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InfoWine Video Says Bioprotection Works Best When Wineries Inoculate Early at 50 mg/L or More

The report says wineries should adapt each dose to fruit condition, spoilage risk, and the wine’s chemical and sensory profile.

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InfoWine has published a technical video that says the success of bioprotection during winemaking depends largely on two operating decisions: how much microbial starter is used and how early it is added in the process. The material, taken from a presentation by wine microbiologist Isabelle Masneuf-Pomarède, reviews trial results from different

inoculation strategies and says wineries need to match their approach to the microbiological conditions of each batch.

The report focuses on bioprotection as a tool for microbiological control during the early phases of vinification. According to the video, the practice can begin very early, including directly on the grapes, during mechanical harvesting, or while fruit is being transported to the winery. It can also be applied later, during crushing, pressing, or juice settling. The central point is that earlier use can help a selected microbial population establish itself before unwanted organisms gain ground.

Masneuf-Pomarède says the dose is a key factor because the protective effect depends on rapid implantation of the chosen microorganisms. The video cites about 50 mg/L as a minimum reference dose and says that level may need to be increased when grapes arrive in poor sanitary condition or when the microbiological pressure is high. In practical terms, the message is that a low dose may not be enough to dominate the environment quickly, especially when native spoilage organisms are already present in significant numbers.

The video compares several ways of using bioprotection and shows that results are not uniform across all situations. Instead, the effectiveness changes with the timing of the addition, the inoculation rate, and the microbial status of the harvest. That means a strategy that performs well in one winery or one lot of grapes may not give the same outcome in another. The report presents this as a reason for wineries to avoid fixed protocols and instead adjust their decisions to the conditions of each fermentation.

Among the organisms highlighted in the analysis are Hanseniaspora, Brettanomyces bruxellensis, and acetic acid bacteria. The video says bioprotection can help limit the development of these microorganisms during pre-fermentation stages. That matters because those populations are associated with quality risks if they grow unchecked. Brettanomyces bruxellensis, in particular, is closely watched in wineries because of its role in off-flavor formation, while acetic acid bacteria can contribute to volatile acidity and related spoilage problems.

The material does not present bioprotection only as a question of reducing unwanted microbial counts. It also says wineries should evaluate the effects of the practice on the wine itself, including its chemical composition and sensory profile. In other words, a strategy cannot be judged only by whether it suppresses spoilage organisms. It must also be assessed for its impact on aroma, flavor, and broader wine style. The report says this wider evaluation is necessary because the microorganisms used for protection become part of the fermentation environment and can shape the final product.

That point is important for wineries trying to balance microbiological security with product identity. The video indicates that the choice of dose and timing may influence not just control of unwanted species but also how the wine develops chemically and sensorially. For that reason, the report frames bioprotection as a technical intervention that needs to be integrated with the overall production objective, rather than treated as a simple preventive measure.

The presentation also places emphasis on the condition of the fruit at intake. When harvest health is weaker, or when the incoming load carries higher microbial pressure, the report says wineries may need to reinforce the inoculation strategy. That could mean moving the application to an earlier stage, increasing the dose above the baseline reference, or both. The aim is to secure early dominance of the protective population before competing flora become established.

Mechanical harvesting and transport are described as especially relevant points for intervention because they can expose grapes and juice to conditions that favor microbial activity before formal fermentation begins. Applying bioprotection at those moments may give wineries a chance to act before later cellar operations, rather than waiting until the must has already developed a more complex microbial population. Crushing, pressing, and settling remain possible points of use, but the report suggests that earlier application may offer a practical advantage when rapid implantation is the goal.

InfoWine identifies Masneuf-Pomarède as a professor and researcher specializing in wine microbiology and the microbial ecology of grapes and wine. Her scientific work has focused on wine yeasts and on the development of bioprotection strategies for

vinification. The technical video reflects that research focus by linking operational choices in the cellar with measurable microbiological, chemical, and sensory outcomes.

The report arrives at a time when wineries continue to look for more precise ways to manage early fermentation risks without treating all lots in the same way. Its message is not that one formula works everywhere, but that bioprotection can be effective when the microbial population is introduced in sufficient numbers and at the right moment. The evidence presented in the video points to an approach based on adaptation: the winery must consider harvest condition, microbial pressure, production stage, and the intended wine profile before deciding how and when to apply the treatment.

By presenting dose, timing, spoilage control, and wine quality in the same discussion, the video turns bioprotection into a broader winemaking management issue rather than a narrow lab measure. The practical implication for producers is that decisions made at the earliest stages of handling grapes may affect not only microbial stability but also the character of the finished wine.