CT Italy		amministrazione@ladeliziosa.it
Partner	Ficurinia s.r.l.s	VIA MEGARA, 284 96011 Augusta SR Italy		info@ficurinia.com

Role	Azienda	Address	Telephone	E-mail
Partner	Università degli studi di Catania - Dipartimento di Agricoltura Alimentazione e Ambiente (Di3A)	Piazza Università n. 2 95131 Catania CT Italy	095 4788011	protocollo@unict.it
Partner	Carmelo Danzi	Via D'AMICO, 72 95131 Catania CT Italy		
Partner	Promoter Group spa	Piazzale Clodio, 18 00195 Roma RM Italy		finanza.agevolata@promotergroup.eu

Pratiche abstract

Description

A process and product innovation that concerns the enhancement and reuse of prickly pear production / processing waste. A "Shared transformation laboratory" will be created, for a green industrial extraction process, from prickly pear peels, with an unprecedented microwave system already used and tested in the laboratory during the studies produced, to obtain pectins and dyes with high added value.. The process is completely innovative as it has not been implemented on an industrial scale in order to obtain a standardized product, there are no pectins and dyes extracted from prickly pear on the market. Overall, the process is suitable, with the guarantee of appreciable economies of scale, to extract and characterize valuable quantities of pectins, dyes (betanins), seed oil, mucilage and concentrated juice from the prickly pear fruit, with a fair biological value.

Description

The introduction of technological innovation, from the management point of view, concerns the traceability of the product which will lead to the establishment of a portal connected to the project website containing all the information to which the final consumer can also access for traceability purposes and as proof of production and product quality. Farms will be guided and involved in the management modernization process of traceability to innovate and computerize and allow better business management.

Description

Introduction of innovative irrigation managing methods in the participant farms, and the use of residual mucilage from prickly pear waste as natural fertilizers, for the purpose of better environmental management.

Link utili

Titolo/Descrizione	Url	Tipologia
Sito web del progetto	http://ebioscart.eu	Sito web
Evento EbioScart del 31 maggio a Roma	https://www.ebioscart.eu/evento-ebioscart-del-31-maggio-a-roma-alla-camera-dei-...	Materiali utili
Layman's Report italiano/inglese	https://www.ebioscart.eu/materiale-divulgativo/	Materiali utili
Manuale divulgativo dell'innovazione del progetto EbioScart	https://www.ebioscart.eu/materiale-divulgativo/	Materiali utili
Le newsletter di EBIOSCAR - GO FICO	https://www.ebioscart.eu/newsletter/	Materiali utili
La brochure del EBIOSCAR - GO FICO	https://www.ebioscart.eu/materiale-divulgativo/	Materiali utili
Pagina web sul sito dell'Università di Catania	https://www.archiviobollettino.unict.it/articoli/ebioscart-bioprodotto-da-scart-...	Link ad altri siti che ospitano informazioni del progetto
La pagina facebook del progetto	https://www.facebook.com/EBioScart	Link ad altri siti che ospitano informazioni del progetto
EBioScart Go Fico: in onda su Tg2 a Sì Viaggiare	https://www.facebook.com/watch/?v=500838302066417	Materiali utili
EBioScart Go Fico: in onda su Tg2 a Tutto il Bello che c'è	https://www.facebook.com/watch/?v=524505186209438	Materiali utili

Titolo/Descrizione	Url	Tipologia
EBioScart presente con un intervento in onda nel programma Geo su Rai 3.	https://www.facebook.com/watch/?v=1487111471674736	Materiali utili
EBioScart presente al Fruit Logistic di Berlino 2022.	https://www.facebook.com/watch/?v=686630122556884	Materiali utili
EBioScart presente con un intervento in onda nel programma "L'Italia del Sud".	https://www.facebook.com/watch/?v=469654451629905	Materiali utili
Seminario di presentazione del progetto EBioScart GO-FICO	https://www.ebioscart.eu/wp-content/uploads/2021/09/Seminario%20di%20presentazi...	Materiali utili
EBioScart - GO FICO presso Santa Margherita di Belice (AG) dal titolo "La valorizzazione degli scarti agricoli nella Valle del Belice. Il case history ficodindicolo."	https://www.youtube.com/watch?v=px08BPXA3d8	Materiali utili
EBioScart - GO FICO presso il comune di Roccapalumba (PA) dal titolo "La valorizzazione degli scarti agricoli nei Monti Sicani. Il case history ficodindicolo."	https://www.facebook.com/watch/?v=393743185517050	Materiali utili
L'intervento in onda su Tgr Rai Sicilia parla di noi!	https://www.facebook.com/watch/?v=963829807548901	Materiali utili

Titolo/Descrizione	Url	Tipologia
EBioscart illustrato all'assessore regionale all'Agricoltura della Regione Siciliana, Luca Sammartino.	https://www.ebioscart.eu/ebioscart-illustrato-allassessore-regionale-allagricol...	Materiali utili
Giornata divulgativa EbioScart del 4 dicembre a Roccapalumba	https://www.ebioscart.eu/giornata-divulgativa-ebioscart-del-4-dicembre-a-roccap...	Materiali utili
Consuntivo di medio periodo per Ebioscart	https://www.ebioscart.eu/consuntivo-di-medio-periodo-per-ebioscart-con-la-secon...	Materiali utili