

# **Basal stem rot disease of oil palm caused by *Ganoderma Boninense*: A bibliometric analysis**

## **ABSTRACT**

In Southeast Asia, particularly Malaysia and Indonesia, basal stem rot (BSR), which is caused by *Ganoderma boninense*, is the most harmful disease that affects oil palm (*Elaeis guineensis* Jacq). Despite being a significant problem in the oil palm sector in recent years, there is still no paper on the bibliometric study of *Ganoderma* basal stem rot disease. Therefore, the purpose of this study was to use a bibliometric analysis to thoroughly evaluate the present state and trends of research on the disease. The data were retrieved from the SCOPUS database and relevant articles were selected for inclusion in the study according to the inclusion criteria. The bibliometric analysis was conducted with Biblioshiny. A total of 412 articles that were published between 1960 and 2023 were included. A significant increase in annual publications was observed from 2017 to 2019. Malaysia and Indonesia were the dominant countries in this field, accounting for 54.4% (224 articles), and 11.7% (48 articles) of the publications, respectively. Universiti Putra Malaysia and Idris A.S. were the most influential institution and author, respectively. Journal of Oil Palm Research was the most prolific journal, while Plant Pathology was the most cited journal. The words "biocontrol" and "biological control" were frequently employed by the authors. The trend topics analysis reveals that deep learning, gene flow, petroleum industry, and disease detection were the most popular topics for the past three years (2021-2023). In this study, we summarized the characteristics of publications and identified the most influential countries, institutions, authors, journals, hot topics and trends regarding the research on *Ganoderma* basal stem rot disease. In Southeast Asia, particularly Malaysia and Indonesia, basal stem rot (BSR), which is caused by *Ganoderma boninense*, is the most harmful disease that affects oil palm (*Elaeis guineensis* Jacq). Despite being a significant problem in the oil palm sector in recent years, there is still no paper on the bibliometric study of *Ganoderma* basal stem rot disease. Therefore, the purpose of this study was to use a bibliometric analysis to thoroughly evaluate the present state and trends of research on the disease. The data were retrieved from the SCOPUS database and relevant articles were selected for inclusion in the study according to the inclusion criteria. The bibliometric analysis was conducted with Biblioshiny. A total of 412 articles that were published between 1960 and 2023 were included. A significant increase in annual publications was observed from 2017 to 2019. Malaysia and Indonesia were the dominant countries in this field, accounting for 54.4% (224 articles), and 11.7% (48 articles) of the publications, respectively. Universiti Putra Malaysia and Idris A.S. were the most influential institution and author, respectively. Journal of Oil Palm Research was the most

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