**VALOVITIS, the value of minority or endangered vine varieties in the Pyrenean foothill**

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The **VALOVITIS project** aims at improving competitiveness of the wineries from the Pyrenean Piedmonte area in a global market through innovation and differentiation. The grapevine genetic resources of endangered varieties in these territories are prospected and assessed, ensuring their safeguard by their introduction in existing repositories and vineyards studies.

A demonstration project. The assessment through field demonstration trials of the agronomic, technological and aromatic values of these minority varieties let transfer the knowledge to winemakers and professionals of the vine selection. These innovative varieties will provide a competitive advantage to SMEs of the local wine industry, keeping economic and social dynamism in the rural areas covered by the project.

**Step 1 Identification of singular varieties**

3 different techniques:
1. Experts visual identification (pictures) ➔ participatory approach available in the VALOVITIS project website: www.valovitis.eu
2. Projections ➔ Field work – Sampling and record
3. Molecular characterization ➔ Sampling and lab analysis in IFV facilities (Montpellier).

Sanitary analysis of the plant material tested.
This project was based on the preservation work developed in the Germoplasm Bank managed by the CTI (Aragon Government) and on the molecular characterization carried out by Aula Del – CSIC. Both of them associated partners in the VALOVITIS project.

**Desired characteristics:** Long cycle and late maturity varieties.

**Climate:** In Aragon predominates the continental Mediterranean climate, cold winters and hot, dry summers. However, the patterns of this climate are modified by the topography, ranging from the aridity of the Ebro valley to the permanent snow areas of the Pyrenees, through the succession of areas characterized by their altitude, orientation or relief. Atlas Agroclimático de Aragón, 2007.

**Step 2. Agronomic assessment – demonstration field trials**

Sanitary analysis of the plant material tested.

**Test of 120 plant material inputs from 45 different locations.**

Assessment of the agronomic production:
- kg grape/vine
- No grape/bunch
- No bunches/vine
- Weight of 100 grapes
- Total acidity, brix and pH of the grape must entering to the winery

**Desired characteristics:** Harvests with higher yields and minimum observed genetic variation.

**Step 3. Wine making**

Statistic analysis of the chemical parameters measured in the must entering the winery

**Chemical analysis were carried out by the Agrifood laboratory of the Aragon Government.**

Sensory analysis - 11 testers

**The varietal component determines the agronomic and sensory patterns and their singularity.**

**Step 4. Chemical and sensory wine analysis**

Statistic results show how the varietal effect prevails over the growth conditions of every harvest.

**Conclusions and future prospects**

- Data obtained in the 2 harvests monitored in the VALOVITIS project show the strength of the varietal component. It influences in the must quality in higher extent than the specific conditions of every harvest.
- Plant material coming from Ebro valley showed a better adaptation capacity to their replicability in warmer and drier conditions. Varieties obtained from northern areas (wetter and colder regions) find more difficulties in their introduction to controlled semi-arid conditions.
- 3 of the varieties assessed will be introduced in larger plots moving a step forward towards their commercial development.
- Aragón possesses a valuable varietal heritage. It is worth to continue working on its preservation and provide valuable tools to the local wine sector offering uniqueness and differentiation in the markets.

**Table 1. Varietals and varieties assessed.**

<table>
<thead>
<tr>
<th>Varieties tested*</th>
<th>White</th>
<th>Rosé</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>39</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>2017</td>
<td>32</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td><strong>TOTAL in VALOVITIS</strong></td>
<td><strong>43</strong></td>
<td><strong>28</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
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* Some varieties were tested in several wines and in several years.