

Abstract

The experiment were conducted to screening entomopathogenic fungi against red spider mite. After that isolate that showed high pathogenicity were selected to find technology to improved mass production techniques for biopesticide factory of the Royal Project Foundation. And also simple technology production for the farmer. The results showed that 12 mycosis were found at different area of Agricultural station and Highland Development Project Using Royal Project System. The results of isolation and identification indicated that 9 isolates as *Beauveria* and 3 isolates as *Metarhizium*. All of isolates had pathogenic to red spider mite caused percentage mortality between 75.56 to 100. According to percentage mortalities can be classified to 3 group. Isolate HL9 was higher pathogenic than all the other isolates against red spider mite. The 2 isolates HL9 as *B. bassiana* and HL12 as *Metarhizium* were further for develop technology for mass production, which produced conidia from blastospore with difference media i.e. , (1) boiled rice (2) boiled sticky rice (3) boiled wheat (4) blended boiled rice blended (5) boiled sticky rice blended (6) boiled wheat blended (7) corn grinder (8) boiled rice mixed 1 % yeast extract (9) boiled sticky rice mixed 1 % yeast extract (10) boiled wheat mixed 1 % yeast extract (11) blended boiled rice blended mixed 1 % yeast extract (12) boiled sticky rice blended mixed 1 % yeast extract (13) boiled wheat blended mixed 1 % yeast extract (14) corn grinder mixed 1 % yeast extract. The results of *B. bassiana* showed that, all media test could be produced blastospore but significantly difference concentration were found among media. The concentration of blastospore range from 4.16×10^6 to 6.37×10^9 spore/ml. The highest concentration was found on boiled wheat blended. Blastospore of *M. anisopliae* could not be produced when boiling rice, sticky rice and wheat but produced more when blending. The highest concentration of *M. anisopliae* conidia were found on sticky rice blending and corn grinder with 4.27×10^{11} and 5.57×10^{11} conidia/gram, respectively. Aseptic methods of media for simple technology by using H_2O_2 and boil in boiling water found that all media test contaminated with bacteria. Contamination of bacteria regarded to media and entomopathogenic fungi. Low contamination was found on glutinous rice boiled blended. *M. anisopliae* was found contaminated less than *B. bassiana*. High effective to sterilize was found on H_2O_2 . To put the vinegar into the media to help inhibit bacterial contamination and increase the concentration of conidia.