INSECTARY: USDA, ARS, SJVASC, Parlier, CA SOP Rearing Procedure: PTB (Rev. October 2007)

Peach Twig Borer, Anarsia lineatella Zeller; Lepidoptera: Gelechiidae

Origin: 2004; Fresno County; Parlier, CA; U.C. Davis, Kearney Agricultural Center; Laboratory Colony

<u>Diet/Culture</u>: Lima Bean Agar Diet in 1-ounce Cups (See Appendix)

Tasks Performed: Weekly

Day	Procedure
Monday	Harvest/Replace Egg Sheets (→ 50°F); Pull Diet Trays for Tomorrow
Tuesday	Infest Diet Cups; Check Sugar-water Vials
Wednesday	Harvest Pupae & Set up E/L Containers
Thursday	Harvest/Replace Egg Sheets (→ 50°F); Discard Oldest E/L Containers
Friday	Move Eggs from 50°F Incubator to Shelf in Rm. #1 (80°F);
·	Check Sugar-water Vials

Harvest/Replace Egg Sheets (E/S):

Materials:

- PTB E/S with eggs
- PTB replacement E/S
- Forceps
- 'S'-weights
- ½ pint jars with solid lids and rings

Procedure – performed on shelves in holding room:

- 1. Carefully remove 'S-weight' from top of egg sheets
- 2. Using forceps, carefully remove the sheets from the lid of the E/L containers
- 3. Distribute egg sheets evenly between six (6) ½-pint jars and close jars with solid cap and ring
- 4. Place iars in 50°F incubator in holding room
- 5. Replace egg sheets on lids of E/L containers 4 sheets per lid
- 6. Put one 'S-weight' on top of each egg sheet

Refill/Replace Sugar-water Vials (10% Fructose):

Materials:

- 7-dram clear plastic vials with bridal veil material held tightly over top with two rubber bands
- 10% fructose solution
- Petri® dish top or bottom

Procedure – performed on shelves in holding room and over sink in handling room:

- 1. Fill sugar-water vial with 10% fructose solution
- 2. Invert vial(s) by placing Petri dish on top; hold together; and invert in one smooth motion
- 3. Carefully set one inverted sugar-water vial on top center of each E/L container
- 4. Carefully remove and refill or replace any vials that are less than 1/3 full
- 5. To avoid spills, lift vials straight up, smoothly but not too slowly

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<u>Infest cups – Set up new colony:</u>

Materials:

- PTB neonate larvae
- PTB cups (1 oz.) with fresh diet
- Small camel hair brush
- Paper lids

Procedure – performed under fumehood:

- 1. Using a small camel hair brush, infest each diet cup with 3-4 larvae
- 2. Place the larvae on the underside of the lid
- 3. Place lid on cup and push into place, making sure it is fully seated in cup
- 4. Label trays and place on shelf in holding room for development

Set up Egg Layers (E/L):

Materials:

- PTB pupae
- Oviposition containers with lids with bridal veil centers
- Larval forceps

Procedure – performed under fumehood:

- 1. Gently harvest PTB pupae from cups
- Place pupae from about 3 trays into each E/L container
 Place E/L containers on shelf in holding room
- 4. Place 1 or 2 egg sheets on top of container with 'S'-weights
- 5. Place sugar-water vial on top center of lid