

Total of metric tons available in Europe (estimation):



Residues of apple
1443.7 T



Residues of pear
1461.7 T



Residues of vine
12200.9 T



Residues of apple/pear
2292 T



The AgriWasteValue team needs you !

In order to transform agricultural residues from the European North-West regions into bioactive compounds to use them in industrial sectors such as the cosmetic and nutraceutical fields, the AgriWasteValue team develops on its website a digital map that allows, mainly for cosmetics and nutraceutical fields, to see where and how much residues are available in North-West Europe.

We need information from vineyards and orchards in France, Belgium, Germany and the Netherlands to find out what residues from tree pruning can be converted into molecules of interest for use in cosmetics or food supplements. This information enables samples to be collected and the locations and quantities to be listed on our digital map (see picture above).

Questionnaires and contact

The questionnaires are available in French, English, Dutch and German. They can be found on the AgriWasteValue website : <https://www.agriwastevalue.eu/en/article/agriwastevalue-team-needs-you>

How does the map work ?

The digital map available on the AgriWasteValue website (<https://www.agriwastevalue.eu/en/raw-material>) allows to see, with one glance, where the agricultural residues of vines, pear and apple trees are available and in which quantities.

These information are interesting for cosmetic and nutraceuticals companies that are looking for natural and local by-products. By seeing where the biomass is located, they can see that it can be easy to get raw material not far from their facilities - in the North-West of Europe. The amount of raw material indicated on this map is an estimate, but it gives a pretty accurate overview of what is available.

The AgriWasteValue project really aims to transform agricultural residues from the European North-West regions into bioactive compounds in order to use them in key industrial sectors such as the cosmetic and nutraceutical fields and then in a second phase in the energy, chemical and agricultural fields.

Nutraceuticals as phenolic bioactive compounds

analysis of softwood bark and their possibilities of industry applications

Valorisation is a key principle of the biorefinery approach, and full valorisation of lignocellulosics should bring both economic and environmental benefits. A great amount of research in the last decades has been focused on **the extraction of bioactive compounds from different types of biomass or bio-waste, especially, of polyphenolic bioactive substances, which can be used for the production of nutraceuticals.** These compounds represent the main group of secondary metabolites in phytomass. While the bark is a rich source of bioactive compounds, which can find application in the field of food additives, cosmetics and pharmacological or agricultural products, millions of tons of bark are mainly burned or landfilled every year. The various ranges of bioactive nutrients present in natural products, such as bark, roots and needles, play a vital role in the prevention and cure of various diseases.



Abstract and full study available here : https://www.researchgate.net/publication/331471076_Nutraceuticals_as_phenolic_bioactive_compounds_analysis_of_softwood_bark_and_their_possibilities_of_industry_applications

Apple polyphenol supplements shown to alleviate UV-induced skin damage

Apple polyphenols (AP) and their major active compounds, procyanidins have several health benefits, particularly for ultraviolet (UV)-damaged skin according to a team of Japanese scientists.

In an Asahi Breweries-funded study, the research team found that an ApplePhenon extract prevented UV irradiation-induced skin pigmentation although a dose-dependent link could not be determined. phenols are used as compounds in cosmetic applications and are abundantly found in foods including fruits, vegetables, nuts, seeds, and bark, and beverages including red wine and cocoa.

In this study, the oral administration of ApplePhenon was effective in **inhibiting pigmentation by UV irradiation.** This is the second clinical study showing that this extract may be effective as a complementary support for healthy skin.

Dietary supplementation with vitamins, carotenoids, and phytochemicals such as **polyphenols are linked to improvements in skin condition** with astaxanthin said to reduce UV-induced moisture loss in humans.

Apples are considered an important source of procyanidins in the human diet.

More information on the study and the mechanisms of action here : https://www.nutraingredients.com/Article/2020/06/17/Apple-polyphenol-supplements-shown-to-alleviate-UV-induced-skin-damage?utm_source=newsletter_weekly&utm_medium=email&utm_campaign=From%2012-Jun-2020%20to%20



In a similar vein, poly-

Portugal: BLC3 develops biofuels from co-products of vines and trees

A project to use pruning residues from vines and fruit trees to produce advanced biofuels is being developed at the BLC Campus. The BLC3 association "is **developing a circular economy project in the agricultural sector in which it aims to use waste from agricultural activities**, such as pruning residues from olive trees, vines and fruit trees, to produce advanced biofuels" - told the president of the BLC3 Campus, João Nunes, to the news agency Lusa.

The project, "which can also potentially be applied to the forestry sector", aims **to use "agricultural waste" in the production of biofuels**. The production of energy will take place "efficiently and with much lower carbon emission levels than those generated by fossil fuels," stressed João Nunes. The biofuel produced by this method is "similar and equivalent to agricultural diesel," he explained.

"The primary sector is very important for the national economy and can grow further in

terms of competitiveness if we are able to use the resources we have available efficiently," the president continued.

In Portugal "we have 3.6 million hectares of land devoted to agriculture (39.5% of the total area), with over 360 thousand farms employed, equal to an average of 10 hectares per farm".

With these dimensions the sector is naturally "not very competitive in terms of economies of scale", and this has "a negative impact on the use of resources and carbon emissions".

In Portugal there are about 360 thousand hectares dedicated to olive growing, 178 thousand to viticulture and 45 thousand to fruit growing. According to João Nunes, these sectors generate "a high quantity of biomass, equal to about one million tons of waste per year". However, this is "a figure that is always difficult to quantify because it depends on agricultural production itself".

"Farms that generate large amounts of biomass have the potential and also the interest to produce their own fuel" to be used for example to power tractors, concluded João Nunes.

Innovation made in Portugal : the BLC3 Technology and

Innovation Campus is a non-profit association, founded in 2010. It is a "new model for the development of research and technological intensification of excellence. It is a place of incubation of ideas and businesses, as well as support for the economic fabric in the hinterland and rural areas".

More information on the BLC3 association and their projects : <https://www.blc3.pt/index.php>



The global market for natural cosmetics could reach \$48 billion by 2024

During a webinar, the research firm Kline presented its prospects for the global natural cosmetics market. This market has grown strongly in recent years.

According to Kline, it reached **\$39 billion in 2019** and is **expected to continue to grow in the coming years**.

The firm estimates that the natural cosmetics market will grow by

5.7% to reach **\$48 billion**.

Kline anticipates solid growth in all beauty care segments except fragrances. For the research firm, the market will also tend towards "truly natural" brands with a higher percentage of natural

ingredients and the elimination of substances considered undesirable.

"Technologies are evolving and so is the supply of natural ingredients. What was tolerated in a natural product ten years ago is not necessarily tolerated today," says Nikola Matic, head of Kline's Chemicals & Material practice.

The firm also believes that distributors will be increasingly demanding and raise their standards with regard to the composition of products and substances to be banned.

As far as Europe is concerned, importance will be given to certifications and **local production**.



Upcoming event



January 26, 2021 - Lille, France

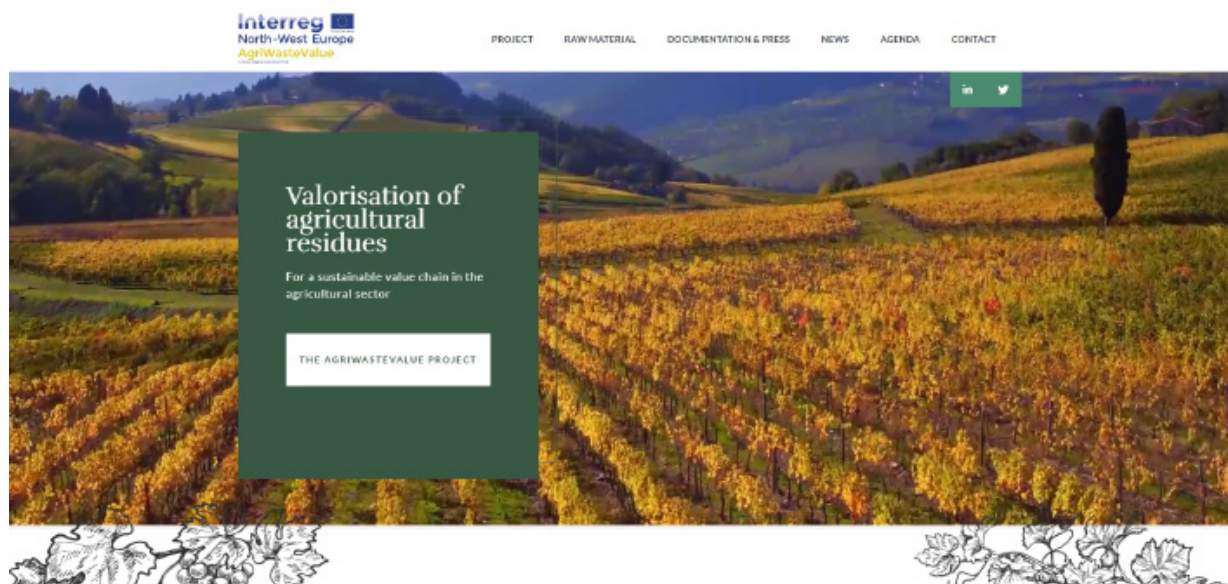
The mid-term event of AgriWasteValue, "Molecules of interest for cosmetics and nutraceuticals" will be held during NutrEvent, at Lille Grand Palais (France), on January 26, 2021.

On the agenda : results of AgriWasteValue project halfway through, interventions of a cosmetic and a nutraceutical companies, questions & answers sessions, networking...

Free event on registration (event in English)

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