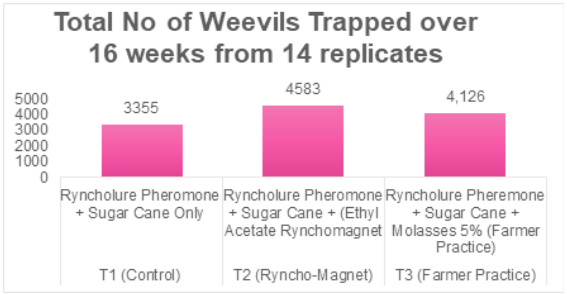
Disposal of SAP weevils

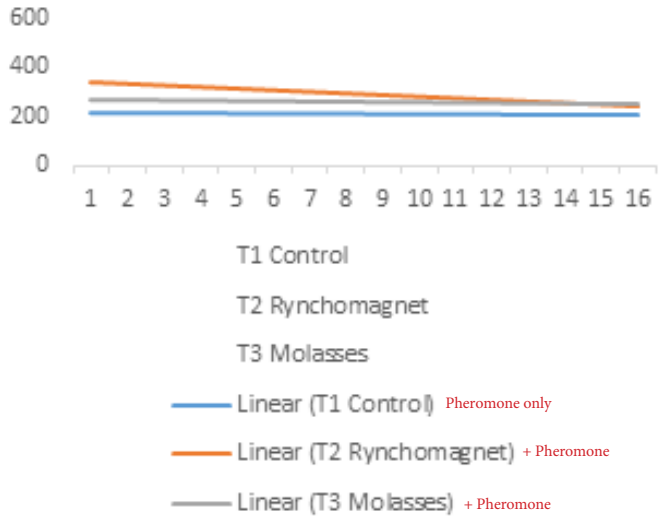
- SAP Weevils die when they are deprived of oxygen
- Remove beetles from trap and place in an airtight bag or container or
- Beetles can be frozen and disposed of

Result of weevils trapped using improved funnel trap design



Funnel trap with Ryncolure + Ryncomagnet trapped 11% more weevils than the traditional method

CARDI in collaboration with Ministry of Agriculture, Land and Fisheries (MALF) tested an improved trap design with a funnel shape which has resulted in many more South American Palm Weevils (***Rhynchophorus palmarum***) being trapped without the need for insecticide. Additionally they evaluated the effect of Rynchomaganet synergist combined with the Rynchlure pheromone and found that this combination trapped 11% more weevil and also reduced the population by 6.58 weevils per week, more than the farmers' practice using molasses and pheromone which only reduced the population by 0.84 weevils per week.



Sugar cane and Rynchlure pheromone used in all traps

Funnel traps when combined with Rynchomagnet synergist and Rynchlure pheromone decreased the population at a higher rate of 6.58 weevils per week compared to farmer practice T3 which was only able to reduce the weevil population by 0.84 wevils per week.

Benefits of using funnel trap with Rynchomagnet synergist, Rynchlure pheromone and sugar cane for trapping of SAP weevils

- The funnel trap design has many advantages over the traditional open window design trapping as many as 130 weevils per week per trap
- Requires no insecticide
- Cost effective
- Requires no molasses, uses cane and water only
- Reduces the female population of the weevil
- Decreases the population at a faster rate at 6.58 weevils per week as compared to only 0.84 per week with molasses

Ministry of Agriculture, Land and Fisheries

The Caribbean Forum of ACP States CARIFORUM

CARDI

International Trade Centre

ALLIANCES FOR ACTION

IMPROVED FUNNEL TRAP DESIGN FOR TRAPPING THE SOUTH AMERICAN PALM WEEVIL (VECTOR FOR RED RING DISEASE)

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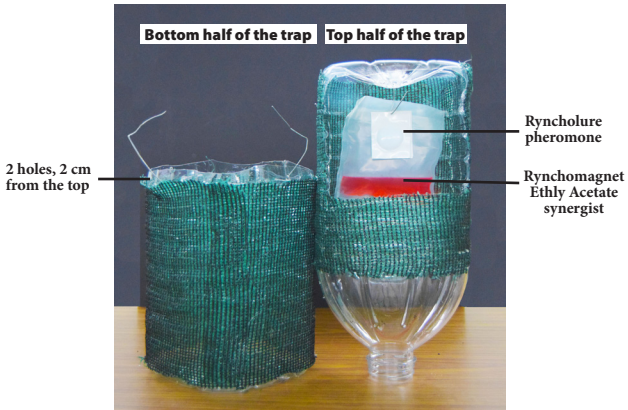
How to set up bottle funnel trap for the South American Palm Weevil (SAP weevil)(*Rhynchophorus palmarum*)

- Use two used 2L water bottles
- Remove 12 cm from the top of one of the bottles. This would be the bottom of the half of the trap
- Using a box cutter create a window (10 cm x 12 cm), starting 20 cm from the mouth of the second bottle. This would be the top of half of the trap
- Using a soldering iron punch a whole on either side of the window, at least 3 cm from the window and 15 cm from the mouth of the top of the trap
- Punch 1 hole to the bottom of the top half of the trap, 11 cm from the window
- Similarly with the bottom of the trap, punch 2 holes, 2 cm from the top and 2 wholes 4 cm from the bottom
- Cut 3 pieces of cutlass wire at least 15 cm in length. this would be used to secure the top and bottom of the traps together and hang the Pheromone
- Attach the wire in the top holes created in the bottom of the trap
- Assembling the trap, invert the the top of the trap into the bottom of the trap and lock together using the cutlass wire attached
- Using the remaining wire fasten the pheromone to the top of the trap



How to bait funnel trap

- Remove the top part of the half of the trap and add 7 pieces of cane and water to the bottom half
- Attach the Rynchomagnet pheromone onto a piece of 10 cm long wire and place at the top of half of the trap

Servicing of traps

- Changing the sugar cane every 2 weeks has proven to increase trapping (It is important that sugar cane and water is maintained during the dry season to ensure attraction)
- Change the Rynchomagnet pheromone every 6 - 12 weeks
- For increased trapping efficacy, Ethyl Acetate (Rychomagnet synergist) can also be added to the funnel trap

Bucket Funnel Trap

Alternative trap design to the water bottles. It incorporates the use of 5 gallon buckets with a funnel inserted to the top of the bucket through which the weevils enter.

Placement of traps in the field

- It is important that traps are placed 10m away from coconut trees & preferably in a shaded area
- It is recommended that 2 traps are used per hectare
- Traps can be spaced at 100 m radius from each other