



Guidelines for the incorporation and transformation of the agri-waste in the PHENOLEXA biorefinery

Raw material: **Vineyard pruning wastes**

COUNTRIES

Spain
Italy
France

PRODUCTION LOCATIONS

Big producers
Winemakers whit own vineyards

MAIN ACTORS

Farm owners
Pruning personnel

COSTS AND REQUIREMENTS



1.7 Tm/year per ha of pruning waste

COSTS:

- Production: 3,854.98€/ha, (3,156.82€/ha wine-growing activities)
- Rake swath-ing rake con-ditioner: 28.82€/h or 5.72€/ha
- Transport: 36€/h or 18.71€/ha
- Harvester: 25.94€/h or 55.42€/ha
- Chipping: 14.6€/h or 11.8€/ha

REQUIREMENTS:

- Planted area in these regions is distributed between small, medium and big farm
- Pruning: December until March

CURRENT PRACTICES ON WASTE MANAGEMENT

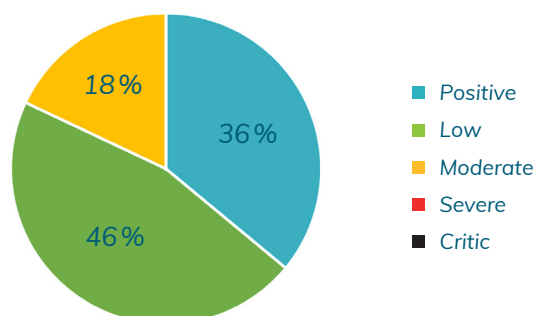
On-field mulching

ACTIVITIES

On-field management

- Manual pruning
- Mechanical chipping
- Mixing and incorporation into the soil

IMPACTS



This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101023225. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.



Guidelines: Vineyard pruning wastes



CURRENT PRACTICES ON WASTE MANAGEMENT

On-field burning

ACTIVITIES

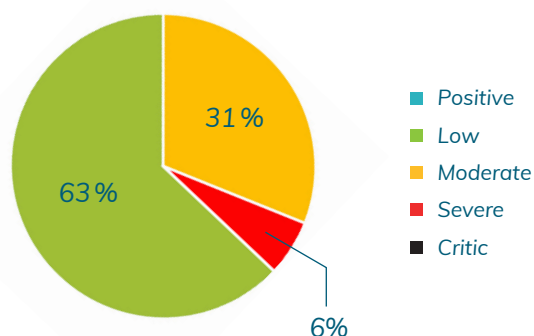
On-field management

- Manual pruning
- Mechanical collection

Collection and treatment of wastes

- On-field staking
- Shoots burning

IMPACTS



Pellets production

ACTIVITIES

On-field management

- Raking
- Trailer forwarder

Collection and treatment of wastes

- Transport to plant
- Raw material collection
- Natural drying

In-plant pre-processing

- Vine shoot crusher
- Trommel screening

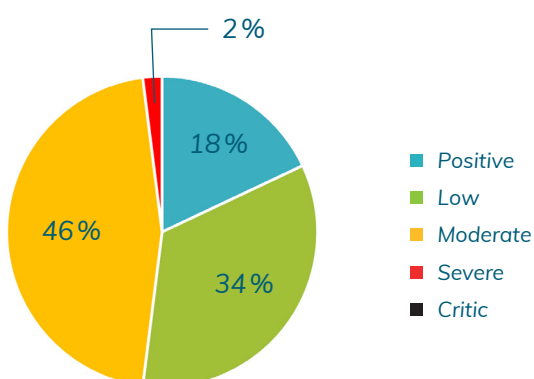
Cleaning of improper

- Recover stones and metals
- Recover micro sliver
- Production of pellets

Use of the resource

- Pellet transport to boiler
- Combustion

IMPACTS



RECOMMENDATION

Vineyard pruning residues: Take the stacked residues prior to disposal by combustion.



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