DISTRIBUTIONS OF AND RELATIONSHIPS BETWEEN HARMFUL AND BENEFICIAL INSECTS IN COMMERCIALLY STORED PEANUTS

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ABSTRACT

The dynamics of and relationships between insect population in commercially stored farmers stock peanuts were studied. No effort was made to control insects. The Indianmeal moth, Plodia interpunctella (Hubner), the almond moth, Cadra cautella (Walker), and the parasite, Bracon hebetor Say, were abundant and of major interest. Insignificant numbers of the red flour beetle, Tribolium castaneum (Herbst), were found. Data were analyzed for (1) temporal and spatial distribution per species, (2) associations between species, (3) preferences for Virginia peanuts vs. runner peanuts, and (4) rate of parasitism by B. hebetor. Sampling units of 0.5 ft.^{2} (surface area) were as accurate and precise as larger 1.0 ft.^{2} units in estimating insect populations.

FOOD UPTAKE BY PYEMOTES TRITICI (ACARI: PYEMOTIDAE)

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ABSTRACT

Pyemotes tritici is able to feed through a synthetic membrane on both normal host homogenate and on an artificial diet. After a feeding site has been selected, the short (ca. 17 m) stylet-like chelicerae pierce the membrane and a toxin is released. Food is then pumped at a rapid rate into an opisthosomal sac that can be greatly expanded by means of concealed cuticular folds. Numbers and sex of progeny appear to reflect the quality as well as the quantity of the diet. The morphology of the mouthparts and cuticular fold is discussed.