

Mating Disruption/SIR

Codling Moth in Apples and Pears

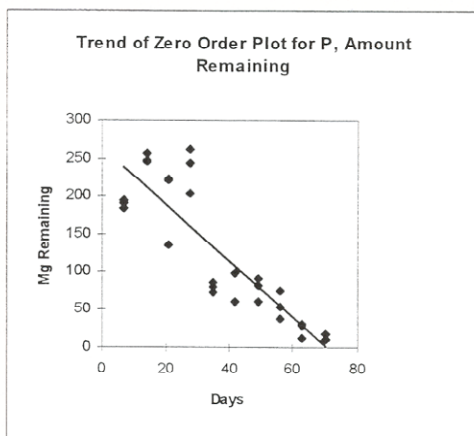
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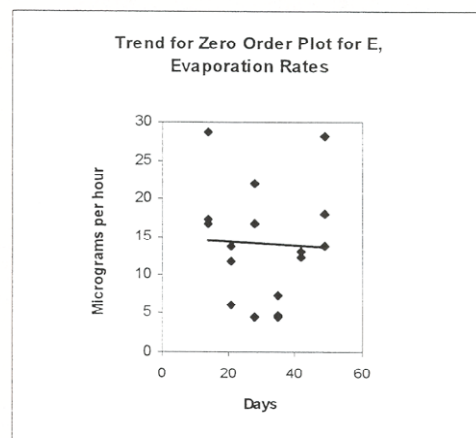
Consep Checkmate-CM dispensers were aged in an orchard for 70 days in order to study their characteristics and better understand their performance in the field. Samples were collected weekly for analysis. Evaporation rate was determined by collecting evaporated vapor. Then the dispenser was extracted and analyzed for codlemone residue.

The data were analyzed by linear regression analysis for pheromone residue versus time. The amount of codlemone residue, P, remaining in the dispensers decreased from an initial value of about 265 mg to 10 mg after 70 days. The rate of loss was constant at 3.75 mg/dispenser/day (Graph 1).

Initial evaporation rates were 56 +/- 21  $\mu\text{g/hr/dispenser}$  (1.3 mg/day/dispenser). After 56 days evaporation rates dropped to 0.46  $\mu\text{g/hr/dispenser}$  (0.01 mg/day/dispenser). Evaporation rate decreased very rapidly during the first two weeks. There is a lot of scatter in the data, but visually there is no discernible downward trend in evaporation rates during most of the life of the dispenser. Evaporation rates appear relatively constant over 14 to 49 days at an average rate of about 14.7  $\mu\text{g/hr/dispenser}$  (0.35 mg/day/dispenser), before dropping to nearly zero by 56 days (Graph 2). Even if these dispensers were releasing their average (0.35 mg/day/dispenser) over 70 days, the amount evaporated would correspond to only 24.5 mg of codlemone. Evaporation rates do not account for most of the loss of pheromone as measured by residue levels.



Graph 1



Graph 2