GROWTH AND SPORULATION OF *BEAUVERIA BASSIANA* ON DIFFERENT CULTURE MEDIA

Moldovan A.[1,2], Ivantoc N.[2], Munteanu-Molotievskiy N.[1]
[1]*Institute of Zoology, Republic of Moldova*
[2]*Moldova State University, Republic of Moldova*
e-mail: anna.moldovan@yahoo.com

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The entomopathogenic fungi *Beauveria bassiana* (Bals.-Criv.) Vuill. 1912 (Hypocreales: Cordycipitaceae), thanks to its effective insecticidal properties, is widely used as a biological control agent. A critical issue in the mass-production of fungal-based biopesticides is the selection of the culture media optimal for the growth and sporulation of the producer strain. The most often used medium for the cultivation of *B. bassiana* is Potato Dextrose Agar (PDA). However, the relatively high price of the commercially available PDA medium determines the need to look for an alternative culture medium that would allow efficient and profitable cultivation of entomopathogenic strains for industrial purposes. Thus, the research aimed to select the optimal nutrient medium for mass-production of a local *B. bassiana* strain (Invention Patent MD 4560).

The *B. bassiana* CNMN-FE-01 strain's vegetative growth was studied on several nutrient media for 14 days at a constant temperature of 25°C. In addition, the number of conidia produced per unit area and the germination rate of these conidia after cultivation on each media were determined. Of all analyzed media three represented commercially available formulations (PDA, SDA - Sabouraud Dextrose Agar, and SAPF - Selective Agar for Pathogenic Fungi), and two were readymade formulations supplemented with yeast extract (SDAY and PDAY). The other were prepared in the laboratory according to known recipes (PSA - Potato Sucrose Agar, PDA, PDAY, Oatmeal Agar).

As a result, *B. bassiana* CNMN-FE-01 strain can be successfully cultivated on various solid media, commercially available formulations, and media prepared in the laboratory. The maximum radial growth rate of the micromycete was recorded on the Oatmeal Agar medium. Also, on Oatmeal Agar, the local strain produces the highest number of viable conidia. The experimental data indicate that the micromycete growth rate differs depending on the culture medium used. The same culture medium but from different producers can induce distinct growth and sporulation patterns of the fungal strain. The current work emphasizes the necessity to verify the purchased media and to identify a simple, cost-efficient media that can be easily prepared on site but also suggests the importance of setting the quality control points in the mass production of fungal-based biopesticides.

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