Trapping Effect of Synthetic Sex Pheromone of *Acleris fimbriana* (Lepidoptera: Tortricidae) in Chinese Northern Orchard

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The yellow tortrix, *Acleris fimbriana* Merick (Lepidoptera: Tortricidae), is an economically important insect pest on fruit trees with four generations a year in North China. In order to develop a new and effective method for forecasting and controlling the pest, the sex pheromone was studied. We have identified the female sex pheromone as **(E)**-11,13-tetradecadial (**(E)**11,13-**14:Ald), **(E)**-11,13-tetradecadienyl acetate (**(E)**11,13-**14:Ac) and **(E)**-11-tetradecenyl acetate (**(E)**11-**14:Ac). Trapping effect of synthetic chemicals **(E)**11,13-**14:Ald, alone and in combination with **(E)**11,13-**14:Ac or/and **(E)**11-**14:Ac to *A. fimbriana* males was tested in Beijing Xishan Orchard (2001). **(E)**11,13-**14:Ald on its own was much attractive to *A. fimbriana* males. Neither **(E)**11,13-**14:Ac nor **(E)**11-**14:Ac alone caught any moths. The catches markedly increased by adding **(E)**11,13-**14:Ac to **(E)**11,13-**14:Ald. The optimum ratio of **(E)**11,13-**14:Ald and **(E)**11,13-**14:Ac was 6:4 to 5:5. This attractiveness was apparently enhanced when 5% to 10% of **(E)**11-**14:Ac was added. The best field activity was in the lure baited with a 6:4:1 ratio of **(E)**11,13-**14:Ald, **(E)**11,13-**14:Ac and **(E)**11-**14:Ac at a dosage of 1000 µg/septum. The effect of antioxidant, 2,6-di-tert-butyl-4-methylphenol [butylated hydroxyluene (BHT)], to the synthetic pheromone blends on its duration and catching efficacy was also tested. Addition of 5–10% BHT to the synthetic pheromone could prolong the life-span of pheromone chemicals for 6–8 weeks, thereby increased its catching efficacy.

**Key Words:** *Acleris fimbriana*, Sex Pheromone, Field Trapping