

Research Article

## Evaluation of New Generation Fungicides Against *Ganoderma* Induced Basal Stem Rot of Oil Palm

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### Abstract

Basal stem rot (BSR), incited by *Ganoderma* spp. poses a significant challenge to the oil palm industry in India. A total of ten roots and basidocarps samples were taken from BSR-infected fields of Pedavegi, Andhra Pradesh, and identified as *Ganoderma* based on distinctive colony characters. To enhance identification accuracy, PCR with GB4 genus-specific primers, resulting in a 500 bp amplicon that confirmed the isolate's affiliation with the *Ganoderma* genera. The efficacy of 13 fungicides against *Ganoderma* was evaluated through solid plate assay. Noteworthy inhibition of mycelial radial growth was observed with the eight fungicides at all tested doses, including Hexaconazole 5 per cent SC, Propiconazole 25 per cent EC, Tebuconazole 25.9 per cent EC, Tebuconazole 50% + Trifloxystrobin 25% w/w WG, Propiconazole 13.9% + Difenconazole 13.9%, Fluopyram 17.7% w/w + Tebuconazole 11.4% SC, Azoxystrobin 8.3% + Mancozeb 66.7% WDG and Pyraclostrobin 5% + Metiram 55% WG. Complete inhibition was achieved at 2000 and 4000 ppm with Triflumizole 42.14% SC and Azoxystrobin 18.2% + Difenconazole 11.4% SC. Additionally, the liquid broth assay validated the efficacy of five fungicides in hindering mycelial dry weight. Furthermore, effective strategies against BSR, such as root feeding, stem injection and soil drenching, emerged as valuable insights for the integrated *Ganoderma* management in plantation crops.

**Key words:** Basal stem rot, fungicides, *Ganoderma*, management, oil palm

**Citation:** Lakshmi MA, Indraja M, Challa GK, Arutselvan R and Suresh K. 2024. Evaluation of fungicides against *Ganoderma* induced basal stem rot of oil palm. *J Mycol Pl Pathol* 54 (2): 101-110 (<https://doi.org/10.59467/JMPP.2024.54.101>)