

## Storage of Maize Grains Using Powder and Oils of Commonly Used Medicinal Plants (*Aframomum melegueta*, *Garcinia kola* and *Piper guineense*)

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**Abstract :** Powders and oils of *Aframomum melegueta*, *Garcinia kola* and *Piper guineense* were tested as preservatives for the storage of maize grains for four weeks. The concentrations of the powders were 32.5gkg<sup>-1</sup>, 65.0gkg<sup>-1</sup> and 97.5gkg<sup>-1</sup> maize, while those of oils were 0.85mlkg<sup>-1</sup>, 0.50mlkg<sup>-1</sup> and 0.75mlkg<sup>-1</sup> maize respectively. Powders of the three botanicals at 97.5gkg<sup>-1</sup> maize possessed insecticidal effect on *Sitophilus zeamais* and also inhibitory activities on *Aspergillus flavus*, *A. fumigatus*, *A. niger* and *Fusarium verticillioides*, while little effect was observed for other concentrations. Oils of the three botanicals at 0.50mlkg<sup>-1</sup> and 0.75mlkg<sup>-1</sup> maize showed an insecticidal effect on *S. zeamais* and also inhibitory activities on *A. flavus*, *A. fumigatus*, *A. niger*, *F. verticillioides*, *Penicillium* and *Rhizopus* species. Oils showed more potential as a protectant against fungal and insect pest in storage maize grains than powders. Powders and oils of *A. melegueta*, *G. kola* and *P. guineense* could be successfully used as biopesticides.

**Keywords :** *afframomum melegueta*, *garcinia kola*, maize, powder, oils, *piper guineense*

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