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WEDELIA: A POTENTIAL GROUND COVER FOR REDUCING THE ATTRACTIVENESS OF TROPICAL AIRFIELDS TO BIRDS

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Abstract: Airport environments frequently provide ideal feeding and loafing habitats for many bird species. Bird strikes at most airports involve predominantly insectivorous species. However, the Lihue Airport on the island of Kauai, Hawaii has had a severe problem with bird strikes involving 4 granivorous species: the zebra dove (*Geopelia striata*), spotted dove (*Streptopelia chinensis*), chestnut mannikin (*Lonchura malacca*), and nutmeg mannikin (*L. punctulato*). Two owl species, the common barn owl (*Tyto alba*) and Hawaiian short-eared owl (*Asio flammeus sandwhichensis*), have also been involved in aircraft collisions at Lihue. Shooting and hazing techniques to disperse birds have proven ineffective or unacceptable; therefore, an alternative ground cover, wedelia (*Wedelia trilobata*), was tested to determine if the airfield environment could be rendered unattractive to birds. Volunteer stands of wedelia throughout the airfield were delineated and additional plantings established. We used bird activity, exclusion of seed-producing plants, rodent abundance, and invertebrate populations as indicators of effectiveness. Utilization of test plots by rodents and the four major seed-eating birds was significantly lower than in the corresponding control plots. The nearly monotypic stands of wedelia resulted in decreased seed availability to birds and rodents. Because of the ease of establishing and maintaining wedelia on airfields, its dominance over palatable seed producing plants, exclusion of rodent populations, low fire hazard, and decreased utilization by critical bird species, wedelia shows great promise as an alternative ground cover in tropical airfield environments.

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Key words: airports, alternative ground cover, bird strike, habitat modification, Hawaii, tropical airfields, wedelia, *Wedelia trilobata*.