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Efficacy of three feeding deterrents on diamondback moth and its parasitoid, Cotesia plutellae (Kurdjumov)

Bitter tasting synthetic chemical denatonium benzoate (5, 50 and 250 mg/l) and two neem derivatives; Azatin EC (0.01, 0.1 and 1 ml/l) and Pestistat R (0.1, 1 and 2 ml/l) were tested against the fourth instar larvae of diamondback moth, *Plutella xylostella* L. and its hymenopteran parasitoid, *Cotesia plutellae* (Kurdjumov) to find out the efficacy of denatonium benzoate as a feeding deterrent in laboratory studies. Results indicated that all three compounds were effective in reducing the food consumption significantly and two neem derivatives were more effective. The lowest leaf area consumption was observed on 2

ml/l Pestistat R. Formation of parasitoid cocoons of *C. plutellae* was 41-46% regardless of the treatments but the emergence of parasitic wasps was significantly reduced in the antifeedant treatments and denatonium benzoate treatments had the highest percentage emergence. This shows that *C. plutellae* can survive the antifeedant treatments partially. *P. xylostella* adults were not emerged in all antifeedant treatments indicating that parasitoids can, whereas *P. xylostella* cannot, survive the antifeedant treatments. Results clearly shows that these three environmentally safe antifeedants could be used with appropriate dosages in the Integrated Pest Management programmes.