

Exploitation of by-products of grape-wine production chain

Riferimenti

Tipo di progetto

Gruppo Operativo

Acronimo

UVA PRETIOSA

Tematica

Gestione dei sottoprodotti agricoli

Information

Time frame

2019 - 2021

Durata

32 months

Partners (no.)

7

Regione

Toscana

Comparto

Viticultura

Localizzazione

ITI14 - Firenze

ITI1A - Grosseto

Costo totale

€352.006,96

Fonte di finanziamento principale

Programma di sviluppo rurale

Programma di sviluppo rurale

2014IT06RDRP010: Italy - Rural Development

Programme (Regional) - Toscana

Parole chiave

Farming/forestry competitiveness and diversification

Waste, by-products and residues management

Sito web

<http://www.uvapretiosa.eu/>

Project status

completed



Objectives

Optimizing the exploitation of raw materials produced in the vineyard, according to a circular scheme to enhance the noble components of the by-products and put the final waste back into play to produce energy, returning it to the vine in the form of nourishment. In particular:

- Increase profitability, competitiveness, diversification, thanks to the development of new products with market value (extracted from immature grapes, pomace and scum - quality wines from pomace and vinification scum, high quality grape seed oil)
- Realize prototypes and implement operational protocols for the exploitation of by-products and the reuse of waste

Activities

Innovative technologies and processing techniques will be introduced.

In particular, the transfer of innovation will be addressed for the exploitation of the following byproducts: Unripe grapes, Pomace, Lees, Grape seeds.

The introduction of innovations will be implemented through

- Visits in the field, in the cellar, in the company
- Prototype adaptation
- Testing tests
- Demonstration fields
- Meetings

According to a circular approach to the optimal introduction and recovery of resources, the final waste of the above processes will be reused to produce energy from biogas and, finally, the residue will be composted and used to restore organic substance to the soil.

Context

The Tuscan wine supply chain is based on a vineyard heritage of 54,152 hectares in production and 3.5 million quintals of grapes harvested (source

Regione Toscana 2017), the companies are about 26,120 (source Istat, 2010). Tuscany contributes to the national wine production with 2.6 million hectoliters, equal to 5% of the total (more than 48 million hectoliters) (Report UniCESV 2016). The 58 PDO and IGT attest to the choice to produce quality wines, also with the attention to the image (landscape and environmental) of the territory that drives an important regional agritourism movement: there are over 4,500 businesses in Tuscany compared to the total Italy of 22.661 (CREA 2017), many of which are enotourist.

At the same time, the wine sector is known for generating a high quantity of by-products and waste (pomace, lees, and other organic residues). In general, the pomace represents 20-30% of the weight of the grapes used, while it is estimated that about 5% of the total volume of wine produced constitutes the residue, which is more than 100,000 hectoliters per year.

The current destination of by-products and waste from the supply chain (distillation, energy production, soil improvers) exposes companies to economic losses deriving from the partial exploitation of the resources produced, generates management costs and can create problems from an environmental point of view. The question invests all vine-growing companies and its possible solution is part of a broader sustainable vision.

Partenariato

Role	Azienda	Address	Telephone	E-mail
Leader	Beringer Blass Italia srl - Castello di Gabbiano	Via di Gabbiano 22 50024 San Casciano di Val di Pesa - Loc. Mercatale FI Italy	055 821053	castellogabbiano@castellogabbiano.it
Partner	Società Agricola San Lorenzo Green Power srl	Via Aurelia Antica 50 58100 Grosseto GR Italy		info@greenpowersl.com
Partner	Società Agricola Isole e Olena srl	Località Isole 1 50021 Barberino Val D'elsa FI Italy	055 8072763	office@isoleolena.it

Role	Azienda	Address	Telephone	E-mail
Partner	Università degli Studi di Firenze - Dipartimento di Gestione dei Sistemi Agrari, Alimentari e Forestali	Piazzale delle Cascine 18 50144 Firenze FI Italy	055 2755658	direttore@gesaaf.unifi.it
Partner	Università degli Studi di Firenze - Dipartimento di Scienze delle Produzioni Agroalimentari e dell'Ambiente	Piazzale delle Cascine 19 50144 Firenze FI Italy	055 2755700	segreteria@dispaa.unifi.it
Partner	ERATA - Ente Regionale di Assistenza Tecnica in Agricoltura	Via degli Alfani 67 50121 Firenze FI Italy	055 293354	fedtosca.erata@confagricoltura.it
Partner	Vinidea Srl	Piazza I° Maggio 20 29028 Ponte dell'Olio PC Italy	0523 876423	info@vinidea.it

Pratiche abstract

Description

The project UVA PRETIOSA aims to find new grape-wine production by-products reuses technics using a circular scheme in order to valorize their noble components and to reuse wastes to produce energy in order to increase the economic and environmental sustainability of the process. The preliminary results of analysis done on lees shown that these are interesting due to their potential to produce energy (about 390 m3 of methane per ton of dry organic substance) and do not have any bacteriostatic or bactericide effect on microorganisms, therefore they can be used to produce biogas. Next steps will allow to investigate on logistical and economical aspects linked to production, collection and transportation of the lees to the biogas production facility, checking the quantity of lees compatible with the facility conditions of operation and the water content suitable for the lees transportation using a tank. Moreover, trials to produce oil from grape seeds have been performed. The machine can treat 300 kg of pomace quickly. Then, the grape seeds drying have to be quickly performed until the seeds reach 10-12% humidity to allow the oil extraction. In the next months, we will work to reduce the time needed for this operation.

Link utili

Titolo/Descrizione	Url	Tipologia
sito web del progetto	http://www.uvapretiosa.eu	Sito web
Video di presentazione del progetto	https://www.youtube.com/watch?v=XCYDhYceOZ0	Materiali utili
Video del webinar Uso di uva immatura per vini senza solfiti e valorizzazione di vinaccioli	https://www.youtube.com/watch?v=WIGzNtBlfis	Materiali utili
Relazione finale del progetto UVA PRETIOSA	http://www.uvapretiosa.eu/intranet/libretti/0/20614-PS-GO%2011-2017%20UVA%20PRE...	Materiali utili
Registrazioni del webinar tenutosi il Venerdì 8 aprile	http://www.uvapretiosa.eu/it/documenti/valorizzazione_della_vinaccia_d_uva_espe...	Materiali utili
Manuale delle buone pratiche di marketing	http://www.uvapretiosa.eu/it/documenti/manuale_delle_buone_pratiche_di_marketin...	Materiali utili
L'olio di vinaccioli e la filiera vitivinicola: soluzioni tecniche ed opportunità di mercato - Risultati del progetto	http://www.uvapretiosa.eu/it/documenti/l_olio_di_vinaccioli_e_la_filiera_vitivi...	Materiali utili
Valorizzazione dei sottoprodotti della filiera viti-enologica: uso del biodigestato per migliorare l'efficienza del vigneto - Risultati del progetto	http://www.uvapretiosa.eu/it/documenti/valorizzazione_dei_sottoprodotti_della_f...	Materiali utili

Titolo/Descrizione	Url	Tipologia
Prove di utilizzo di un estratto di uva immatura in alternativa alla solforosa per la maturazione in legno di vino Sangiovese - Risultati del progetto	http://www.uvapretiosa.eu/it/documenti/prove_di_utilizzo_di_un_estratto_di_uva_...	Materiali utili
Vini senza solfiti aggiunti addizionati di estratto di uva immatura: una valutazione della sostenibilità economica dell'innovazione del processo alla luce delle tendenze di mercato - Risultati del progetto	http://www.uvapretiosa.eu/it/documenti/vini_senza_solfiti_aggiunti_addizionati_...	Materiali utili