



***In vitro* evaluation of the effect of aqueous extracts of *Agave sisalana* and *Cymbopogon citratus* on mycelial growth and conidia production of *Pyricularia oryzae*, causal agent of rice blast**

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ABSTRACT

Objectives: To evaluate the effects of aqueous extracts of *Agave sisalana* (*sisal*) and *Cymbopogon citratus* (lemon grass) on mycelial growth and conidia production of *Pyricularia oryzae*, causal agent of Rice Blast.

Methodology and Results: The plants aqueous extracts were used at concentrations 0.1; 0.2; 0.3; 0.4; 0.5; 1; 2; 3; 4; 5; 10; 20; 30% concentrations for *Agave sisalana* extracts and 0.5; 3; 5; 10; 15; 20% for *C. citratus* extracts. Fisher randomized block design with five (5) replicates was used to test the two extracts. All the two extracts tested had an inhibitory effect on the growth and spore production of the fungus. The Minimum inhibitory concentration (MIC) of *Agave sisalana* extracts was 3% (PI \leq 97%). For the *C. citratus* extract, the MIC was 20% and the concentration less than 20% had a mild effect on mycelial growth.

Conclusion and application potential of the results: The use of pesticides of plant origin has been suggested by some researchers as alternatives to synthetic chemicals, in order to counter the potential hazards and pollution problems associated with the use of synthetic chemicals. The plants extracts tested showed antifungal activity. This result should enable use of aqueous extract of *Agave sisalana* to control blast diseases.

Key words: In vitro, plant extracts, mycelial growth, spore production, rice blast, *Pyricularia oryzae*.