Science, selection, and traditions: The Institute of Viticulture and Winemaking in Pleven revealed the magic of Muscat varieties

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With a large-scale exhibition of 70 grape varieties, the Institute of Viticulture and Enology (IVE) in Pleven marked the beginning of the fourth edition of the Wine and Farmer's Delicacies Festival "Time for Wine". The event brought together the scientific community, producers, and officials, focusing on the long-standing work of Bulgarian breeders and the fundamental importance of scientific research for the development of the viticulture and wine sector.

Scientific Contribution and the Evolution of Bulgarian Breeding

During the Open Day dedicated to Muscat varieties, IVE presented a total of 49 exhibits – 27 table grape, 17 wine grape, and 5 from new breeding programs. The collection was significantly supplemented with varieties provided by the Institute of Agriculture in Kyustendil and the Institute of Agriculture and Seed Science – Obraztsov Chiflik.

An impressive scientific aspect is the fact that only about ten of all 70 presented varieties are not of Bulgarian breeding. As noted by Assoc. Prof. Dr. Iliyan Simeonov from the Pleven Institute, the exhibition provides a unique opportunity to trace the history of native breeding in its complete chronological order – from the first created varieties to the most modern scientific achievements.

Special emphasis in the exposition was placed on Muscat varieties. According to Assoc. Prof. Simeonov, they rank among the oldest and first culturally cultivated and selected grape varieties worldwide. In Bulgaria, the oldest representative of this group is Tamyanka, while internationally, Muscat Ottonel remains the most famous. The "code" of the Muscat is linked to its DNA profile, which determines the vine's ability to synthesize specific aromatic compounds in the grape berry skin.

The wines created from these varieties are distinguished by a specific and very well-expressed aroma, which makes them widely known and preferred by connoisseurs.

To delve deep into the chemistry of wine and the biochemical processes in the grape itself, we need to know exactly what terpenes are (and more specifically, monoterpenes such as *linalool, geraniol, and nerol*), which physically create the Muscat aroma. Terpenes are organic compounds that impart notes of rose, citrus, orange blossom, and exotic spices in wines. They exist in grapes in two forms – free (which we perceive immediately) and bound (which have no aroma until "unlocked" during fermentation). Besides creating an incredible aroma, terpenes have important biological functions. For the vine itself, they serve as a defense mechanism against fungal diseases and pests, as well as an attractant for pollinators. For humans, terpenes are known for their antioxidant and antimicrobial properties, which provides additional biological benefits.

The two lectures at the IVE Open Day created a complete scientific portrait of the Muscat:

"The Enigma of Muscat Varieties: The Code of an Aroma", presented by Assoc. Prof. Dr. Iliyan Simeonov.

"Aromatic Potential and Biological Effects of Terpenes", delivered by Assoc. Prof. Dr. Dimitar Dimitrov.

Visitors to the Open Day had the opportunity not only to familiarize themselves with the scientific reports but also to taste grapes from various varieties, as well as selected wines from Muscat varieties provided by Bulgarian wineries. The event was also attended by the Deputy Minister of Agriculture, Yanislav Yanchev, who highly praised the institute's role in preserving valuable genetic material.

Economic Challenges and the Industry's Response

Despite the high scientific achievements and the good harvest this year, producers are facing serious market trials. The National Association of Bulgarian Vinegrowers (NABV) has raised the alarm that the grape harvest has already begun, but the grape market is practically non-existent. The weak interest from winemakers and the accumulated quantities from previous campaigns raise concerns that purchase prices will remain below the cost of production.

The industry's main demands to the Ministry of Agriculture and Food (MAF) include clarifying the criteria for excluding viticulture from the de minimis emergency aid amounting to EUR 42.6 million, as well as ensuring adequate crisis aid based on updated technological maps. Vinegrowers also insist on strict control over grape imports to protect the domestic market.

State Measures and Support Prospects

In response to the tension in the sector, Deputy Minister Yanislav Yanchev presented to the media the specific measures the state is undertaking:

Financial Support: Funds are envisaged under the so-called "Iranian aid", as well as under the liquidity intervention with an expected application period at the beginning of 2027, with the aim of the total resource with national co-financing reaching EUR 35 million.

Import Control: Joint inspections are being conducted with the Customs Agency and the National Revenue Agency on vehicles, shipping documents, invoices, and declared values of production.

Expanded Climate Compensation: The scope of support for farmers is being expanded, and in addition to fully destroyed areas (100%), this year farms with over 30% loss of production will also be compensated.

Deputy Minister Yanchev emphasized the need to achieve a market price that covers production costs and called on producers to actively associate and cooperate for greater sustainability.