

Title Population fluctuation of longtailed mealybug on different ornamental plants
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Citation ISHS Acta Horticulturae 755:99-104. 2007.
Keywords longtailed mealybug; ornamental plants

Abstract

Studies on population fluctuation of longtailed mealybug on different ornamental plants were carried out in the Department of Entomology, Sindh Agriculture University Tando Jam, from November 2005 to February 2006. The population increased and reached their highest, i.e. 14.9, 14.3, 12.8 and 15.8 on *A. godseffiana*, *E. aspersum*, *G. pictum* and *Draceana* sp. on 4th January and it was highest (15.6) on *A. wilkesiana* on 11th January after which it declined gradually. Consolidated population of mealybugs indicated that it was maximum (14.62) on 4th January with an increasing curve of line $1.262X$ and $r^2 = 0.89$. The R-square explained that about 89 percent variation in population increase was observed by weeks. There was a negative and highly significant correlation between predator population and temperature with a slope of line $-0.91X$ and $r^2 = 0.96$. The R-square explained that about 96 percent variation in population increase was observed due to temperature. Thereafter, population of pest decreased and reached its minimum (4.85) with a declining curve $-0.80X$ and $r^2 = 0.94$. The regression analysis further depicted that there was a significant negative correlation between temperature and population growth with a slope of line $1.08X$ and $r^2 = 0.94$. The analyses showed that there are significant differences in population between host plants ($F=10.78$, $df=4$, $P<0.001$). The data indicated that the plant section-wise mean population of 15.906 ± 0.51 was recorded on top, 10.052 ± 0.53 in the middle and 4.333 ± 0.19 at the bottom, analyzed statistically by applying analysis of variance (ANOVA), and DMR test. The analyses showed that there were significant differences between sections ($F=65.45$, $DF=2$, $P<0.001$). It is concluded that mealybugs attack all plants. However *Draceana* sp. is susceptible whereas *Eranthemum aspersum* resistant. Top leaves of all test plants were preferred by mealybugs. The population fluctuated with temperatures. Maximum population was recorded at low temperatures.