

# An Analysis of Storage Food Ecosystem: Microflora Analysis in Dried Vegetable Storage as the Influence of Indianmeal Moth, *Plodia interpunctella* Hübner (Lepidoptera:Pyralidae)

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Food ecosystem was studied by micflora analysis in dried vegetable storage. Fungal growth was tested in dried green onions (i.e. dehydrated chive flakes, <12% m.c.) which were infested with indianmeal moth larvae, with indianmeal moth larvae plus *Bracon hebetor*, or without insects (control). The 65 liter of dehydrated chive flakes (DCF) in a cardboard box (50×40×40cm) was stored at a room (28.3°C, 40±5% RH) for 30, 60, 90, and 120 days. The total fungal growth from each treatment was determined by ergosterol assay. The amount of ergosterol was increased as storage time increased. Ergosterol levels were higher in DCF infested with indianmeal moth (47.66µg/g at 30 days, 295.91µg/g at 120days) than with indianmeal moth plus *B. hebetor* (2.67µg/g at 30 days, 79.44µg/g at 120 days) and control (13.41µg/g at 30 days, 80.24µg/g at 120 days). Storage fungi such as *Aspergillus glaucus*, *A. niger*, *A. candidus*, and *A. flavus* and several field fungi such as *Fusarium moniliforme* and *Mucor* spp. were identified. Indianmeal moth larvae were collected using a compartment probe from a box which had four sampling holes. Moth larvae distributed all directions in DCF infested with indianmeal moth and with indianmeal moth plus *B. hebetor* but the number of larvae was greatly low in latter.