

TECHNICAL APPENDIX A.

UNDERSTANDING THE IMPACTS OF WILDLAND FIRE AND SMOKE ON CALIFORNIA'S WINEGRAPE INDUSTRY: A STATEWIDE SURVEY OF WINEGRAPE GROWERS AND OPERATORS

The survey will take **less than five** minutes to complete.

Please complete the survey and return in the included envelope.

Survey responses must be postmarked by July 19, 2021.

This project is being conducted as a collaboration of the U.S. Department of Agriculture (USDA) Agricultural Research service, the USDA California Climate Hub, and the Farm Foundation's Young Agri-Food Leaders Network program.

Results will be published as a peer-reviewed paper, and shared with decision makers and other stakeholders including, the California Department of Food and Agriculture (CDFA), USDA, and industry organizations.

The purpose of this project is to help winegrape producers and the agricultural industry adapt to the impacts of wildfires, and to inform decision makers' allocation of resources and support as tied to the industry's needs.

1. Please select all that apply to you

- I am a grower
- I operate a vineyard management company (manage other people's vineyards)
- I produce wine for commercial sale and have a type 2 ABC winegrowers license

2. In what county do you primarily produce? If you operate in multiple counties, please indicate the county you produce in that you are the most concerned about regarding wildfire risk.

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Alameda | <input type="checkbox"/> Santa Clara |
| <input type="checkbox"/> Alpine | <input type="checkbox"/> Santa Cruz |
| <input type="checkbox"/> Amador | <input type="checkbox"/> Shasta |
| <input type="checkbox"/> Butte | <input type="checkbox"/> Sierra |
| <input type="checkbox"/> Calaveras | <input type="checkbox"/> Siskiyou |
| <input type="checkbox"/> Colusa | <input type="checkbox"/> Solano |
| <input type="checkbox"/> Contra | <input type="checkbox"/> Sonoma |
| <input type="checkbox"/> Del Norte | <input type="checkbox"/> Stanislaus |
| <input type="checkbox"/> Fresno | <input type="checkbox"/> Sutter |
| <input type="checkbox"/> Glenn | <input type="checkbox"/> Tehama |
| <input type="checkbox"/> Humboldt | <input type="checkbox"/> Trinity |
| <input type="checkbox"/> Imperial | <input type="checkbox"/> Tulare |
| <input type="checkbox"/> Inyo | <input type="checkbox"/> Tuolumne |
| <input type="checkbox"/> Kern | <input type="checkbox"/> Ventura |
| <input type="checkbox"/> Lake | <input type="checkbox"/> Yolo |
| <input type="checkbox"/> Lassen | <input type="checkbox"/> Yuba |
| <input type="checkbox"/> Los Angeles | |
| <input type="checkbox"/> Madera | |
| <input type="checkbox"/> Marin | |
| <input type="checkbox"/> Mariposa | |
| <input type="checkbox"/> Merced | |
| <input type="checkbox"/> Mendocino | |
| <input type="checkbox"/> Monterey | |
| <input type="checkbox"/> Napa | |
| <input type="checkbox"/> Nevada | |
| <input type="checkbox"/> Orange | |
| <input type="checkbox"/> Placer | |
| <input type="checkbox"/> Plumas | |
| <input type="checkbox"/> Riverside | |
| <input type="checkbox"/> Sacramento | |
| <input type="checkbox"/> San Bento | |
| <input type="checkbox"/> San Diego | |
| <input type="checkbox"/> San Francisco | |
| <input type="checkbox"/> San Joaquin | |
| <input type="checkbox"/> San Luis | |
| <input type="checkbox"/> Obispo | |
| <input type="checkbox"/> San Mateo | |
| <input type="checkbox"/> Santa Barbara | |

3. How many years have you been growing wine grapes?
 - 0-10 years
 - 11-20 years
 - 21-30 years
 - 31-40 years
 - 40+ years

4. Do you believe the risks to your operation from wildfires are greater today than five years ago?
 - Yes
 - No
 - I don't know

5. Have you considered changes to your operation in response to wildfire risks?
 - Yes
 - No

6. Have you implemented changes to your operation due to wildfire risks?
 - Yes
 - No

7. If you answered YES to Question 6, please select which change(s) characterize what you have implemented. Select all that apply. If you answered NO, please move on to Question 9.
 - Management practices were changed or newly adopted
 - Physical aspects of the operation were changed or improved
 - The adopted changes or improvements required a cash outlay

8. How did the adopted changes or improvements impact your operation?
 - The adopted changes or improvements made my operation less efficient
 - The adopted changes or improvements made my operation more efficient

9. Do you believe growers, like you, have the information needed to effectively manage the risks of wildfires to vineyard operations?
 - Yes
 - No
 - I don't know

10. What are your top sources for wildfire related information/guidance related to your agricultural operation(s)? Select all that apply.

- County Agricultural Commissioners
- Other growers
- Cooperative Extension
- Trade/commodity organizations
- Government agencies (CDFA, CalFire)
- Insurance providers (agents, underwriters)
- Social media
- Other

11. Was your operation affected by wildfire(s) in 2020?

- Yes
- No

12. Where applicable, select the nature of the impact to your operation due to wildfire(s).

- Harvest activities were disrupted due to presence of smoke and human health considerations
- Vineyard employees were unable to report to work (evacuation orders, personal safety concerns, home or property damage, etc.)
- Unable to access vineyard(s) when necessary
- My winery customer was unable to receive and process my grapes (for reasons other than smoke)
- Vineyard(s), related structures or infrastructure were damaged or destroyed
- Interruption of power affected critical vineyard operations
- Grapes exposed to wildfire smoke
- Other

13. If you selected other, please elaborate.

14. If you selected ‘grapes exposed to wildfire smoke’, please select all of the following results to your wine grapes. If you did NOT select that response, please move on to question 15.
- Quality loss
 - Grapes under contract were discounted by buyer
 - Grapes under contract went unsold
 - Uncontracted grapes, as of August 1, went unsold
 - Financial loss for my operation
15. Please rate the significance of wildfire effects on your operation.
- No impact
 - Slight impact
 - Great impact
 - Severe impact
 - Irreversible damage
16. Did you have need to access laboratory services to test grapes or wine for the presence of smoke taint?
- Yes
 - No
17. If YES, were you able to obtain access to timely laboratory test results? If NO, please move on to question 19.
- Yes
 - No
18. If you were NOT able to obtain access to timely laboratory results, did your inability to do so adversely affect your operation?
- Yes
 - No
19. Was your operation adversely affected by wildfire(s) in any of the following years?
Select all that apply.
- 2019
 - 2018
 - 2017
 - 2016
 - A year prior to 2016
 - None of the above

20. For any year in which you were affected by wildfires, identify the most significant adverse effects for your operation (you may select up to five).

- Smoke damage to grape crop
- Lost grape sales or reduced prices
- Difficult work conditions for vineyard employees due to presence of smoke
- Inability to access vineyard(s)
- Damage to structures, equipment or infrastructure
- Disruption of agritourist activities/onsite events
- Disruption of power
- Inability of employees to work (loss of housing, evacuation orders, personal safety issues, etc.)
- Environmental damages to vineyard and adjacent lands (fire damaged trees, loss of vegetation, mudslide risks, erosion problems, etc.)
- Uninsured losses
- Other

21. If you selected OTHER, please elaborate.

22. Is there anything else you would like us to know concerning wildfire risk/impact on California winegrape operations?