

# Summary – PCA Breakfast

Sonoma County

March 7, 2024

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## Topics for Discussion

1. Review vineyard pests at budbreak and early shoot growth taking into consideration the weather
2. Early season management strategies for weeds and pests active at budbreak (thrips, mites, mealybugs, leafrollers)
3. Discuss timing of fungicide sprays relative to budbreak, shoot development, and rain events
4. Group discussion and reporting on Pierce's Disease vector. Numbers from monitoring and management options
5. Timing of foliar insecticides to maximize sharpshooter control taking into account the size of the canopy
6. Discuss best management practices and updates on any new and reduced risk materials or alternative controls

## Other topics

1. Pinot Leaf Curl
2. Frost-nucleating bacteria
3. Powdery Mildew

7:30am – 7:40am = Introductions

7:40am – 9:00 am = Discussions

### **1. PCA Breakfast Logistics**

- a. Notes will be taken from now on and available online
- b. New PCAs should be invited (emails not on our list)

### **2. Ant Identification Workshop**

- a. April 10 - 11
- b. Is there a need?
  - i. Some interest in ant identification
- c. Interest for other species identification
  - i. Sharpshooter Identification interest
  - ii. New insect and send out old ant materials as well
  - iii. Other insects for consideration
    - 1. Sharpshooters
    - 2. Leafhoppers
    - 3. Mites (different class)
      - a. Pacific
      - b. Willamette
    - 4. Mealybug
    - 5. Beneficials
  - iv. Smaller Setting – bring to conference room
    - 1. Samples for viewing
  - v. Mimic what is done in the field for insect ID
    - 1. No microscopes
    - 2. Use of eye-loops

### **3. Season Predictions / Early Observations**

- a. Weather (Winter 2024)
  - i. Lots of rain

- ii. No hard freezes
- iii. Comparing chilling hours from this year to 2023
  - 1. Range 2023 = 300 – 800 chilling hours
- iv. Possibly warmer spring than 2023

b. Blue-Green Sharpshooter Populations

- i. What supports a higher survival rate during winter
- ii. High precipitation leads to healthy weeds
- iii. Fewer freeze days increases winter survival
- iv. Blue-Green Sharpshooter trapping information
  - 1. Website = [ucanr.edu/bgss](http://ucanr.edu/bgss)
  - 2. 104 traps (2020 – 2024)

c. Powdery Mildew

- i. Stay on schedule
- ii. Lots of wind last year 2023; blown out of schedule
- iii. Frac-3 testing resistance (Oregon State)**
  - 1. Follow up – Alec Levin**
- iv. Conditions that led to less worry 2023
  - 1. Fewer buds left last year (2023) due to coming out of drought
  - 2. Less reason to worry
  - 3. Initial spray was later than usual
  - 4. First spray was 12-16” of growth
    - a. May spray at earlier growth depending on the spray product
    - b. Coverage at 4” ≈ 12” shoots?
    - c. May start at 4”
      - i. Spray without fan for better coverage (First spray)
  - 5. First spray was early April
  - 6. High pressure even with two week intervals

a. Sulfur only (14-day intervals)

d. Budbreak (March 7, 2024)

- i. Buds swelling in Guerneville
- ii. Not early (on average)  $\approx$  Average
- iii. 20% budbreak in Carneros
- iv. 60% budbreak in Healdsburg
- v. 5% budbreak in Santa Rosa

#### 4. Review vineyard pests at budbreak

a. UC IPM GDD model

- i. Most useful website on UCCE Sonoma Page

b. Three-Cornered Alfalfa Hoppers

i. BMPs (Tillage) for TCAH control

- 1. Timing based on accumulation of GDDs
- 2. Model predicts 1<sup>st</sup> or 3<sup>rd</sup> instars of TCAH on ground cover
- 3. 1<sup>st</sup> and 3<sup>rd</sup> instars feed at base of the plant
  - a. Mowing may not help much
  - b. Tilling helps more
- 4. Tilling early
  - a. Overwintering TCAH will have less places to lay their eggs
  - b. If there is less ideal habitat, TCAH adults will keep looking and live longer
    - i. TCAH prefers Vetch over Clover
    - ii. Vetch grows everywhere/wild
  - c. May want to leave some cover for eggs to be laid on so control methods using tilling can be more successful

ii. Detection of TCAH

1. If GRBaV spreads in vineyards it is likely that TCAH is present in the vineyard
2. Girdled petioles may be a sign they are present, but may not represent the population sizes
3. May be other vectors
  - a. *Tortricollis* species in particular
4. Sweep netting before tillage
  - a. Requires a lot of sweeping
  - b. First visible TCAH was 1<sup>st</sup> generation adults (too late)
  - c. Don't see them until 4<sup>th</sup> or 5<sup>th</sup> instar in sweep nets
  - d. 1<sup>st</sup> – 3<sup>rd</sup> instars may be too small or hard to trap
  - e. Degree Days predict when 1<sup>st</sup> – 3<sup>rd</sup> instars will be present since they are hard to see with the eye
  - f. Adults arrive in February
5. Soil Insecticides
  - a. Products used
    - i. Admire
    - ii. Platinum
  - b. Applied when vine mealybug is present
  - c. May help with TCAH?
    - i. Depends on how these perform with hoppers
6. Gemini viruses
  - a. Only one vectored by treehoppers
  - b. This one was closely related to GRBaV
  - c. Gut receptor site is highly specific
    - i. More likely to be similar vector species

## 7. Grapevine Phylloxera

a. Not known to vector anything

### c. Ice nucleating bacteria

- i. Increase freezing temperatures by 3-4 °F
- ii. Increases frost risk in spring
- iii. Live on cover crop
- iv. Spread in airborne distribution when mowing
- v. Copper can help control by killing off bacteria

### d. Pinot Leaf Curl

- i. Nitrogen fertilizer can make symptoms worse
- ii. Remobilized Nitrogen is turned into putrescene

### e. Crown Gall (*Agrobacterium tumefaciens*)

- i. Top grafted (Alexander Valley)
- ii. 60% infected with crown gall
- iii. Soil-contact leads to infection
  1. Tools
  2. Tape
  3. Plant material
- iv. Kerosene painting around graft may help reduce infection rate

### f. Vine Mealybug

- i. Celada Vine Mealybug 180
  1. PCA trialing in multiple sites
  2. Survives harvest machinery
  3. One application per year
  4. Moves along the wire
  5. Apply to clip
  6. Can cut out flowable products

7. Supposed to last 12 months
8. Helps with maintaining windows
9. Organic use permitted (Exception label)  
– unverified

- g. Spore Trapping (Powdery Mildew)
  - i. No detections until end of June
  - ii. Performed poorly in 2023 in Chardonnay vineyards
  - iii. Seemed to work better in Pinot Noir vineyards

## **5. Upcoming Events**

- a. PCA Breakfasts Mendocino County
  - i. March – November (Monthly)
- b. April 10 – 11 – Pest Identification Workshop
- c. April 26 – Organic Crops Day
  - i. Tentative: 0.5 – 1.5 DPR Units
- d. May 28 – Pear and Grape Day
  - i. Tentative: 0.5 – 1.5 DPR Units
- e. June 12 – Soil Carbon Workshop

## **6. Event Ideas**

- a. Foliar Fertilizer Applications
  - i. Expert outside of chemical companies
  - ii. Soil applied vs. Foliar
- b. Microphones to identify pests feeding on crops
  - i. What insects are present and feeding?
  - ii. How many?
  - iii. Mealybugs in grapevines might work
  - iv. Cutworms in grapevines might work too
  - v. Picks up physical feeding sounds