

COMPARISON of SEVERAL TRAPS for CATCHING GERMAN COCKROACHES (DICTYOPTERA: BLATTELLIDAE) under LABORATORY CONDITIONS

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German cockroach, *Blattella germanica* (L.), catch by five types of traps and modifications of each for a total of 15 different treatments, were tested under controlled laboratory conditions. Multivariate analysis of variance (MANOVA) was used to detect differences among traps. The response variables were the counts of trapped cockroaches in each of six size classes. The counts of total number (trapped and untrapped) of each of the six classes in an arena were used as covariates in the analysis. Cockroach catch was different among traps. Lo-line® trap caught the greatest number of cockroaches in the test arena for each size class (>60% excluding small nymphs, 23%, and gravid females, 39%). Glass jar traps caught the least number of cockroaches in the test arena for each size class (>7%, and <23%). Modifications of traps also altered catch of cockroaches. Food bait tablets increased catch significantly; however, increases were small (< 10%). Size of traps did not affect catch; whole traps or half traps caught the same number of cockroaches. Presence of *B. germanica* aggregation pheromone did not increase the catch of any cockroach size class compared with other traps. Glass jar traps were much less effective than sticky traps, catching only half the number of cockroaches as sticky traps. A thin layer of petrolatum was a more effective barrier in jar traps to cockroach escape than powdered Olancha clay. Traps with petrolatum caught about twice as many cockroaches as traps with clay. Trapping of any of six life stages was not significantly affected by catch of any of the other stages. Rather, trap catch of each life stage was dependent on the number of that life stage available in the experimental arenas. In conclusion, Lo-line® trap was the most sensitive trap for measuring cockroach catch and would presumably be the best trap for simple presence-absence sampling. The Detector® trap (1/3 of trap), however, was the most economical trap, providing the greatest sensitivity for lowest cost.