

Atlas Vine and wine biomass. Languedoc-Roussillon wine area.

Realized par IFV (Sophie Penavayre and Emilie Adoir) for NoAW European project

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Summary

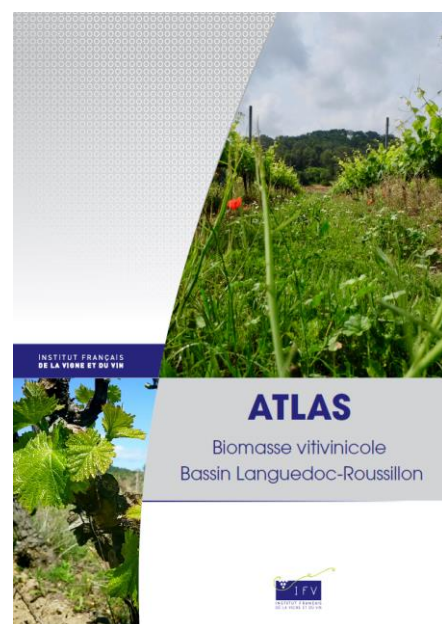
By-products are generated by vine and wine growing: vine shoots, strains, grape marc, wine lees. These by-products represent an irreducible part of biomass which can be valued from an environmental, agronomic and economic point of view.

The distillation of grape marc and wine lees, as well as the spreading, composting and methanization of grape marc have been studied by IFV at national scale since 2010 with the aim of answering the following questions: technical feasibility? environmental impact? cost for the winegrowers? regulatory constraints to respect, particularly in environmental matters?

The results of the tests and studies carried out within the framework of the national experiment on the valorization of wine by-products (IFV, 2010-2013) are summarized in the IFV Itinerary Book n° 5 : *“Marcs de raisins et lies de vin : Quelle gestion des sous-produits viticoles ?”*¹.

According to the note from the French ministries in charge of Ecology and Agriculture supplementing the circular of November 18, 2011, there is no strict ban on open burning of branches and strains within farms at national level. However, the practice must be limited and restrictions by decree may be issued depending on the prefectures, in particular during pollution episodes or in areas subject to an Atmosphere Protection Plan (PPA). To facilitate the development of alternatives, each region has established a Regional Biomass Scheme (SRB). Within the framework of the National Biomass Mobilization Strategy, the SRB aims to define shared objectives regarding the place of bioenergy, ensuring the right regional balance is achieved and a relevant articulation of the different uses of biomass, for the period 2019-2023. On the other hand, until 2014, the European obligation to eliminate grape marc and wine lees was translated for French winegrowers into the obligation to deliver all of the co-products to an approved wine distillery. Since August 2014, this obligation can be satisfied by distillation, anaerobic digestion, composting or spreading.

Supporting the wine industry towards a circular economy, the French Institute for Vine and Wine (IFV) has produced this Atlas of Languedoc-Roussillon wine by-products as part of the No AgroWaste (NoAW) project. It identifies biomass resources and recovery facilities in order to support operators towards relevant recovery routes by integrating the specifics of Languedoc-Roussillon, one of the study areas of the NoAW project. This atlas follows on from those published in 2017 and



2019 concerning respectively the Bourgogne-Beaujolais-Jura-Savoie, Champagne, Aquitaine and Charentes-Cognacⁱⁱ wine-growing areas, and the South-Westⁱⁱⁱ wine-growing area.

This atlas includes:

- a mapping of vine and wine biomass resources and valorization facilities,
- a directory of local players, making it possible to link operators who wish to develop their biomass and those involved in recovery.

The biomass studied in this atlas is:

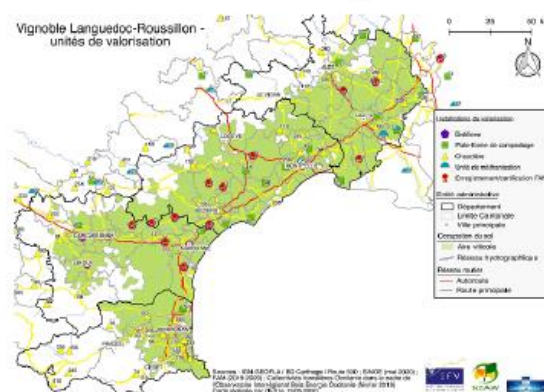
- viticultural biomass: branches and stumps (resulting from the uprooting of vines),
- wine biomass: grape marc and wine lees.

The recovery routes authorized by the regulations vary according to the different types of biomass. Five of them are listed, four of which require dedicated facilities: distillation, anaerobic digestion, composting and combustion in a biomass boiler. Innovative recovery methods are starting to develop, such as the extraction of active ingredients from branches or stumps, or the creation of bio-based materials.

The scope of the study is the Languedoc-Roussillon wine region. This extends over 4 departments: Aude, Gard, Hérault and Pyrénées-Orientales. This wine-growing area is divided into two wine-growing sub-basins, Languedoc and Roussillon, for a production variety of 69 denominations (46 AOC and 23 IGP).

A large part of the branches is crushed and reincorporated into the soil. The ways of recovering strains (resulting from the renewal of dead plants or the uprooting of plots) are limited and open burning remains the most widespread practice, due to the lack of relevant alternatives at the scale of the plant operation (equipment) or production basin (services). With a high removal rate in the wine-growing area, the strains represent a large volume (48,000 tMS per year on average). On average (between 2015 and 2018), 266,000 t of grape marc and 480,000 hl of liquid by-products (mud and lees) are produced. Fifteen distilleries are present throughout the basin. However, their distribution remains heterogeneous and concentrated between Aude and Hérault. Some wine-growing areas do not have it, especially at the Gard-Hérault border and in the Pyrénées-Orientales.

Les installations de valorisation de biomasse dans le bassin Languedoc-Roussillon



ⁱ https://www.vignevin.com/wp-content/uploads/2019/03/Itin-25-Modif_dec.pdf

ⁱⁱ <https://www.vignevin.com/wp-content/uploads/2019/03/ATLAS - Projet biomasse vitivinicole vF BD - Copie.pdf>

ⁱⁱⁱ <https://www.vignevin.com/wp-content/uploads/2020/10/Atlas-Biomasse-SO-2019.pdf>