



Bulletin of technological demand R&D&i



Connecting wine industry companies and R&D&i suppliers

Nº1 / FEBRUARY 2014



Correction of soil acidity

Kind of demanding company and region: Winery in Extremadura (the contact will be made through the project animator of Castilla y León)

Kind of collaboration wanted: Contract service

Summary of the demand: Natural acidification of soil environment is a pedogenic process which may be favoured by poor soil management. It provokes negative consequences on vines from a nutritional standpoint. The demanding winery that owns a lot of vineyards planted on soils with acidic conditions, is willing to set up an appropriate program for the use of liming amendments, in order to improve nutritional conditions for the vine. This task could be carried out in the framework of contract services, but the company is also interested in looking for other funding which might help to build up investigation projects. These programs could aim at studying in detail the nature of the soil, establishing optimal strategies of liming and investigating the implications and impacts of the amendments on the vine, grape quality and the final wine product.

Improvement of downy and powdery mildew attacks prediction based on climatic and meteorological data

Kind of demanding company and region: Winery (Castilla-La Mancha)

Kind of collaboration wanted: R&D project

Summary of the demand: The winery would like to know in advance the probability of downy and powdery mildew attacks based on weather and climatic data of their geographical location in order to improve the management of these diseases. The prediction will help to reduce the use of expensive fungicides that are not always necessary, as they do not always affect their vineyards and particularly in the neighboring areas.

Simplification and improvement of methods for grape quality control

Kind of demanding company and region: Winery (Castilla-La Mancha and North of Portugal)

Kind of collaboration wanted: R&D project

Summary of the demand: The winery needs to ensure that the grape quality complies with the optimum characteristics for maintaining a continuous standard

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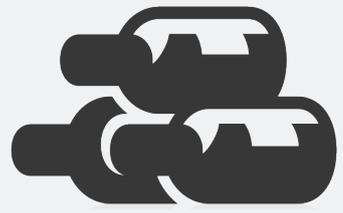
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and homogeneity in its product. The winery is interested in both techniques affecting work on vine and grape, and processes in the winery to maintain the continuity and exert the necessary improvements based on the parameters and results obtained in the short-medium term.

Studies of grape varieties autochthonous to Rías Baixas as an alternative to Albariño

Kind of demanding company and region: Winery (Galicia)

Kind of collaboration wanted: R&D project

Summary of the demand: Within the D.O. Rías Baixas, the Albariño variety accounts for about 95% of the total production. Taking into account that processes and technologies used in the elaboration of Albariño wines are always similar, it is getting increasingly difficult to create distinctive cuvées. Multivarietal white wines are generally well perceived by consumers. The winery believes local varieties permitted by the regulation council of the D.O. and already planted in the vineyard could be an interesting option for diversification. The winery is considering its participation in a research project that will aim at understanding the agronomical and enological behaviors of these minor grape varieties and their ability for blending. It will allow to provide to the market, personal and distinctive multivarietal wines.



Rotundone analysis in grape and wine

Kind of demanding company and region: Technical Institute (Midi-Pyrénées)

Kind of collaboration wanted: Contract service or R&D project

Summary of the demand: Rotundone is a powerful aromatic compound that smells of black pepper, identified for the first time in 2008 in an Australian Shiraz wine. Currently, few laboratories specialized in wine aroma are able to analyze this compound. A research center in viticulture and enology located in the French Midi-Pyrénées region, has identified recently the presence of this compound in several local grape varieties. This institute is looking for a laboratory with ability to carry out this kind of analysis as a contract service or with willing to participate in European research projects. The annual number of analysis to be performed could exceed 50 samples.

Improvement of capacity, temperature control and filtration

Kind of demanding company and region: Winery (Alentejo)

Kind of collaboration wanted: Technological

Summary of the demand: The winery has the following equipment and investment needs: new fermentation tanks

to increase its capacity, post-harvest cold storage facilities for grapes, system of temperature control for white fermentors. In order to simplify and make more efficient the filtering process prior to bottling, the winery needs a tangential filter equipped with polymeric membranes.

Replacement of sulfur dioxide: innovative approaches to conservation substitutes

Kind of demanding company and region: Winery (Castilla La Mancha)

Kind of collaboration wanted: R&D project

Summary of the demand: One of the main current issues is the growing rejection by consumers of wines containing sulfites. Trends go to more and more healthy and natural products. Reducing or eliminating the use of SO₂ in wines would be a key element to position the winery's products on the market with high values and competitive advantages.

Use of liquid oak extracts as an alternative to oak barrels and chips

Kind of demanding company and region: Auxiliar industry from Poitou-Charentes (the contact will be made through the project animator of Castilla-La Mancha)

Kind of collaboration wanted: R&D project

Summary of the demand: The demand of this company is to develop the use of oak liquid extracts instead of barrels or chips. Everyday winemaker's work would be facilitated by not having to use and manipulate chips, but rather directly oak extracts. The use of standardized and homogenized liquid extracts should help to insure a greater and constant quality from one year to the other.

Improvement of colour and aroma stabilities on white and fruit driven red wines

Kind of demanding company and region: Winery and wine marketer (Castilla-La Mancha)

Kind of collaboration wanted: R&D project

Summary of the demand: The demanding winery produces and sells large quantities of bulk wine throughout the year (about 50 million liters). It encounters troubles from May to June as its wines progressively lose colour and flavour and are therefore less competitive than wines from Italy that usually have greater stability.

Identification and isolation of indigenous yeasts

Kind of demanding company and region: Winery (Galicia)

Kind of collaboration wanted: Collaborative project

Summary of the demand: The winery is keen to improve the organoleptic characteristics of its wines through a program of indigenous yeast strains selection. With the objective to develop innovative, personal, different and exclusive wines, this work would consist of the isolation,

identification, characterization and selection of the best yeast in each vineyard. The winery seeks collaboration with a research group to carry out the project with the support if possible, of any kind of public funding.

Elaboration of sparkling wines with the Mencía grape variety

Kind of demanding company and region: Winery (Galicia)

Kind of collaboration wanted: R&D project

Summary of the demand: The pursuit of innovation through the development of new products is a main issue among Galician wineries as it allows to position themselves in a more and more competitive market. The winery is interested in developing a sparkling wine with the Mencía cultivar under the protection of the D.O. Valdeorras. This demand includes the study of several vineyard management techniques, the determination of the optimal picking date and the test of different methods of elaboration in order to obtain a very high quality product. In order to carry out this project, the winery is looking for a research team with expertise in this field.

Automation of density determinations during alcoholic fermentation

Kind of demanding company and region: Winery (Galicia)

Kind of collaboration wanted: R&D project

Summary of the demand: During the alcoholic fermentation, the density control of grape must is an analytical determination that is performed at least once a day. This represents a significant commitment from the cellar in terms of time spent. Taking into consideration that nowadays some expensive devices are available on the market for this kind of application, the winery is interested in participating as a partner in any projects working on this topic. Currently, a research team from the University of

Galicia is working on the development of sensors for the automation of density determination. Thus, the possibility of business-university collaboration can be of great interest for both parties.



Subproducts

Innovative and/or high value-added grape derived products

Kind of demanding company and region: Winery (Castilla-La Mancha)

Kind of collaboration wanted: R&D project

Summary of the demand: In periods of grape overproduction, the interest of the winery is based on the detection, analysis and potential for exploitation of highly valued grape derived components in the fields of pharmaceuticals, cosmetics, nutrition. The winery is also considering any other possible research areas that may open new business opportunities.

Valorisation of by-products

Kind of demanding company and region: Winery (Castilla-La Mancha)

Kind of collaboration wanted: R&D project

Summary of the demand: Waste management in the operation of the winery began to be a serious problem and justify the research of alternatives to reduce the economic and environmental cost of their elimination. The use of this waste as source of energy in the facilities or raw material to obtain value-added products shall help improving the economic and/or functional performance of the demanding winery.



WINETech PLUS is an European project funded by the EU under the Interreg IV B SUDOE program.



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