# CHANGES IN SPECIES COMPOSITION OF AN INSECT POPULATION ON STORED CORN

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Abstract

Insect populations infesting a small bulk of corn stored in southeastern Georgia (USA) were followed for 8 years by monthly sampling beginning 8 months after the corn was placed in storage. The species composition of the total insect population, which included 12 granivorous and 5 parasitic species, changed as the corn deteriorated. Nine species became dominant (comprised a greater portion of the population than any other species) at some stage of succession. Some species comprised more than 50% of the population for periods of time ranging from 1 or 2 months to over 2 years. These species in chronological order of their ascent to dominance were: (1) Oryzaephilus surinamensis (L.), which was dominant between 9 and 10 months' storage time but declined rapidly and was no longer detectable after 34 months; (2) Cryptolestes ferrugineus (Stephens), which was most abundant during the first half of the storage period and at 12 months comprised 72% of the insect population; (3) Sitophilus zeamais Motschulsky, which reached its maximum population level at 16 months and then declined markedly but survived in small numbers to the end of the storage period; (4) Tribolium castaneum (Herbst), which was abundant during most of the storage period and was dominant between 24 and 56 months; (5) Latheticus oryzae Waterhouse, which ascended to dominance as T. castaneum declined and was dominant for 3 years; (6) Cynaeus angustus (LeConte), which was first detected about midway in the storage period and increased in numbers after 80 months as the L. oryzae population declined, but was dominant for only a few months; and (7) Trogoderma inclusum LeConte, which increased rapidly near the end of the storage period and was dominant for the last 4 months.



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