



California Grower Survey Results

Cooperating with the California Department of Food and Agriculture

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California Department of Food and Agriculture (CDFA) Pierce's Disease/Glassy-Winged Sharpshooter Board

State and Regional Totals

The **Pierce's Disease/Glassy-Winged Sharpshooter Survey**, conducted in November and December 2019, gauges winegrape growers' attitudes toward efforts undertaken on their behalf by CDFA and its Pierce's Disease/Glassy-Winged Sharpshooter Board. The survey results will help determine appropriate ways to keep winegrape growers informed about Pierce's Disease, the glassy-winged sharpshooter, and other designated pests and diseases.

This report summarizes the survey results at the State and Regional levels by growers of grapes crushed for wine. Regions are based on the California Grape Pricing Districts. A map of the California Grape Pricing Districts and corresponding survey regions are shown at the end of this report. Questions 1 and 2 of the survey were screening questions to determine whether the survey respondents should answer the remaining questions. There were 1,119 growers in the sample and 741 responded to the survey. Of the 741 responses, 384 had winegrapes and 357 did not have winegrapes.

3. Have glassy-winged sharpshooters ever been found in any of your vineyards?

| | Yes | No | Don't know | No response | Total ^{1/} |
|----------|-------|-------|------------|-------------|---------------------|
| State | 32 | 309 | 43 | --- | 384 |
| | 8.3% | 80.5% | 11.2% | --- | 100% |
| Region 1 | 18 | 135 | 18 | --- | 171 |
| | 10.5% | 78.9% | 10.5% | --- | 100% |
| Region 2 | 1 | 54 | 10 | --- | 65 |
| | 1.5% | 83.1% | 15.4% | --- | 100% |
| Region 3 | 7 | 73 | 6 | --- | 86 |
| | 8.1% | 84.9% | 7.0% | --- | 100% |
| Region 4 | 6 | 47 | 9 | --- | 62 |
| | 9.7% | 75.8% | 14.5% | --- | 100% |

4. Has Pierce's disease ever been found in any of your vineyards?

| | Yes | No | Don't know | No response | Total ^{1/} |
|----------|-------|-------|------------|-------------|---------------------|
| State | 63 | 273 | 47 | 1 | 384 |
| | 16.4% | 71.1% | 12.2% | 0.3% | 100% |
| Region 1 | 47 | 106 | 17 | 1 | 171 |
| | 27.5% | 62.0% | 9.9% | 0.6% | 100% |
| Region 2 | 2 | 54 | 9 | --- | 65 |
| | 3.1% | 83.1% | 13.8% | --- | 100% |
| Region 3 | 6 | 69 | 11 | --- | 86 |
| | 7.0% | 80.2% | 12.8% | --- | 100% |
| Region 4 | 8 | 44 | 10 | --- | 62 |
| | 12.9% | 71.0% | 16.1% | --- | 100% |

^{1/} Percentages may not add due to rounding.

5. How big of a threat did you feel Pierce's disease and the glassy-winged sharpshooter were five years ago?

| | Significant threat | Moderate threat | Minimal threat | Don't know | No response | Total ^{1/} |
|----------|--------------------|-----------------|----------------|------------|-------------|---------------------|
| State | 123 | 101 | 150 | 8 | 2 | 384 |
| | 32.0% | 26.3% | 39.1% | 2.1% | 0.5% | 100% |
| Region 1 | 67 | 51 | 46 | 6 | 1 | 171 |
| | 39.2% | 29.8% | 26.9% | 3.5% | 0.6% | 100% |
| Region 2 | 14 | 10 | 40 | --- | 1 | 65 |
| | 21.5% | 15.4% | 61.5% | --- | 1.5% | 100% |
| Region 3 | 21 | 26 | 38 | 1 | --- | 86 |
| | 24.4% | 30.2% | 44.2% | 1.2% | --- | 100% |
| Region 4 | 21 | 14 | 26 | 1 | --- | 62 |
| | 33.9% | 22.6% | 41.9% | 1.6% | --- | 100% |

6. How big of a threat do you feel Pierce's disease and the glassy-winged sharpshooter are today?

| | | | | | | |
|----------|-------|-------|-------|------|------|------|
| State | 70 | 143 | 163 | 6 | 2 | 384 |
| | 18.2% | 37.2% | 42.4% | 1.6% | 0.5% | 100% |
| Region 1 | 36 | 74 | 58 | 3 | --- | 171 |
| | 21.1% | 43.3% | 33.9% | 1.8% | --- | 100% |
| Region 2 | 13 | 11 | 40 | --- | 1 | 65 |
| | 20.0% | 16.9% | 61.5% | --- | 1.5% | 100% |
| Region 3 | 10 | 34 | 40 | 1 | 1 | 86 |
| | 11.6% | 39.5% | 46.5% | 1.2% | 1.2% | 100% |
| Region 4 | 11 | 24 | 25 | 2 | --- | 62 |
| | 17.7% | 38.7% | 40.3% | 3.2% | --- | 100% |

7. How effective do you think the program to halt the spread of Pierce's disease and the glassy-winged sharpshooter has been?

| | Very effective | Somewhat effective | Not at all effective | Don't know | No response | Total ^{1/} |
|----------|----------------|--------------------|----------------------|------------|-------------|---------------------|
| State | 174 | 162 | 21 | 21 | 6 | 384 |
| | 45.3% | 42.2% | 5.5% | 5.5% | 1.6% | 100% |
| Region 1 | 74 | 69 | 12 | 14 | 2 | 171 |
| | 43.3% | 40.4% | 7.0% | 8.2% | 1.2% | 100% |
| Region 2 | 28 | 30 | 3 | 3 | 1 | 65 |
| | 43.1% | 46.2% | 4.6% | 4.6% | 1.5% | 100% |
| Region 3 | 44 | 36 | 3 | 1 | 2 | 86 |
| | 51.2% | 41.9% | 3.5% | 1.2% | 2.3% | 100% |
| Region 4 | 28 | 27 | 3 | 3 | 1 | 62 |
| | 45.2% | 43.5% | 4.8% | 4.8% | 1.6% | 100% |

^{1/} Percentages may not add due to rounding.

| | | Yes | No | Don't know | No response | Total ^{1/} |
|---|----------|-------|-------|------------|-------------|---------------------|
| 8. Are you aware of any programs or research that have come about because of the statewide Pierce's disease winegrape assessment? | State | 146 | 223 | 5 | 10 | 384 |
| | | 38.0% | 58.1% | 1.3% | 2.6% | 100% |
| Region 1 | Region 1 | 70 | 93 | 3 | 5 | 171 |
| | | 40.9% | 54.4% | 1.8% | 2.9% | 100% |
| Region 2 | Region 2 | 24 | 39 | --- | 2 | 65 |
| | | 36.9% | 60.0% | --- | 3.1% | 100% |
| Region 3 | Region 3 | 30 | 52 | 1 | 3 | 86 |
| | | 34.9% | 60.5% | 1.2% | 3.5% | 100% |
| Region 4 | Region 4 | 22 | 39 | 1 | --- | 62 |
| | | 35.5% | 62.9% | 1.6% | --- | 100% |

| | | Federal funds | State funds | Industry assessment funds | Other funds | Don't know | No response |
|---|----------|---------------|-------------|---------------------------|-------------|------------|-------------|
| 9. What funding sources are you aware of for Pierce's disease control activities in California? ^{2/} | State | 32 | 122 | 182 | 11 | 58 | 64 |
| | | 8.3% | 31.8% | 47.4% | 2.9% | 15.1% | 16.7% |
| Region 1 | Region 1 | 9 | 48 | 93 | 5 | 27 | 25 |
| | | 5.3% | 28.1% | 54.4% | 2.9% | 15.8% | 14.6% |
| Region 2 | Region 2 | 11 | 23 | 23 | 2 | 7 | 18 |
| | | 16.9% | 35.4% | 35.4% | 3.1% | 10.8% | 27.7% |
| Region 3 | Region 3 | 6 | 24 | 39 | 2 | 15 | 15 |
| | | 7.0% | 27.9% | 45.3% | 2.3% | 17.4% | 17.4% |
| Region 4 | Region 4 | 6 | 27 | 27 | 2 | 9 | 6 |
| | | 9.7% | 43.5% | 43.5% | 3.2% | 14.5% | 9.7% |

| | | Yes | No | Don't know | No response | Total ^{1/} |
|---|----------|-------|------|------------|-------------|---------------------|
| 10. Do you think that the statewide Pierce's disease winegrape assessment has contributed to the success of the Pierce's disease and glassy-winged sharpshooter research and containment program? | State | 299 | 28 | 35 | 22 | 384 |
| | | 77.9% | 7.3% | 9.1% | 5.7% | 100% |
| Region 1 | Region 1 | 125 | 14 | 20 | 12 | 171 |
| | | 73.1% | 8.2% | 11.7% | 7.0% | 100% |
| Region 2 | Region 2 | 53 | 4 | 6 | 2 | 65 |
| | | 81.5% | 6.2% | 9.2% | 3.1% | 100% |
| Region 3 | Region 3 | 70 | 6 | 4 | 6 | 86 |
| | | 81.4% | 7.0% | 4.7% | 7.0% | 100% |
| Region 4 | Region 4 | 51 | 4 | 5 | 2 | 62 |
| | | 82.3% | 6.5% | 8.1% | 3.2% | 100% |

^{1/} Percentages may not add due to rounding.

^{2/} Totals not applicable because of multiple responses.

11. Do you feel that growers of other crops besides winegrapes have played a significant role in containing the glassy-winged sharpshooter?

| | Yes | No | Don't know | No response | Total ^{1/} |
|----------|-------|-------|------------|-------------|---------------------|
| State | 162 | 128 | 64 | 30 | 384 |
| | 42.2% | 33.3% | 16.7% | 7.8% | 100% |
| Region 1 | 62 | 50 | 43 | 16 | 171 |
| | 36.3% | 29.2% | 25.1% | 9.4% | 100% |
| Region 2 | 25 | 27 | 9 | 4 | 65 |
| | 38.5% | 41.5% | 13.8% | 6.2% | 100% |
| Region 3 | 49 | 26 | 6 | 5 | 86 |
| | 57.0% | 30.2% | 7.0% | 5.8% | 100% |
| Region 4 | 26 | 25 | 6 | 5 | 62 |
| | 41.9% | 40.3% | 9.7% | 8.1% | 100% |

If YES, which ones? ^{2/}

| | Nursery industry | Citrus industry | Almond industry | Table grape industry | Raisin grape industry | Other |
|----------|------------------|-----------------|-----------------|----------------------|-----------------------|-------|
| State | 114 | 79 | 34 | 70 | 62 | 4 |
| | 70.4% | 48.8% | 21.0% | 43.2% | 38.3% | 2.5% |
| Region 1 | 54 | 25 | 10 | 28 | 23 | 2 |
| | 87.1% | 40.3% | 16.1% | 45.2% | 37.1% | 3.2% |
| Region 2 | 18 | 7 | 7 | 8 | 10 | 1 |
| | 72.0% | 28.0% | 28.0% | 32.0% | 40.0% | 4.0% |
| Region 3 | 26 | 32 | 15 | 21 | 21 | --- |
| | 53.1% | 65.3% | 30.6% | 42.9% | 42.9% | --- |
| Region 4 | 16 | 15 | 2 | 13 | 8 | 1 |
| | 61.5% | 57.7% | 7.7% | 50.0% | 30.8% | 3.8% |

^{1/} Percentages may not add due to rounding.

^{2/} Totals not applicable because of multiple responses.

| | | CDFA Pierce's Disease Control Program | CDFA Pierce's Disease and Glassy-Winged Sharpshooter Board (newsletter, e- blast, website, Facebook, YouTube and trade shows) | U.C. Cooperative Extension | County Agricultural Commissioner | Regional or statewide grower associations |
|---|----------|--|--|---|---|--|
| 12. What key source(s) do you rely on for information about Pierce's disease and the glassy-winged sharpshooter? ^{2/} | State | 85 | 109 | 122 | 146 | 73 |
| | | 22.1% | 28.4% | 31.8% | 38.0% | 19.0% |
| | Region 1 | 42 | 49 | 52 | 77 | 29 |
| | | 24.6% | 28.7% | 30.4% | 45.0% | 17.0% |
| | Region 2 | 10 | 20 | 20 | 22 | 22 |
| | | 15.4% | 30.8% | 30.8% | 33.8% | 33.8% |
| | Region 3 | 19 | 27 | 28 | 32 | 10 |
| | | 22.1% | 31.4% | 32.6% | 37.2% | 11.6% |
| | Region 4 | 14 | 13 | 22 | 15 | 12 |
| | | 22.6% | 21.0% | 35.5% | 24.2% | 19.4% |

12. (continued)

| | | Crop consultant or PCA | Other winegrape growers | Media | Other | Don't know | No response | None |
|----------|-------|---------------------------------------|--|--------------|--------------|-----------------------|------------------------|-------------|
| State | 116 | 101 | 75 | 24 | 6 | 25 | 7 | |
| | 30.2% | 26.3% | 19.5% | 6.3% | 1.6% | 6.5% | 1.8% | |
| Region 1 | 36 | 39 | 30 | 17 | 3 | 12 | 5 | |
| | 21.1% | 22.8% | 17.5% | 9.9% | 1.8% | 7.0% | 2.9% | |
| Region 2 | 22 | 16 | 9 | 2 | 1 | 8 | --- | |
| | 33.8% | 24.6% | 13.8% | 3.1% | 1.5% | 12.3% | --- | |
| Region 3 | 39 | 18 | 17 | --- | 1 | 4 | 1 | |
| | 45.3% | 20.9% | 19.8% | --- | 1.2% | 4.7% | 1.2% | |
| Region 4 | 19 | 28 | 19 | 5 | 1 | 1 | 1 | |
| | 30.6% | 45.2% | 30.6% | 8.1% | 1.6% | 1.6% | 1.6% | |

^{2/} Totals not applicable because of multiple responses.

13. Have you visited any websites seeking information about Pierce's disease and/or the glassy-winged sharpshooter?

| | Yes | No | Don't know | No response | Total ^{1/} |
|----------|-------|-------|------------|-------------|---------------------|
| State | 93 | 281 | 1 | 9 | 384 |
| | 24.2% | 73.2% | 0.3% | 2.3% | 100% |
| Region 1 | 52 | 112 | --- | 7 | 171 |
| | 30.4% | 65.5% | --- | 4.1% | 100% |
| Region 2 | 12 | 52 | --- | 1 | 65 |
| | 18.5% | 80.0% | --- | 1.5% | 100% |
| Region 3 | 14 | 70 | 1 | 1 | 86 |
| | 16.3% | 81.4% | 1.2% | 1.2% | 100% |
| Region 4 | 15 | 47 | --- | --- | 62 |
| | 24.2% | 75.8% | --- | --- | 100% |

If YES, please specify.
^{2/}

| | CDFA's Pierce's Disease Control Program | PDGWSS.net | U.C. Cooperative Extension | County Agricultural Commissioner | Other |
|----------|---|------------|----------------------------|----------------------------------|-------|
| State | 36 | 17 | 62 | 40 | 10 |
| | 38.7% | 18.3% | 66.7% | 43.0% | 10.8% |
| Region 1 | 24 | 10 | 28 | 24 | 10 |
| | 46.2% | 19.2% | 53.8% | 46.2% | 19.2% |
| Region 2 | 4 | 2 | 10 | 4 | --- |
| | 33.3% | 16.7% | 83.3% | 33.3% | --- |
| Region 3 | 5 | 2 | 10 | 6 | --- |
| | 35.7% | 14.3% | 71.4% | 42.9% | --- |
| Region 4 | 3 | 3 | 14 | 6 | --- |
| | 20.0% | 20.0% | 93.3% | 40.0% | --- |

a. Were the websites helpful?

| | Yes | No | Don't know | No response | Total ^{1/} |
|----------|-------|------|------------|-------------|---------------------|
| State | 90 | 2 | 1 | --- | 93 |
| | 96.8% | 2.2% | 1.1% | --- | 100% |
| Region 1 | 50 | 1 | 1 | --- | 52 |
| | 96.2% | 1.9% | 1.9% | --- | 100% |
| Region 2 | 11 | 1 | --- | --- | 12 |
| | 91.7% | 8.3% | --- | --- | 100% |
| Region 3 | 14 | --- | --- | --- | 14 |
| | 100% | --- | --- | --- | 100% |
| Region 4 | 15 | --- | --- | --- | 15 |
| | 100% | --- | --- | --- | 100% |

^{1/} Percentages may not add due to rounding.

^{2/} Totals not applicable because of multiple responses.

| | | Yes | No | Don't know | No response | Total ^{1/} |
|---|-------|-------|-------|------------|-------------|---------------------|
| 14. Have you made any changes to your production practices as a result of the Pierce's disease/glassy-winged sharpshooter threat? | State | 84 | 287 | 3 | 10 | 384 |
| | | 21.9% | 74.7% | 0.8% | 2.6% | 100% |
| Region 1 | 46 | 116 | 1 | 8 | 171 | |
| | 26.9% | 67.8% | 0.6% | 4.7% | 100% | |
| Region 2 | 9 | 56 | --- | --- | 65 | |
| | 13.8% | 86.2% | --- | --- | 100% | |
| Region 3 | 18 | 64 | 2 | 2 | 86 | |
| | 20.9% | 74.4% | 2.3% | 2.3% | 100% | |
| Region 4 | 11 | 51 | --- | --- | 62 | |
| | 17.7% | 82.3% | --- | --- | 100% | |

| | | Very effective | Somewhat effective | Not at all effective | Don't know | No response | Total ^{1/} |
|---|-------|----------------|--------------------|----------------------|------------|-------------|---------------------|
| 15. In 2010 the PD/GWSS Board began addressing other pest and disease threats of winegrapes. How responsive do you feel the PD/GWSS Board has been to these additional threats of winegrapes? | State | 80 | 204 | 24 | 54 | 22 | 384 |
| | | 20.8% | 53.1% | 6.3% | 14.1% | 5.7% | 100% |
| Region 1 | 31 | 94 | 9 | 27 | 10 | 171 | |
| | 18.1% | 55.0% | 5.3% | 15.8% | 5.8% | 100% | |
| Region 2 | 12 | 32 | 5 | 13 | 3 | 65 | |
| | 18.5% | 49.2% | 7.7% | 20.0% | 4.6% | 100% | |
| Region 3 | 22 | 44 | 5 | 9 | 6 | 86 | |
| | 25.6% | 51.2% | 5.8% | 10.5% | 7.0% | 100% | |
| Region 4 | 15 | 34 | 5 | 5 | 3 | 62 | |
| | 24.2% | 54.8% | 8.1% | 8.1% | 4.8% | 100% | |

| | | Yes | No | Don't know | No response | Total ^{1/} |
|--|-------|-------|-------|------------|-------------|---------------------|
| 16. Do you feel the PD/GWSS Board is doing enough research and outreach on other winegrape pests and diseases? | State | 205.0 | 86.0 | 63.0 | 30.0 | 384 |
| | | 53.4% | 22.4% | 16.4% | 7.8% | 100% |
| Region 1 | 85 | 37 | 34 | 15 | 171 | |
| | 49.7% | 21.6% | 19.9% | 8.8% | 100% | |
| Region 2 | 28 | 16 | 17 | 4 | 65 | |
| | 43.1% | 24.6% | 26.2% | 6.2% | 100% | |
| Region 3 | 50 | 21 | 7 | 8 | 86 | |
| | 58.1% | 24.4% | 8.1% | 9.3% | 100% | |
| Region 4 | 42 | 12 | 5 | 3 | 62 | |
| | 67.7% | 19.4% | 8.1% | 4.8% | 100% | |

^{1/} Percentages may not add due to rounding.

MAP AND DEFINITIONS OF CALIFORNIA GRAPE PRICING DISTRICTS

