

BODEGAS FONTANA

**STATUS OF THE AVANCE TERROIR
PROJECT ON MONTE CARBONERO
ESTATE**

MAYO 2006

PROYECTO
TERROIR



: **1.**

Objectives of the study

The Terroir Project in Monte Carbonero has been an on-going development since January 2005. The objects of the project are outlined below:

Objective 1:

To determine the *terroir* units in terms of the quality of wine and grapes on the Monte Carbonero estate, over an area of approximately 250 hectares. This study will form the basis of the strategic decision-making of the winery, particularly in the areas of marketing and sales, with regards to the production of quality wines.

Objective 2:

To determine the most suitable zones for future plantings.

Objective 3:

To position Bodegas Fontana as the undisputable leader of *terroir* studies in the Castilla la Mancha region.

2.

Methodology

The study into *terroir* units is based on methodology written by Girard (1983) and Girard and Vaudour (2001) regarding the concept of “*soil landscape*” of viticultural *terroirs*. This term was devised by Girard to incorporate a number of factors including the range of soil horizons, agrological factors and the elements of the landscape such as vegetation, human activity, morphology, hydrology, geology and geomorphology. A study of the spatial organization of these elements allows a categorization of the agrological coverage which, in this case, can be related to the quality of the wine.

The methodology was further complemented during 2005-2006 with studies carried in Burgundy by Pierre Becheler. His is considered to be an expert in *terroir* and is advisor to several vineyards including Montrose, Cos d’Estournel and Chateau Latour.

Finally, it is important to reemphasize the fact that this methodology has been used in Champagne, the Rhone, Burgundy and Chile.

The aim of the methodology is to establish a relationship between the physical cultivation environment (soil, morphology, petrology) with the quantitative and qualitative output from the vineyard, measured through the vigour of the vineyard and the quality of the grapes and wine obtained from it. (Figure 1)

In the case of this particular study, it is therefore necessary to analyse the following factors in some depth:

- 1) Morphological units of the estate and its environment.
- 2) Spatial agrological zoning of the estate based on the high-resolution satellite data.
- 3) A detailed agrological-viticultural study on land based on the descriptions of trenches of between 1.5 and 2m deep. This will form the basis of a database (descriptive, chemical and physical information) to validate point 2. In a second stage, a statistical analysis of the described solums, an agrological and morphological analysis of the zones using SIG (Geographical Information System) and an analysis of the vigour of the vineyard and the quality of the root development are needed.
- 4) Determination of the potential *terroir* units in terms of edaphic aptitude, viticulture and the quality of grape. Setting up of monitoring zones.

Oenological validation of grapes and wine of the *terroir* units through a sensory analysis of micro-vinifications by sector of aptitude.



Figura 1. Base metodológica simplificada

MEDIO FISICO VIÑEDO	Physical Vineyard Environment
COMPARTIMIENTO DE LA VIÑA	Vine performance
VITICULTURE	Viticulture
ENOLOGÍA	Oenology
UNIDADES FUNCIONALES DE TERROIR ADAPTADAS A LA REALIDAD DE LA BODEGA Y A LINEAS DE DESARROLLO	Functional <i>terroir</i> units adapted to the practicalities of the winery and to the lines of development.

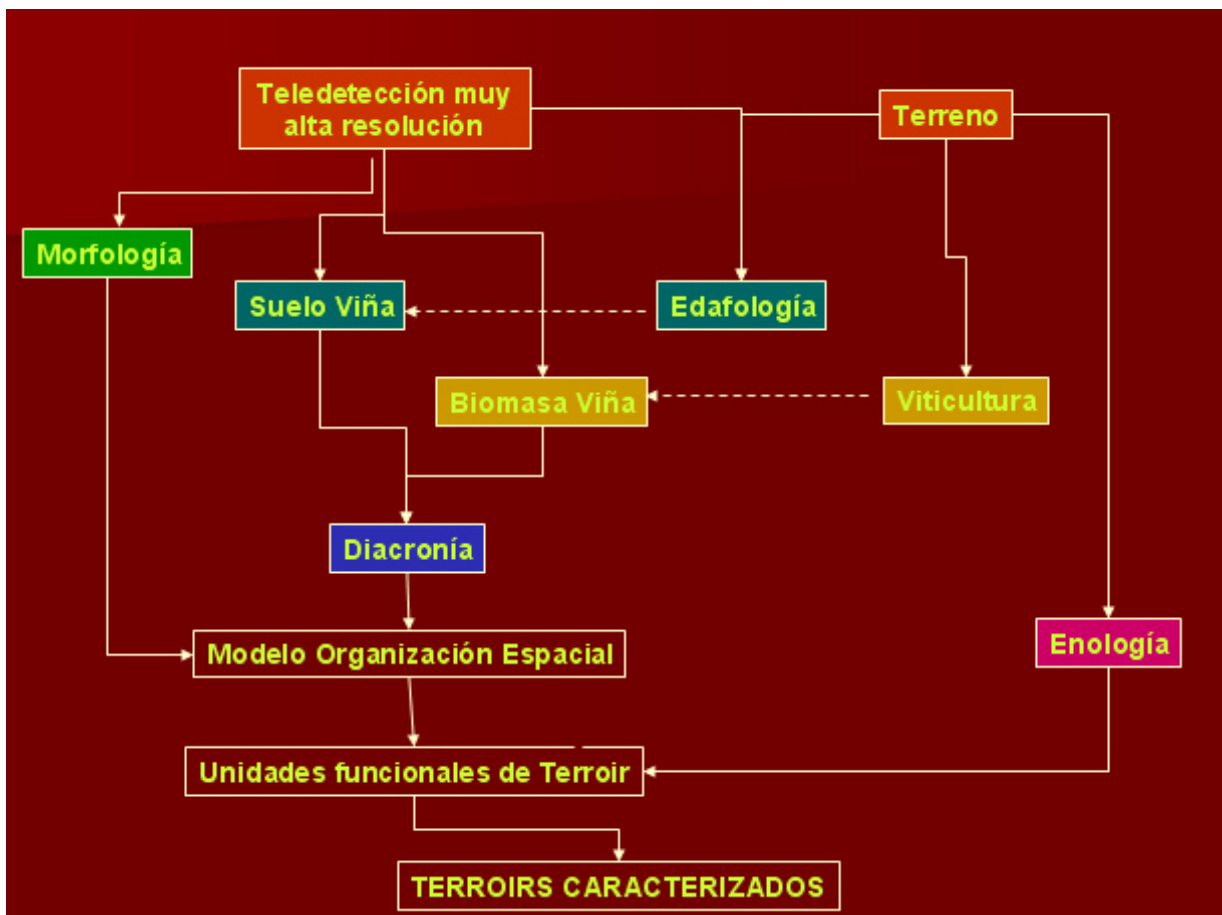


Figure 2: Detailed work methodology

TELEDETECCION MUY ALTA RESOLUCION	High resolution remote sensing
TERRENO	Terrain
VITICULTURE	Viticulture
EDAFOLOGIA	Agrology
ENOLOGIA	Oenology
MORFOLOGIA	Morphology
SUELO VIÑA	Vine Soil
BIOMASA VIÑA	Vine Bio-mass
DIACRONIA	Diachrony
MODELO ORGANIZACION ESPACIAL	Spatial Organizational Model
UNIDADES FUNCIONALES DE TERROIR	Functional Terroir Units
TERROIRS CARACTERIZADOS	Characterized Terroirs

3. *Expected results*

The results of the study are expected by the middle of 2007 and will correspond to:

Delimitation of the planted estate into zones of viticultural-oenological management according to level of quality (3, 4, or 5 to be defined by the company) called *micro terroirs*.

The setting up of a monitoring system for future oenological monitoring of each *micro terroir*. (Follow-up analysis of grape ripeness and of the polyphenols.)