

Fruit Tree, Nut Tree and Grapevine Improvement Advisory Board

Meeting Minutes - April 13, 2016

Trinchero Family Estate Building, Pete Christensen Conference Room
501 Hopkins Rd., UC, Davis 95616

Members

Nicholas Podsakoff (Chair) - Absent
Denise Moore - Absent
David Cox
Clifford Little
Tom Burchell
Andrew Jones - Absent
Benjamin Kaesekamp
Ernest Bowman
Mike Farris
Cliff Beumel

Guests

Deborah Golino
Carole Lamb
Tia Russell
Maher Al Rwahnih
Neil McRobert
Mysore Sudarshana
Andreas Westphal
Tom Gradziel
Andrew Walker
Ken Shackel
Richard Bostock
Daniel Kluepfel
Nancy Fowler Johnson

CDFA Staff

Sean Dayyani - Manager
Phuong Lao
Joshua Kress

Call to order:

In the absence of Nicholas Podsakoff, Sean Dayyani welcomed the attendees and called the meeting to order at 9:10 a.m., followed by self-introductions.

Research Proposal Presentations (Attachment No.1) Research presentations available upon request

The Board heard a total of 10 research and service proposals for funding consideration from the following Principal Investigators (PI) and service providers:

- **Andrew Walker** - Development of Next Generation Rootstocks for California Vineyards
- **Adib Rowhani** - Study of the Effects of Red Blotch Disease on Different Grapevine Rootstocks and Different *Vitis vinifera* Plants.
- **Tom Gradziel** - Molecular Marker Validation of Interspecific Breeding Germplasm for Rootstock Development
- **Ken Shackel** - Managing the Water Relations of Bare Root Nursery Stock to Improve Establishment, Performance, and Disease Resistance
- **Neil McRoberts** - Education and Outreach for the Grapevine Certification and Registration Program, and an Assessment of Recently Established Production Vines From Increase Blocks
- **Richard Bostock** - Integrated Management of Fusarium Canker in Bare Root and Container-Propagated Stone Fruit Seedlings
- **Andreas Westphal** - Evaluating Novel Nematicidal Chemistry for Usefulness In the Nursery Industry
- **Mysore Sudarshana** - Evaluation of dPCR for the Feasibility of a Cost-Effective Multiplex Detection of Grapevine Viruses Using TaqMan Probes
- **Daniel Kluepfel** - Anaerobic Soil Disinfestation Against Soilborne Phytopathogenic Agents

Foundation Plant Services (FPS) Budget Proposal for FY 2016-17 (Attachment No.2)

Deborah Golino presented the FPS proposed budget request for 2016 to the IAB Board with a total amount of \$767,832. Golino added that Adib Rowhani has retired and a need for his replacement has become necessary. Subsequently, included in the funding request, there was an amount of \$126,108 for salary and benefits of a Plant Pathologist. Golino suggested that for a smooth transition for Rowhani's replacement, the Board to

consider funding for a Plant Pathologist salary in lieu of current funding of 40% of the FPS director's salary. Golino also brought the Board's attention to University's overhead and indirect cost. She expressed if the UC's indirect cost exemption would not be implemented by the next IAB meeting in May, there would be an additional 25% indirect cost in FPS' total proposed budget request.

Assessment Collection for 2015-16 (as of April 12, 2016)

Sean Dayyani reported that as of April 12, 2016, assessment fees totaling \$1,271,780 were collected for fruit tree & nut tree sales, \$6,993 for olive sale, and \$830,708 for grapevine sale, bringing the total revenue received to date to \$2,109,481. Dayyani projected an additional \$505,000 to be collected within the following week, which would bring the total projected assessment amount to approximately \$2,614,000.

IAB Budget (Draft) for FY 2016-17

Draft Financial sheets were provided to the Board Members for their review in preparation for the May 10th budget approval meeting.

Next Meeting Date and Proposed Agenda Items

The next IAB meeting is scheduled for May 10, 2016.

Joshua Kress recommended an agenda item for proposed rulemaking to add the list of nursery stock exempt from IAB assessment to regulations. (Attachment No.3)

In anticipation of added UC overhead and indirect cost for 16-17, Tom Burchell proposed that the Board should discuss opting for addressing the issue, including the possibility of converting the IAB to a marketing order.

The Board will move to select for a new Vice Chair in May meeting.

Adjournment

The meeting was adjourned at 3:00 p.m.

Respectfully Submitted By:

Sean Dayyani,
Senior Environmental Scientist, IAB Manager
CDFA Nursery, Seed, and Cotton Program

Approved by the Improvement Advisory Board on May 10, 2016

Attachments

IAB RESEARCH PROPOSALS - FISCAL YEAR 2016-17

Project Leaders	Date Submitted	Proposal Title	Years	Trees/Grapes	Affiliation	Requested Amount	Progress/ Final Report	Other Sources of Funding	
1	A. Westphal	1/29/2016	Evaluating Novel Nematicidal Chemistry for Usefulness in the Nursery Industry	2 of 3	(1) Tree	UC, RIVERSIDE	\$61,726	Yes	None
2	D. Kluepfel	2/3/2016	Anaerobic Soil Disinfestation Against Soilborne Phytopathogenic Agents	3 of 3	(2) Tree	USDA-ARS	\$30,000	Pending	None
3	T. Gradziel	2/12/2016	Molecular Marker Validation of Interspecific Breeding Germplasm for Rootstock Development	2 of 2	(3) Tree	UC, DAVIS	\$9,420	Yes	Almond Board of CA, Pending
4	R. Bostock/T. Gordon	2/12/2016	Integrated Management of Fusarium Canker in Bare Root and Container-Propagated Stone Fruit Seedlings	1 of 2	(4) Tree	UC, DAVIS	\$35,742	Prior research, Pending	None
5	K. Shackel	2/12/2016	Managing the Water Relations of Bare Root Nursery Stock to Improve Establishment, Performance, and Disease Resistance	1 of 2	(5) Tree	UC, DAVIS	\$32,742	N/A	None
6	M. Sudarshana	2/8/2016	Evaluation of dPCR for the Feasibility of a Cost-Effective Multiplex Detection of Grapevine Viruses Using TaqMan Probes	1 of 1	(1) Grape	USDA-ARS	\$34,100	N/A	None
7	A. Walker	1/29/2016	Development of Next Generation Rootstocks for California Vineyards	Continuing	(2) Grape	UC, DAVIS	\$50,000	Yes	CTGC, AVF, CGRIC

IAB RESEARCH PROPOSALS - FISCAL YEAR 2016-17

Project Leaders	Date Submitted	Proposal Title	Years	Trees/Grapes	Affiliation	Requested Amount	Progress/ Final Report	Other Sources of Funding	
8	N. McRoberts	2/3/2016	Education and Outreach for the Grapevine Certification and Registration Program, and an Assessment of Recently Established Production Vines From Increase Blocks	1 of 3	(3) Grape	UC, DAVIS	\$82,336	N/A	CGRIC
9	A. Rowhani	2/12/2016	Study of the Effects of Red Blotch Disease on Different Grapevine Rootstocks and Different <i>Vitis vinifera</i> Plants	4 of 5	(4) Grape	UC, DAVIS	\$109,312	Yes	None
10	D. Golino		Foundation Plant Services	Continuing	Service	UC, DAVIS		N/A	NCPN
11	J. Wells		Methyl bromide CUE/QPS	Continuing	Service	Environmental Solutions LLC	\$21,000	N/A	
12	S. Siv Pillai		Heat Therapy and Indexing of Stone Fruit and Pome Fruit Tree Cultivars	Continuing	Service	WSU	\$30,000	N/A	

DESCRIPTION OF BUDGET ITEMS

FOUNDATION PLANT SERVICES REQUEST FOR PROGRAM FUNDING

JULY 1, 2016 TO JUNE 30, 2017

SUBMITTED TO THE CALIFORNIA FRUIT TREE, NUT TREE, AND GRAPEVINE IMPROVEMENT ADVISORY BOARD

Foundation Plant Services (FPS) 2016-2017 budget request to the California Fruit Tree, Nut Tree, and Grapevine Improvement Advisory Board (IAB) provides cost estimates for services which are essential to the California Department of Food and Agriculture grape and tree Certification programs. In addition, proposals are included for both programs and purchases which are not required, but which could enhance or strengthen existing programs or provide additional new services.

In this portion of the 2016-2017 request, a brief description is provided of each item listed in the budget summary. It is intended that this text will help the Board understand the basis for each request and assist the Board in the decision making process. By its nature, this explanation represents a brief overview of the justification and cost of each line item. FPS would be pleased to provide more detailed information for any part of this proposal.

The requests are divided into two sections: funding which is needed to support the FPS base programs for trees and grapes; and funding which is requested to improve existing programs or to add new programs or services. A notation is made as to whether the item is expected to serve the tree program, the grape program, or both. For an overview of the dollar amount to each program, please see "FPS 2016-2017 Proposed Budget Summary Table".

PART I. FUNDING REQUESTS FOR BASE PROGRAM

1. SUPPORT TO THE TREE PROGRAM

COST: \$239,268 PROGRAM: √ TREE GRAPE

The FPS tree program is not supported by user fees. A quality program with reasonably low prices, set in consultation with CDFA Tree R&C nurseries, is maintained by a grant from the IAB. The amount of this request is calculated by averaging the last 3 years actual program costs, and subtracting the average sales of the last three years. These figures are generated from FPS' Annual Reports for those years (available upon request). Estimated program costs of \$315,252 was offset by \$75,984, the amount of NCPN funding received.

2. FPS PLANT PATHOLOGIST'S SALARY AND BENEFITS

COST: \$126,108 PROGRAM: √ TREE √ GRAPE

On July 1, 2016 FPS Plant Pathologist Dr. Adib Rowhani is retiring. This position was previously covered by the University but will not be in the current budget environment. We request salary and benefits for Dr. Maher Al Rwahnih who has been mentored to assume this key position in the program at FPS. This request replaces the previous support of 40% of the salary and benefits of FPS Director Deborah Golino.

3. ELISA TESTING OF ORCHARD FOR PNRSV AND PDV

COST: \$54,048 PROGRAM: √ TREE GRAPE

ELISA testing of two-thirds of the Foundation trees for Prunus necrotic ringspot virus and prune dwarf virus was instituted as a substitute for the annual shirofugen biological index by agreement between CDFA and FPS. Each of 1,689 trees will be tested by FPS-UC Davis at \$32 per tree (2 tests per tree, \$16 per test).

4. PCR TEST FOR 11 GRAPEVINE NEPO, LEAFROLL, RED BLOTCH AND VITI VIRUSES IN THE CLASSIC FOUNDATION VINEYARD

COST: \$91,797 PROGRAM: TREE √ GRAPE

The CDFA Grapevine R&C Regulations require testing of each grapevine in the Foundation on a 5 year rotation. In 2016-2017, we propose that approximately 1/5 of the Classic Foundation Vineyard blocks will be tested by qPCR for the following 11 viruses: Grapevine fanleaf virus, Grapevine fleck virus, Grapevine tomato ringspot virus, Arabis mosaic virus, Grapevine leafroll associated viruses 1, 2, 3, & 4, Grapevine red blotch associated virus, Grapevine virus A, and Grapevine virus B. The current Classic Foundation vineyard contains 4,132 vines. We will test 20% (827 vines) in the coming year at \$111 per vine.

5. PCR TEST RUSSELL RANCH FOUNDATION VINEYARD FOR 20 VIRUSES

COST: \$105,938 PROGRAM: TREE √ GRAPE

The CDFA Grapevine R&C Regulations require testing of each grapevine in the Foundation on a 5 year rotation for the 11 viruses above. In addition, the Protocol 2010 standard includes additional virus diseases. In 2016-2017, we propose that approximately 1/5 of the Russell Ranch Foundation Vineyard blocks will be tested by qPCR for the following 20 viruses: Grapevine fanleaf virus; Grapevine fleck virus; Grapevine tomato ringspot virus; Arabis mosaic virus; Grapevine leafroll associated 1, 2, 2RG, 3, 4, 5, 6, 7 & 9; Grapevine red blotch associated virus; Grapevine Virus A, B, D, E & F; and Grapevine Pinot gris virus. The current Russell Ranch Foundation vineyard contains 3,289 vines. We will test 20% (658 vines) in the coming year for 20 viruses at \$161 per vine.

6. FUMIGATION OF FPS ACREAGE

COST: \$31,800 PROGRAM: TREE √ GRAPE

Methyl bromide fumigation of 6 acres for the grape field index at \$5,300 per acre is planned for 2016-2017.

7. SUPPORT FOR AMPELOGRAPHIC SERVICES

COST: \$5,000 PROGRAM: TREE GRAPE

The identification of grapevine species and varieties is dependent on the science of ampelography. Accurate identification depends upon characters of all the growing parts of the vine throughout the season. Knowledgeable examination of the growing tip, various stages of leaves, inflorescences, fruit, seed and vine architecture is required. Dr. Andy Walker has provided this service to FPS at significant cost of time that could be devoted to his research and teaching programs. We feel that support for this demanding and essential service is appropriate. Without his assistance, registration of our many new selections and new plantings would not be possible.

8. SUPPORT FOR TREE ID WORK

COST: \$5,000 PROGRAM: TREE GRAPE

Professional identification of the tree collection requires detailed examination of individual trees during each stage of the growth cycle. In addition, molecular tools which have already been developed, using isoenzymes and microsatellites, are valuable additions to visual observations. Dr. Tom Gradziel has provided extensive services to FPS at a cost to both his research and teaching programs. He has spent time in both the field and in the laboratory using molecular techniques to assure the identity of our accessions. We feel support for these services is appropriate.

PART II. FUNDING REQUESTS WHICH WOULD SUPPLEMENT BASE PROGRAM

9. MICRO SATELLITE ANALYSIS OF GRAPEVINES

COST: \$20,000 PROGRAM: TREE GRAPE

Continue to develop micro satellite profiles for FPS grape accessions and improve the grape ID database. This analysis should provide reliable objective information about the FPS grape collection, which will be useful in the professional identification of our selections, and in providing a database for comparison with material distributed from FPS. Developing this database for our materials will allow nurseries to check their materials against that database for verification. It will also be possible to make international comparison with other documented collections, facilitating professional identification of selections in the R&C program.

10. MICRO SATELLITE ANALYSIS OF ORCHARD

COST: \$20,000 PROGRAM: TREE GRAPE

Continue to develop micro satellite profiles for FPS fruit & nut tree accessions and improve the fruit & nut tree ID database. This analysis should provide reliable objective information about the FPS tree collection, which will be useful in the professional identification of our selections,

and in providing a database for comparison with material distributed from FPS. Developing this database for our materials will allow nurseries to check their materials against that database for verification. It will also be possible to make international comparison with other documented collections, facilitating professional identification of selections in the R&C program.

**11. TISSUE CULTURE VIRUS ELIMINATION FOR GRAPES IN QUARANTINE
OR IN THE FPS RUPESTRIS STEM PITTING BLOCK**

COST: \$68,873 PROGRAM: TREE √ GRAPE

Tissue culture therapy at FPS has proved successful in regenerating plants which are testing negative for the disease with which they were infected. IAB funding to initiate work on tissue culture and the opening of the new facility have brought FPS to the point where virus elimination therapy is being offered as a custom service. Numerous selections in the FPS collection, either in quarantine or in the Rupestris stem pitting block, are still in need of therapy. We propose to continue funding of 50% salary and benefits for a lab technician, plus \$4,500 in supplies to further increase the selections of materials available as California Registered and Certified Foundation stock.

FPS 2016-2017 Proposed IAB Budget Summary Table

BUDGET ITEM	BASE PROGRAM	SUPPLEMENT TO BASE PROGRAM	TREE	GRAPE	TOTAL
1. Support to the FPS tree program for 2016-2017.	√		239,268		\$239,268
2. FPS Plant Pathologist salary & benefits.	√		63,054	63,054	\$126,108
3. ELISA testing of 2/3 of the orchard for PNRSV and PDV.	√		54,048		\$54,048
4. PCR Test 1/5 Classic Foundation vineyard for 10 viruses.	√			91,797	91,797
5. PCR Test 1/5 Russell Ranch Foundation vineyard for 20 viruses.	√			105,938	\$105,938
6. Methyl bromide fumigate the grape index.	√			31,800	\$31,800
7. Support for ampelographic services.	√			5,000	\$5,000
8. Support for tree ID work.	√		5,000		\$5,000
9. Micro satellite analysis of grapevines.		√		20,000	\$20,000
10. Micro satellite analysis of orchard.		√	20,000		\$20,000
11. Tissue Culture virus elimination for grapes.		√		68,873	\$68,873
TOTAL FUNDS REQUESTED	\$658,959	\$108,873	\$381,370	\$386,462	\$767,832

Fruit Tree, Nut Tree and Grapevine Improvement Advisory Board Draft Regulations

[Section # TBD]. Fruit Tree, Nut Tree, and Grapevine Assessment.

(a) In accordance with Section 6981 of the Food and Agricultural Code, the Secretary exempts the sales of the following species of pome and stone fruit trees, nut trees, and grapevines, varieties of olive trees, and ornamental varieties of apple, apricot, crabapple, cherry, nectarine, olive, peach, pear, and plum from assessment:

- (1) Amur chokecherry (*Prunus maackii*)
- (2) Butternut (*Juglans cinerea*)
- (3) Canada red chokecherry (*Prunus virginiana* 'Shubert')
- (4) Carolina laurel cherry (*Prunus caroliniana*)
- (5) Catalina cherry (*Prunus lyonii*)
- (6) Crabapple (*Malus* spp.)
- (7) English laurel (*Prunus laurocerasus*)
- (8) Evergreen pear (*Pyrus kawakamii*)
- (9) Flowering almond (*Prunus glandulosa* and *Prunus triloba*)
- (10) Flowering plum (*Prunus americana* and *Prunus cistena*)
- (11) Hazelnut/filbert (*Corylus* spp.)
- (12) Hickory (*Carya* spp.)
- (13) Hollyleaf cherry (*Prunus ilicifolia*)
- (14) Macadamia (*Macadamia* spp.)
- (15) Olive varieties Manzanillo and Gordal Sevillano
- (16) Otto Luyken laurel (*Prunus laurocerasus*)
- (17) Pecan (*Carya illinoensis*)
- (18) Pistachio (*Pistacia* spp.)
- (19) Portugal laurel (*Prunus lusitanica*)
- (20) Zabel laurel (*Prunus laurocerasus* 'Zabeliana')

Note: Authority cited: Sections 407 and 6981, Food and Agricultural Code.
Reference: Sections 6981, 6982, 6983, and 6986, Food and Agricultural Code.