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An inquiry on Blueberry (Vaccinium corymbosum L.) diseases in western Georgia

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Abstract

Blueberry holds a significant place among the berry cultures, with year-to-year increase in its demand and production both globally and in Georgia, something that is often limited by diseaseinducing pathogenic microorganisms. The purpose of our study was to register and identify the diseases that damage Blueberry crops in weestern Georgia, namely in the following regions: Imereti (Samtredia, village Patara Etseri, Village Bashi), Samegrelo (Zugdidi, village Narazeni; Khobi, village Torsa), Guria (Ozurgeti, village Kvemo Natanebi), Adjara (Keda, village Arsenauli). The study was conducted under the project (PHDF-23-827) funded by the Shota Rustaveli National Science Foundation, using the approved methods in phytopathology and plant protection: determining the percentage of disease spread, re-seeding onto artificial growth medium, creating a 'humid camera', identifying the pathogens using morphologic studies. The following fungal pathogens were identified on various breeds of Blueberry: Alternaria tenuissima Kunze, Botrytis cinerea Pers., Colletotrichum acutatum J.H., Septoria sp., Naohidemyces vaccinii (Wint.), Exobasidium vaccinii Wor., Botryosphaeria vaccinii (Schear.) Barr. The disease spread percentage and intensity was calculated based on the monitoring and the registry. It was determined, that as the intensity of production on the fields increase, the number of diseases decrease. The highest number of diseases were found on smaller, less looked-after fields. The disease spread percentage varied between 5% and 55% in 2023 and sbetween 16.7% and 87.5% in 2024. It's clear, based on the results, that Blueberry diseases are highly spread in Western Goergia, and integrated defense mechanisms are important to be implemented.

Keywords: Fungal pathogens; Identify; Integrated defense; Register; Spread percentage