Application method of antimicrobial substances for the control of Schizophyllum commune Fr. causing brown germ and seed rot of oil palm

ABSTRACT

Biological seed treatment promotes to save the environment from toxic chemicals in the agricultural practices. Schizophyllum commune is one of the important seedborne pathogenic fungi causing brown germ and seed rot of oil palm which required effective and efficient treatment based on environmental friendly approaches. Anti-microbial substances are extracted from antagonistic bacteria of B. multivorans and M. testaceum after mass production in the liquid media. Application method of anti-microbial substances for the control of Schizophylllum commune was done by seed dipping for 30 minutes and vacuum infiltration at 400 mm Hg. vac. for 2 min. in supernatant of anti-microbial substances diluted in sterilized distilled water with concentration ratio of 1:4. Application method using anti-microbial substances from antagonistic bacteria inhibited the growth of pathogenic fungus, enhanced seed germination, and without causing any abnormal growth of oil palm seedlings.

Keyword: Anti-microbial substances; Seed treatment; Schizophyllum commune Fr.