

F.40. THE INFLUENCE OF THE FUNGUS *BOTRYTIS CINEREA* ON THE PRODUCTION OF SWEET WINES

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Abstract. Everyone knows about cheeses with mold, but few people know that there are wines that are made from moldy grapes. The fungus *Botrytis cinerea* attacks grape berries with the so-called “noble rot”. After the rot attacks the grapes, it begins to dry gradually out. By the time, the harvesters come for them. They have turned into shriveled balls covered in fluffy mold. This fungus naturally changes the ratio of water to sugar in the berry, making it an ideal base for creating sweet wines. The process of drying out the berry and increasing its juice concentration changes the metabolism of *Botrytis* mold and stabilizes its development. During the process, several antibiotics are released, including botricin, which prevents other bacteria and fungi from interfering with the formation of flavor and forming unpleasant phenolic tones. *Botrytis*, which feeds on acid and sugar, makes chemical changes in the grapes, creating new elements that change the bouquet of the wine. Since the mold consumes more acid than sugar, the acidity of the wines decreases. Besides, the *Botrytis* mold produces a special substance that prevents alcoholic fermentation. In the word obtained from partially dried berries, whose chemical composition remains unchanged, alcohol-resistant yeast bacteria can ferment sugar into alcohol up to 18-20 °C. Nevertheless, due to the influence of mold, fermentation will stop earlier, and the wine will contain from 13.5° to 14° alcohol. If the harvested grapes contain even more sugar, the fermentation will stop even faster, and the wine will turn out sweeter, with low alcohol content. The wine becomes not only fruity and to some extent floral, but also acquires characteristic notes of liqueur, toast, ginger, and honey. Factors predisposing host tissue to infection by *Botrytis cinerea* included biotic (insects, invertebrates, and humans) and abiotic (nutrition, chemical, and cultural practices). Controlling insects (grape berry moth), modifying microclimate (leaf removal, special pruning), and reducing substrate availability for this mold have significant impacts on *Botrytis cinerea* survival and epidemic development.

Keywords: acidity, *Botrytis cinerea*, bouquet, grapes and sweet wines.

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