



FOUNDATION PLANT SERVICES
ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8600
TELEPHONE: (530) 752-3590
FAX: (530) 752-2132
E-MAIL: fps@ucdavis.edu
WEB: <http://fps.ucdavis.edu>

October 21, 2019

Dear Valued FPS Customer,

Foundation Plant Services (FPS) has been testing grapevines in its foundation vineyards for grapevine red blotch virus (GRBV) since 2013. Red blotch infection rate remains extremely low in the Classic Foundation Vineyard. Infection rates ranged from 0% to 0.21% from 2013 to 2019, with only one of 4,075 vines infected in 2019 (*see table*). Russell Ranch Vineyard (RRV) remained unaffected until 2017 when five of 4,132 vines, only 0.1%, were infected with GRBV. Since then, despite significant efforts to prevent the occurrence of the disease, the infection rate in the vineyard has increased to 0.5% (24 of 4,406) in 2018 and 7.1% (339 of 4,761) in 2019 (*see table*).

Since the discovery of red blotch in the foundation vineyards, all GRBV-positive vines within and near the vineyards have been removed and destroyed. All vines related to the positive vines tested negative in every case, indicating that this was a field transmission of GRBV. In addition, material from these plants was distributed prior to the last negative test date, indicating that material was likely GRBV-free at the time of distribution. In 2018, we implemented a test-to-order policy that further ensure orders being shipped were negative just prior to distribution.

One of the greatest challenges in managing red blotch has been vector-mediated transmission. The three-cornered alfalfa hopper (TCAH), *Spissistilus festinus*, has been documented as a vector in greenhouse studies and has been found in RRV. Given this threat, we have implemented more frequent vineyard inspections and additional spray treatments specifically targeting the vector and developed a comprehensive program for control of this vector. However, it remains unknown if other vectors are involved in the transmission of red blotch.

Given the level of red blotch infection in Russell Ranch Vineyard, we feel the best course of action is to place all orders requesting foundation material from RRV on hold until further notice. However, grapevine material planted the Classic Foundation Vineyard will continue to be available for distribution.

FPS is greatly committed to maintaining the highest testing standard for our foundation vineyards. We will continue to test all vines in the foundation vineyards individually on an annual basis and implement the best management strategies to safeguard foundation material. In addition, we have requested funds to begin a feasibility study for constructing a screen house to protect the most valued foundation material as a backup for field material. This is essential to protect the material from vectors and guarantees immediate access to the clean plant material in case of field infection.

FPS will work closely with industry and other stakeholders to determine the most appropriate strategies for managing the challenges of red blotch. A collaborative approach from FPS, nurseries, and vineyards is our best defense to protect grapevine material from exposure to viruses.

Russell Ranch Foundation

Classic Foundation

Year	Vines Tested	Total Vines	Positive Vines	Infection Rate	Vines Tested	Total Vines	Positive Vines	Infection Rate
2013	1,106	1,142	0	0%	3,438	4,284	9	0.21%
2014	2	1,807	0	0%	1,010	4,081	6	0.15%
2015	1,002	2,616	0	0%	636	4,169	0	0%
2016	584	3,290	0	0%	2,276	4,163	0	0%
2017	6,761*	4,132	5	0.1%	3,604	4,088	1	0.02%
2018	6,013*	4,406	24	0.5%	4,127*	4,075	0	0%
2019	5,442*	4,761	339	7.1%	4,167*	4,075	1	0.02%

*Some vines tested multiple times

Regards,



Deborah Golino
FPS Director
dagolino@ucdavis.edu



Maher Al Rwahnih
Research and Diagnostic Laboratory Director
malrwahnih@ucdavis.edu