PRODUCTION OF METARHIZIUM ANISOPLIAE ACRIDIUM, USING LOCALLY FORMULATED MEDIAS AND BY-PRODUCTS

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ABSTRACT

Metarhizium anisopliae is entomopathogenic fungus. Use of insecticides has brought about adverse effect on the users, the environment and the non-target crops.

This is the reason as why there has been increasing interest in the use of natural antagonists including disease agent for control or suppression of harmful insects. This is also the purpose of this study

It meant to come with a less costly way of mass production of m. anisopliae that has undergone safety testing and found to be harmful to non-insect host.

The materials used in the study for production of blastospores were brewers yeast waste and Sabouraud dextrose broth (SBD) as control.

For production of conidia, rice and ground maize mixed with pumice and gravel was used.

After mass production, the blastospores were weighed in grams until there was constant signifying absence of moisture on drying.

Then the substrate for mass production was prepared and inoculated with the spores and viability testing was done.

The germinated spores were counted against the non- germinated and divide by a hundred so as to obtain the percentage viability.

The result on the percentage viability showed that 70% of the spores tested were viable when inoculated on insects (locust) meaning that 70% of the insect were killed, a reliable percentage since more than half target insect population was eliminated.

48 hours was the recommended incubation time since it would reduce the cost incurred and also the result of fungal biomass showed that the results after 48 and 72 hours were the same.

It as recommended that since m. anisopliae in nature occurs together with a baculovirus, the effects of the relationship be established so as know how it would affect other organisms when the two are inoculated together.

It was concluded that cheap media containing waste brewers yeast and molasses can be used for production of blastospores of m. anisopliae and that rice and ground maize mixed with pumice and gravel can be used to mass produce conidia of the same fungi.

Quality evaluation of conidia resulting from this media against insects however warrant further studies