

Codling Moth, *Cydia pomonella* (L.): Lepidoptera: Tortricidae

Origin: 1984; Madera County; northeast of North Fork, CA; apples

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

Tasks Performed: Weekly

<i>Day</i>	<i>Procedure</i>
Monday	Setup E/L Containers; Infest Diet Cups
Tuesday	Harvest & Chill Adults
Wednesday	
Thursday	Harvest Egg Sheets; Process (Formaldehyde) & Set up for Hatch
Friday	Harvest & Chill Adults; Prepare Materials for Next Week

Set up Egg Layers (E/L):

*Materials:*

- CM adults
- Oviposition can with waxed paper end caps – both ends
- Aspirator

*Procedure – performed under fumehood:*

1. Aspirate adults from 60 cups (2 trays)
2. Transfer to E/L can and close with waxed paper held in place with plastic snap-cap lids
3. Place E/L cans on top shelf in holding room
4. Allow 3 days for mating and oviposition (Monday to Thursday)

Infest cups – Set up new colony:

*Materials:*

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

*Procedure – performed under fumehood:*

1. Using a small camel hair brush, infest each diet cup with 3-4 larvae
2. Place the larvae onto surface of the diet
3. Close cup with plastic lid
4. Label trays and place on shelf in holding room for development

Harvest/Chill Adults:

*Materials:*

- Cups/trays with CM adults
- Place cups with adults in refrigerator (40°F)

*Procedure – performed under fumehood:*

1. Separate cups with adults from those without adults
2. Place cups with adults in refrigerator (40°F)

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Harvest/Process Eggs:

*Materials:*

- E/L cans with adults and eggs
- SS pan and screen
- Large forceps
- 10% formaldehyde stock solution \*  
(Stock solution: 216 ml Formalin® (37%) in 584 ml distilled water)
- Timer
- Tap water
- Wire racks
- Scissors
- Filter paper strips
- Water squeeze bottle

*Procedure – performed under fumehood:*

1. Tap can on surface of fumehood and remove waxed paper end pieces
2. Trim off excess paper
3. Using 10% formaldehyde stock solution, in SS pan, surface sterilize eggs for 15 minutes (set timer)
4. Pour formaldehyde solution back into stock container through funnel lined with coffee filter (to remove moth scales) \*
5. Rinse thoroughly under clean tap water for 15 minutes (set timer)
6. Place egg sheets on wire racks and allow to air dry under fumehood
7. Cut into one-quarter sheets and evenly distribute between 12 ½-pint jars
8. Place a moistened strip of filter paper into each jar & seal w/ solid cap and ring
9. Place jars in holding room for development
10. Eggs should hatch in about 4 days (Thursday to Monday)

**\* When formaldehyde stock solution becomes old or dirty, under a fume hood, transfer it into an appropriate container for disposal and dispose according to location HazMat protocol**

Rearing Conditions:

*Neonate to Adult:*

- Temperature: 27±1°C / 80±2°F
- RH: 60±5%
- Light Cycle: 16 hr Light : 8 hr Dark
- Development Time: 4 weeks

*Neonate to Diapausing Larva:*

- Temperature: 18±1°C / 65±2°F
- RH: 60±5%
- Light Cycle: 8 hr Light : 16 hr Dark
- Development Time: 6 weeks