

Protocol for Rearing *Trichopoda pennipes*

Pupal Harvesting Cage

- Assemble a Bug Dorm cage using ½ mm hardware cloth for the bottom panel
- Add pole beans (washed with vegetable wash), fresh green peanuts if available, and 4 oz. water containers (see SGSB rearing protocol)
- Tape 1 white bounty paper towel in the bottom of a 12" x 12" x 6" white wooden box (Collection Box)
- Fold a paper towel like a fan and place it loosely in the bottom of the wooden box for maggots to pupate under
- Place the assembled Bug Dorm on top of the wooden box and put parasitized stink bugs on hardware cloth in cage

Parasitizing Cage

- Tape a white Bounty paper towel in the bottom of a 12" x 12" x 6" white wooden box
- Provide beans, water, and sugar water solution
 - Sugar Water Solution – 300 g of granulated sugar, 1 gallon of distilled water, and 5.0 grams of ascorbic acid. Mix and store in the refrigerator up to 1 month.

Emergence/Adult Rearing Cage

- Prepare raisin paste: Using a blender, blend 70 grams of raisins with 50 ml of water. Store raisin paste in an air tight container and place it in the refrigerator. Stores up to 1 month in refrigerator.
- Tape 1 white bounty paper towel in the bottom of a 12" x 12" x 6" white wooden box
- Provide sugar water, raisin paste, and water
- Fold a 18 x 4" piece of paper in a fan type pattern and place it in the box

Parasitization

- Place 50-70 Adult SGSBs (5-15 days after molting to adults) into the Parasitizing Cage
- Place 5-8 female and 3 male *Trichopoda* in the cage
- Check every 30 minutes for parasitized stink bugs and remove them from cage
- Place parasitized adults in a Pupal Harvesting Cage
- Continue to check for parasitized stink bugs until all have been parasitized
- Place *Trichopoda* back into their Rearing Cage

Harvesting Pupae and Collection of Adults

- Check Collection Boxes under the Pupal Harvesting Cages daily for pupae
- Place collected pupae (up to 100) in a Petri dish lid that is lined with a 90mm diameter filter paper
- Place the dish lid in the bottom of the Emergence Cage
- Label the top of the cage with the date set up (and number of pupae)
- Check for adult emergence daily and place newly emerged adults into a Adult Rearing Cage
- Using a 1¼ ounce plastic diet cup, place the diet cup over the fly until it begins to climb onto the cup
- Cover the bottom of the diet cup with your hand and transfer the fly into the Adult Rearing Cage
- Label the cage with the date of the emergence
 - * Humidity has to be relatively high for maggots to pupate and adults to emerge

Items for Rearing:

- Bug Dorm – 11 ¾" cube. The cage is made of plastic-injected white polypropylene, nearly transparent with visibility on all sides, top, and bottom. Three side panels have 16 x 24" mesh plastic screen. The fourth side provides easy access from an opening 6 1/8" diameter with nylon sleeve.
Bio Quip Products, 17803 LaSalle Avenue, Gardena, CA 90248-3602 USA, (310) 324-0620

- Wooden Box - 12" x 12" x 6", a solid bottom, one solid back, a 4" circle hole in the center of the front side with a cotton sock attached for easy access, and the two sides with a 3" x 6" rectangle hole sealed with plastic window screen for ventilation. A clear plexiglass lid is fitted on the top of the box to allow light and for easy viewing. These boxes are home made.
- Paper towels – Bounty – 27.9" x 27.9" white, no print, two ply
- 4 ounce Solo cup – clear
Solo Cup Company, Baltimore, MD
- Cotton Dental Rolls – 6" medium, 3/8" diameter, white, 100% cotton, braided, sterile
Richmond Dental, P.O. Box 34276, Charlotte, NC 28234
- Pole Beans – Winn Dixie or Harvey's of Tifton, GA
- Bean Wash – Fit Fruit and Vegetable Wash, 100% natural
HealthPro Brands, Inc., Cincinnati, OH 45242
- Storage Bags – Skilcraft 10" x 10" Seal Closure Bag, linear low density polyethylene and low density polyethylene
Envision Inc., Wichita, KS 67213
- Petri dishes - Falcon 100 x 15mm, polystyrene
- Filter Paper – Whatman 90mm
Whatman International Ltd, Maidstone England
- Diet Cup – Solo 1¼ ounce cup – clear
Solo Cup Company, Urbana, Illinois 61801
- Hardware Cloth, Galvanized – 1/8" mesh
MAT – Manufacturer Midwest Air Technologies, Inc