FPS Update for CDFA Improvement Advisory Board

November 7, 2025

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Classic Foundation Vineyard – 2025 Virus Testing

- Of 4,991 vines at Classic Foundation Vineyard:
  - 1 positive for GLRaV-3
  - 1 positive for GRBV

  = 2 vines removed in August, immediately upon virus detection
- CDFA notified of detection & removal.
- Customers who received material have been notified.

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Classic Foundation Vineyard Testing History

Year	Vines Tested	Total Vines*	GRBV Positive Vines	GRBV Incidence	GLRaV-3 Positive Vines	GLRaV-3 Incidence
2017	3,604	4,088	1	0.02%	0	0%
2018	4,127	4,075	0	0%	0	0%
2019	4,167	4,075	1	0.02%	0	0%
2020	4,301	4,270	0	0%	0	0%
2021	4,594	4,594	0	0%	0	0%
2022	4,660	4,660	0	0%	0	0%
2023	4,634	4,634	0	0%	0	0%
2024	4,881	4,881	0	0%	1	0.02%
2025	4,991	4,991	1	0.02%	1	0.02%

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Location of GLRaV-3 Positive Vines

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Remember: grape material sourced from FPS is tested twice!

- Foundation grapevines are inspected and re-tested regularly to confirm they remain virus-free and are eligible in CDFA certification program.
- FPS testing exceeds CDFA requirement
  - First test: in the **fall** we use leaf petiole samples to test **every vine** for GRBV and GLRaV-3, **every year**.
    - Sample both sides of vine, 6 petioles each
  - Second test: dormant material from every vine that material is distributed from is tested again, to ensure it is free of GRBV and GLRaV-3.

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FPS Grapevine Collection

Classic Foundation Vineyard
2,504 selections

Foundation Greenhouse
~1,200 selections
Most, duplicating Classic material

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Coming Soon: Foundation Screenhouse

- 12,000 square feet
- Fully screened for insect exclusion
- $2.7 million bid for construction
  - $2.5 million loan from College allowed us to start the project.
- Construction team on site September 1.
- Expected completion April 2026

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Propagation Work Continues

- LR3 and GRBV detections are a problem! We need to secure the collection indoors!
- CDFA PD Board funded 1 more year of propagation work, $115,837
- NCPN, funds available at **very** last minute (September 19) were granted to FPS for propagation, $174,000.

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NCPN Funding to Secure Grapevines

- *We expressed an urgent need, and NCPN rose to meet it*
- **September 8** Maher attended NCPN meeting in North Carolina
  - Shared with the group the news of the 2025 LR3 and GRBV detections at Classic Vineyard
  - Viruses at Classic Foundation Vineyard make it imperative that we propagate and secure the grapevine collection as soon as possible
- NCPN Program Manager indicated that $174,000 of funds could be applied for to meet this emergency need.
  - Process needed to be completed ASAP for agreements to be signed and in place by end of September
    - Office of Sponsored Programs responded quickly to our needs on the UC Davis side, and we were able to receive the funds.

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This week on the work site:

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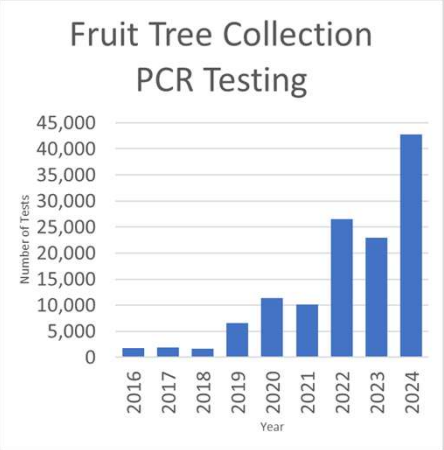
Fruit Tree Program – Annual Testing

- Testing in diagnostic lab has dramatically increased as the program grows
- PCR used to screen introductions
- PCR used on annual testing
  - LChV-1, LChV-2, phytoplasmas added to testing panel due to little cherry disease out break in PNW.
  - CVA added due to risk of pollen transmission.



Annual Testing

PRUNUS
Cherry virus A
Little cherry virus 1
Little cherry virus 2
Prunus necrotic ringspot virus
Prune dwarf virus
Plum pox virus
Phytoplasma Western X
Phytoplasmas (universal)

POME
Apple chlorotic leaf spot virus
Apple green crinkle associated virus
Apple hammerhead viroid-like circular RNA
Apple mosaic virus
Apple rubbery wood virus 1
Apple rubbery wood virus 2
Apple stem grooving virus
Apple stem pitting virus
Apple scar skin viroid
Citrus concave gum-associated virus
Cherry rasp leaf virus
Pear blister canker viroid
Phytoplasmas
Tomato ringspot virus
Tobacco ringspot virus
Citrus virus A
xylella fastidiosa

Fruit Tree Maintenance Testing - 2025

Pome Testing

- Foundation testing began June 11, on 33 composite samples.
  - 1 pear sample tested positive for phytoplasma (PHYTO) from the composite and was confirmed on June 20th.
- August 26, we recollected all 9 Pear cultivars as composite samples again and 7 tested positive PHYTO.
- September 2, we collected and tested the individual trees and 18 trees tested positive PHYTO.
- This made a total of 19 PHYTO positive Pear trees in 2025
- Pathogen is *Candidatus Phytoplasma pyri'*

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Fruit Tree Maintenance Testing - 2025

Prunus Testing

- Began May 28, 2025 on composite samples.
- Individual trees were tested for any positive composite tests, and those trees recollected to confirm a positive result.
- By June we had discovered 2 phytoplasma-infected Prunus.
- Testing again in August (based on Pear experience!) found no more PHYTO positive Prunus.
- Pathogen is *Candidatus Phytoplasma pruni'*

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Fruit Tree Maintenance Testing – 2025

Prunus Testing - continued

- 6 trees positive for PDV
  - Mahaleb seed trees at Goheen, retired two years ago.

Fruit Tree Maintenance Testing – 2025

Pome & Prunus Testing: Trees Removed

- 6 PDV+ Mahaleb seed trees at Goheen
- 2 Phytoplasma+ Prunus tree at Goheen
- 19 Phytoplasma+ Pyrus trees at Russell Ranch
  - **All** RRO pears have been removed

CDFA & affected customers have been notified

Maintenance Testing is Key to this Clean Collection!

- No tolerance for false negatives
- We are using a lot of resources to maintain the collection –
  - Let's review FPS's current funding

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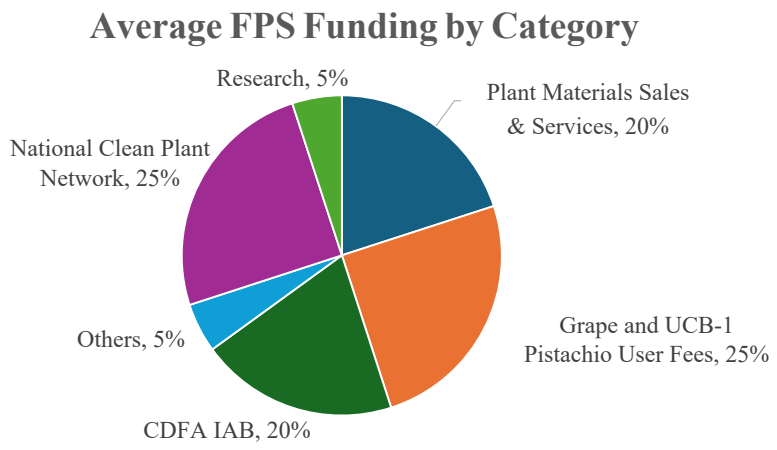

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IAB Funding

- We expect IAB funding to be reduced next year because of the state of the industry

Year	Total Proposed	Total Awarded	% Awarded
2021 2022	$1,343,470	$1,343,470	100%
2022 2023	$1,771,350	$1,771,350	100%
2023 2024	$1,832,402	$1,564,342	85%
2024 2025	$1,993,657	$1,564,342	78%
2025 2026	$1,993,083	$1,256,504	63%
2026 2027	TBD	TBD	TBD

How we are managing the FPS budget

The most important thing is to try to keep the FPS team, minimizing layoffs, during this tough time

- Now offering Berry Import & Quarantine service
- Applying for more research funding from different sources
- Increase the request from NCPN, easily justified by the amount of work that FPS does
- Working hard to increase UCB#1 sales internationally

NEW: FPS Berry Program

- FPS has handled exclusively UC strawberries since 1990s.
- After being approached with requests about berries, we are now using our capacity to expand the FPS berry program.
- All testing is with HTS, which requires much less space than traditional indexing.

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NEW: FPS Berry Program

- Two berry shipments received
- Five other berry shipments anticipated
- Custom HTS and PCR for other programs

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Current Research Funding

Project	Sponsor	Start Date	Amount
Sweetpotato HTS vs. Indexing – Year 1	USDA PPA7721	9/1/25	$143,941
New Kapa Kit on Hamilton liquid handler: HTS Validation – Year 1	USDA PPA7721	9/1/25	$75,271
Strawberry Nursery Survey – Year 3	USDA PPA7721	9/1/25	$240,000
Berry HTS vs. Indexing – Year 3	USDA PPA7721	9/1/25	$124,122
Berry HTS Ring Test – Year 1	USDA PPA7721	9/1/25	$116,449
Agave Virus Screening – Year 1	CDFA	1/1/25	$39,910
Hiplex PCR – Strawberry Year 2	CA Strawberry Commission	2/1/25	$80,760
Hiplex PCR – Grape Year 2	PD Board	7/1/25	$99,339
Sudden Vine Collapse	AVF	6/15/25	$59,000
	TOTAL		$978,792

PPA7721 Research Suggestions Submitted for FY26-27

Project	Amount
Sweetpotato HTS vs. Indexing – Year 2	$150,313
New Kapa Kit on Hamilton liquid handler: HTS Validation – Year 2	$79,023
Berry HTS Ring Test – Year 2	$133,782
Hiplex PCR – Berries Year 1	$103,135
TOTAL	$466,253

- PPA 7721 funding was increased in the recent reconciliation package (“Big Beautiful Bill”), from $75 million to $90 million.
  - NCPN allocation is increased to 10 million

NCPN Funding (a subdivision of PPA 7721)

Year	Total Proposed	Total Awarded	% Awarded
2021 2022	$1,643,769	$1,620,647	99%
2022 2023	$2,031,918	$1,820,646	90%
2023 2024	$2,168,695	$1,885,768	87%
2024 2025	$2,438,756	$2,277,000	93%
2025 2026	$3,140,928	**$2,664,495** due to addition of two special projects: -Database programming ($86,731) -Screenhouse propagation ($174,000)	
2026 2027	$3,519,702[1]		

[1]Request for Grapes, Fruit Trees, Roses and Sweetpotato are increased by ~3% over FY26 request; **Berries** are included for the first time, budget of $252,635.

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Changes to Fee Structures

- No free introduction services
  - $3,000 fee to introduce material to public collection
  - $5,000 fee for proprietary testing & therapy
- Diagnostic prices will be increased, based on cost of providing services.
- No free materials for research projects
- Plant material prices increased

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Cherry User Fees

- Fee of 1% of sale price for each propagative unit, all generations propagated from FPS cherry materials
- Included in the grower agreement language
- Delayed implementation due to contracts
- Will send request first request for payment in **2026**

FPS Model and Expanding UCB#1 Market

- Several meetings in Jordan with high-ranking University administrators and researchers
- Syria, in need of millions of trees for reforestation, is 1.5 hours from Amman, Jordan.
- Goal is introducing UCB#1 for pistachio and ornamental



FPS Model and Expanding UCB#1 Market

- Currently in Algiers, Algeria to attend 14th Arab Congress of Plant Protection
- Presented one poster, two talks:
- Visited with customers
  - 300,000 UCB#1 seeds sold!

Meeting with Dr. Bensaad Hamid, Secretary General of Algerian Ministry of Agriculture and Rural Development

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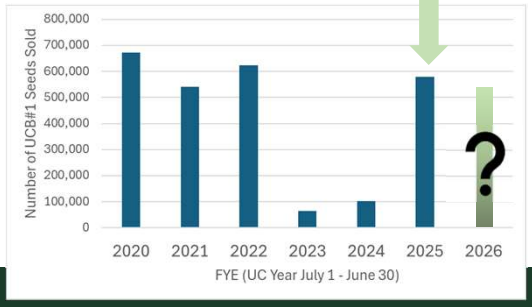
UCB#1 Sales

Historically, 100% of UCB#1 sales were domestic.

We've worked hard to develop **international** and ornamental markets for UCB-1.



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Thank you

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