

# THE FUTURE OF ORGANIC WINE MAKING AND THE DISEASE TOLERANT GRAPE VARIETIES: AN OVERVIEW OF THE GERMAN PRODUCTION AND MARKETABILITY

Philip Sloan  
International University of Applied Sciences Bad Honnef-Bonn  
Bad Honnef, Germany  
e-mail: p.sloan@fh-bad-honnef.de

Willy Legrand  
International University of Applied Sciences Bad Honnef-Bonn  
Bad Honnef, Germany  
e-mail: w.legrand@fh-bad-honnef.de

and

Karina Krauss  
International University of Applied Sciences Bad Honnef-Bonn  
Bad Honnef, Germany  
e-mail: karina.krauss@fh-bad-honnef.de

## ABSTRACT

In a timeframe of two decades, many new wine-producing countries made such progress in enhancing quality and production that they became fierce rivals of the long-established European stronghold. Parallel to this, the wine industry is also considering its impact on the land it heavily uses. While the wine industry is generally not perceived as major environmental polluter, soil erosion, pesticide and fertilizer usage and water usage are the principal environmental concerns. For some grape growers, this mean reducing chemical inputs in production practices; for other winemakers it may mean greening the operations and using more renewable energy sources. The wine industry is faced with a double challenge: how to distribute the product effectively and at the same time ensure a proper living to the winemakers in a world of over production; customers are flooded with wines. This abundance of new wines has awakened wide interest; wine appreciation courses are mushrooming, amateurs are searching for the perfect wine-food harmony, great vintages are matched to grand occasions. However, consumers find it more difficult to find the right bottle; and while label, producer and vintage play an important role in choosing a wine, there is growing tendency to question whether the wine is a natural product or a mere concoction of an over-zealous winemaker.

In a stride to produce more natural and organic wines, many winemakers are looking into alternative grape varieties, particularly disease tolerant varieties or PIWI cultivars. The acronym PIWI is a short form from the German word *pilzwidestandsfähig* literally translated as *disease tolerant*. These cultivars are crossings between European cultivars (viniferas) and disease resistant American species. The disease tolerant cultivars are made by traditional crossbreeding without the aid of genetic transfers. The goal of PIWI cultivars is to provide a certain resistance or tolerance towards the fungal diseases that are present in a natural environment. Traditional grape varieties such as Pinot Noir, Chardonnay or Riesling are prone to disease infestation necessitating a half-dozen to a dozen fungicides treatment over the growing season. The two most common and devastating disease in continental Europe, which require continuous protection against, are downy and powdery mildew. The result is increased toxicity levels entering the environment. Germany's grape growers and winemakers have understood the necessity of working with alternative methods partly as a response to the society's general interest in organic products. Indeed, Germany's interest in organic certified food has grown tremendously since the early 1990's. And while organic consumption comprised in 2007 only three per cent (equals € 5 mrd.) of the entire German food consumption (Miersch, 2008), organic producers are occupying a niche market and this market is bearing great potential (Wier & Calverley, 2002). Currently, 1,73% of the total cultivated area for the purpose of making wine in Germany is done so using organically certified methods (Ecovin, 2008). Current statistics regarding the share of PIWI cultivars are not available or not researched.

There is a general paucity of literature in the field of disease resistant cultivars and its marketability. Hence, the purpose of this paper is to provide an overview of the PIWI cultivars in Germany with a particular interest in

researching the current marketability. The study population was restricted to the owners of wineries which are members of ECOVIN, Germany's largest organic association representing 195 wineries as well as members of the Association of German Prädikat Wine Estates (*Verband Deutscher Prädikatsweingüter*, short VDP), representing 200 wineries, many working with organic or biodynamic techniques. A questionnaire comprising three sections was developed. A pilot test with local winemakers from the wine region Palatinate in Germany was conducted to enhance the reliability and validity of the questionnaire. In the final stage of the survey, the questionnaires were emailed to the owners of wineries. Findings of the survey provide a clear picture of the current positioning of PIWI cultivars in the market and provide hints on the steps to take to encourage and promote the exchange of scientific and practical findings concerning disease tolerant grape cultivars nationally and internationally.

**Key Words: Disease Tolerant Grape Cultivars Production Marketability**