

DINGY CUTWORM (*Feltia jaculifera*) PHEROMONE LURES ARE NOT HIGHLY EFFECTIVE IN ATTRACTING THE CLOSELY RELATED GRANULATE CUTWORM (*Feltia subterranea*)



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BACKGROUND

Granulate cutworms (*Feltia subterranea*) can be a very damaging pest of low desert alfalfa, especially on bedded alfalfa trying to regrow after a harvest.

The caterpillars feed at night and hide during day, making detection difficult. Presence in alfalfa fields is often unknown in recently harvested fields until feeding damage is observed. With severe cases, up to a two week delay in green-up (and yield loss for the year due to delay in harvest) can occur.



Fig. 1. Feeding damage by granulate cutworm is noted by lack of green-up of recently harvested alfalfa as caterpillars eat the new growth.

While many species of moth pest moths have commercial pheromones available for utilization in monitoring, there is no commercial pheromone available for granulate cutworm.

Monitoring of granulate cutworm moths currently relies on light traps, which requires a great deal of time to sort through all the collected moths.

QUESTION TO BE ANSWERED

The dingy cutworm (*Feltia jaculifera*, same genus as granulate cutworm) has four different pheromone lures available as different races of the dingy cutworm exist.

Are any of the four dingy cutworm race pheromones lures effective in attracting granulate cutworm moths, thus potentially providing a more efficient tool for monitoring granulate cutworm moths?

METHODS AND MATERIALS

Pheromone lures of four dingy cutworm races (designated Race A, B, C & D) were obtained from Scentry Biologicals, Billings, Montana, as were blank (not infused with pheromone). natural rubber dispensers.



Fig. 2 Natural rubber dispensers were used as control or infused with the pheromone from one of our four different races of dingy cutworms to lure male granulate cutworms to traps.

Each lure was placed in its own individual bucket containing an insecticide treated strips to kill attracted moths, thus preserving scales on wings for proper identification.



Fig. 3. A set of 5 bucket traps was placed along an alfalfa field edge in 6 locations throughout the Palo Verde Valley.

Each set of 5 traps (Races A-D, + blank) was located in a line along an alfalfa field edge. Traps were approximately 150 feet apart to reduce pheromone scent overlap.

Six (6) field sites, with 5-10 miles separation between locations, were used. Each site served as a replication, with a randomized sequence of the 5 lures at each site.

Moths were collected from each trap twice/week during July-August, 2019, returned to laboratory, separated to species, counted and recorded.

Treatment means were separated and analyzed using Tukey's Honestly Significant Different (HSD) test (JMP Pro 13.0.0).

RESULTS AND DISCUSSION

Very few granulate cutworms were captured in bucket traps during 2019, even though moths were prevalent and many fields needed treatment for granulate cutworm caterpillars.

Highest numbers of granulate cutworms were collected from traps baited with lures of Race 'C', however no significant differences were noted for any lure. Number of moths collected from traps with no pheromone exceeded those of two race lures (A & D).

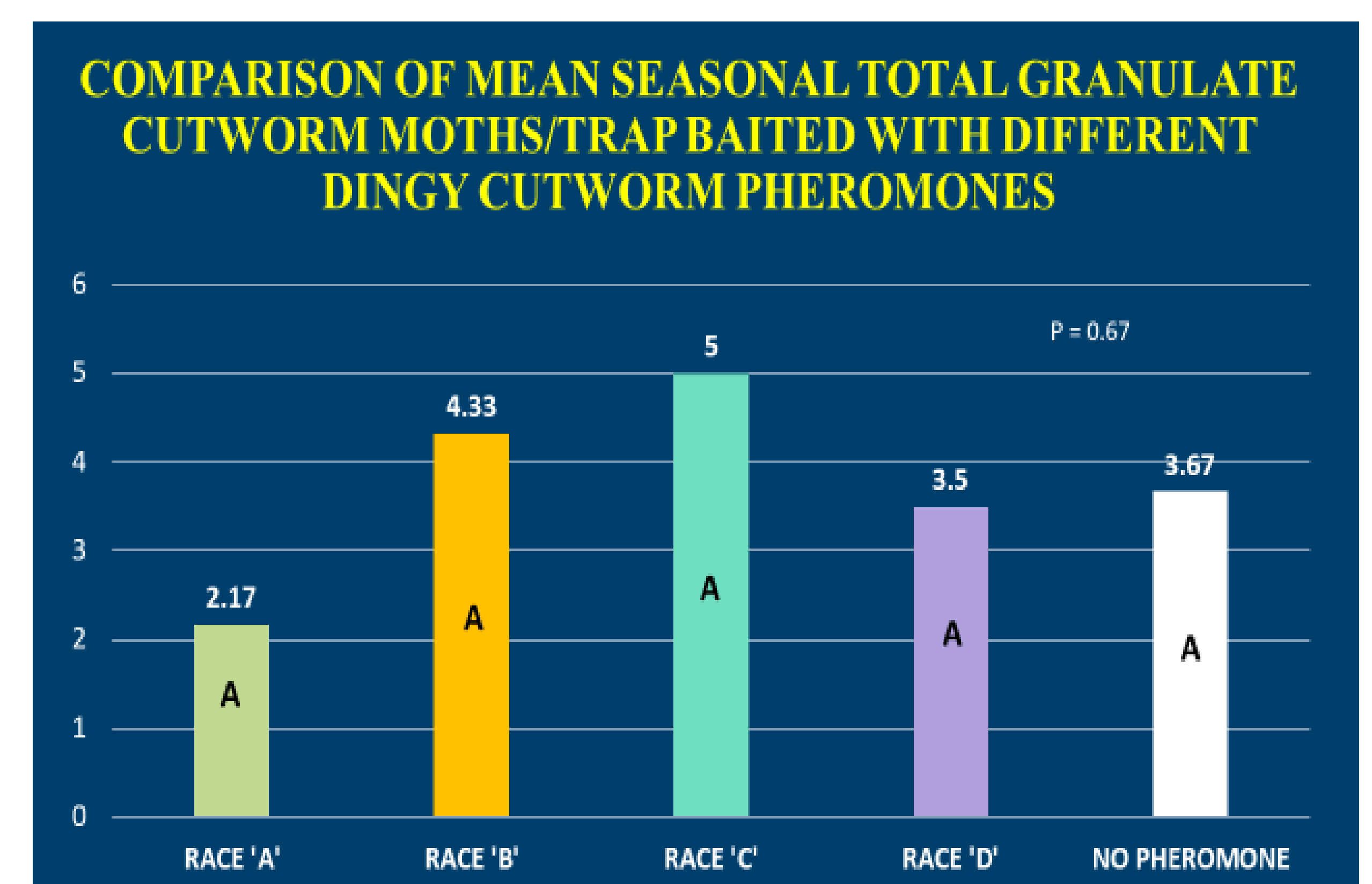


Fig. 4. Mean total granulate cutworm moths collected from bucket traps baited with lures of dingy cutworm races.

CONCLUSION

Pheromone lures of dingy cutworm from Race A, B, C or D are not highly effective in attracting moths of the closely related granulate cutworm.