

IMPROVEMENT OF VINEYARD MANAGEMENT AND CROP PROTECTION AS FACTOR OF MARKET COMPETITIVENESS

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Grapes and wine production vines are now more and more requested to answer not only the needs of quality and price to meet the demands of the market but must also comply with a series of increasingly stringent standards imposed by legislation aimed at Italian and European environmental protection and health of both consumers and operators of the production chain.

This scenario is also considered that there is a greater and more widespread awareness to the issues of environment and health that increases the demand for products perceived as safer such as organic and biodynamic.

Legislative developments made in 2011 will lead to the entry into force of a new European regulation that will lead to a significant reduction in pest control products in the market, allowing the use of only the most safe for environment and human health. In the implementation phase is also the new Directive on the sustainable use of pesticides, whose rules state that each State should enact, will provide answers about the criticality in the system and affecting the value and use of pesticides, natural contaminations, environmental protection, protection of operators and food security.

In this framework, the ethical aspects of production and their environmental and social sustainability will be increasingly important, to satisfy those needs, the Unione Italiana Vini with the support of the University of Milan and with the help of Bayer CropScience has launched a project with some of the most important of national wine companies with the aim of providing new elements that will increase the competitiveness of the wine companies in domestic and international markets.

The working areas of the project want to focus attention on the fact that the crop protection of the vineyard comes from a series of interconnected factors and has to adjusted to provide flexible answers depending on the site of cultivation and the pursued enological objectives. Moreover the canopy management vines has to reach the proper yield to vigour balance to allow not only better quality of grapes but also to prevent fungal diseases and to optimize the effectiveness of interventions for the application of pesticides. It was therefore defined, also including new technologies for Precision Viticulture, an accurate detection system of the vegetative status of the selected vineyards, made by agronomists of Ager SC - Agriculture and Research, to determine some operational parameters of the canopy of the vineyard and to establish some limits optimal for the best adjustment of the sink-source balance.

On selected vineyards a crop protection protocol was defined by Bayer CropScience technicians, which already responded to the characteristics that will be imposed in the coming years with the entry into force of new EU rules, so for example products for defense against Downy Mildew were low in copper and dithiocarbamates free. They had a toxicological classification as favorable as possible. Moreover much importance has also been directed towards preventing the onset of diseases which could lead to the presence of natural pollutants, such the ochratoxin, in the grapes. Finally, the grapes and wines from these vineyards, monitored and conducted according to the strategies already described, in comparison with the control normally managed plots, will be analyzed to assess the presence and possible levels of residues and other contaminants from the laboratories of the Unione Italiana Vini.

First results indicate that there is a strong attention from the companies involved to adopt management techniques directed to raising the quality of the vineyard of grapes and wine which enhance both the effectiveness of crop protection protocols of low environmental impact . In the first year of implementation of the project the proper management of the vineyards has led to obtain sound grapes are able to produce healthy and quality wines and may also have a good economic competitiveness.

Thanks to the obtained results will be possible to also develop a "model of integrated management to sustainable grapes and wine production, i.e. a "format" which identifies the critical issues involved in managing the vineyard with regard to hygiene issues on health, safety and quality of the product over, environmental issues and those relating to human health and the protection of the grower during the stages of vineyard management.

This project want to be a great opportunity for wineries and for the entire vinicultural production chain because it allows for an anticipation of both pieces of legislation and market trends by addressing the needs of consumers in terms of food safety and environmental respect. It also wants to be a first step towards certification of the production processes (from the vineyard to the bottle) as a further guarantee of security (food, operators and environmental) and transparency in the ethics of production. Finally, demonstrating the sustainability (understood in its environmental, social and economic) of wine production, it intends to provide objective data for communication to consumers and media in general.