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FPMS ANNUAL INDUSTRY ADVISORY MEETING FOR GRAPES, TREES, AND ROSES

The 1993 FPMS annual meeting will be held on Tuesday, November 16, 1993, from 9:00 a.m. to 3:00 p.m. on campus at the Memorial Union. For details about the meeting, or to receive a copy of the FPMS annual report, please contact the FPMS office.

MATERIALS DISTRIBUTION REPORT

In the 1992-93 season 72,212 unrooted grape cuttings and 25,275 mist propagated grape plants were sold. Various chemical companies purchased 315 lbs. of grape seed for special testing purposes. Also sold in 1992-93 were 24,146 buds of fruit & nut tree material; 219 lbs. of cherry seed; 353 lbs. of plum seed; 278,465 individual peach seeds; 35,380 UCB1 hybrid pistachio seeds; 19,840 rose scion buds; 71,835 rose rootstock cuttings and 45 heat-treated, meristem cultured, virus-indexed strawberry plants.

ORDER, PRICE, AND BILLING CHANGES

The order deadline for allocated grape materials has been changed back to November 15 for the 1993-94 season. Last year the deadline was extended into January to accommodate leafroll testing.

Significant grape material price and minimum order increases went into effect 10/15/93. These changes are shown on the enclosed price list. Details about these changes are given in the article "Price Increases for FPMS Grape Materials". Charges for phytosanitary certificates have also been increased by Yolo County from \$15 to \$20.

The University accounting system is now based on social security or federal tax identification numbers. FPMS customers are being asked to provide that information to add to the FPMS database to use when billing.

DEAN'S REVIEW OF FOUNDATION SEED AND PLANT MATERIALS SERVICE COMPLETED

The UCD-Industry Task Force appointed by Dean Kinsella in December 1991 completed its review in Spring 1993. The Task Force was co-chaired by Phil Freese,

Robert Woolley, and Cal Qualset. Dean Kinsella accepted the report and all of its recommendations before his untimely death. Implementation of the recommendations is under way. Some of the most important are the following:

1. FSPMS is to be disbanded and two independent service departments are to be formed. One will include the Foundation Seed Program and the California Crop Improvement Association and the other will be the Foundation Plant Materials Service. Each of these two new units will have a Director. Both Directors are under recruitment now. The FPMS Director Search Committee is chaired by John Duniway (Plant Pathology) and the committee includes faculty and *ex officio* industry representatives. The Director will hold an academic position as an Academic Administrator and a 30% appointment as an Extension Specialist. A Ph.D. is required in a field relevant to the mission of FPMS, such as horticulture, plant pathology, or genetics. The closing date for applicants is January 10, 1994. Contact Dr. Duniway if you are interested in applying for the position or have nominations to make.

2. The Task Force recommended more direct involvement in FPMS by the faculty of the departments that have research and extension responsibilities for the crops handled by FPMS. This is being done by the appointment of interim associate directors of FPMS. The first to be appointed was Andy Walker from the Department of Viticulture and Enology. Other appointments will be announced at the annual meeting of FPMS on November 16.

3. FPMS Advisory Committees will be restructured, with the new feature being that the committees will include both industry, UC, and state or federal agency representatives. Term appointments will be introduced with possibility for reappointment. A Rose Advisory Committee is to be formed in addition to the Grape, Tree Fruit and Nut, and Strawberry committees.

4. The Task Force reviewed the goals for each of the FPMS commodity programs and recommended some new features. Protocols for each commodity are being prepared now that will include methods for health cleanup, propagation, and allocation priorities for stocks in limited supply.

The Task Force is convinced that a better FPMS will emerge the next year as the new Director and other of its recommendations are in place. C.O. Qualset, Acting Director, FSPMS.

GRAPEVINE LEAFROLL ASSOCIATED VIRUS TESTING BY ELISA

In the fall of 1992-93, California Nursery Assessment funds were provided to test about 5% of the foundation mother vines for grapevine leafroll-associated virus by ELISA. A significant number tested positive. In response, the California Department of Food and Agriculture (CDFA) and University decided not to distribute foundation stock from vines that tested positive. An extensive project testing all high priority mother vines by ELISA for leafroll-associated viruses was conducted by Dr. Adib Rowhani from November 1992 to June 1993. Interim results from these tests were reported to California certification program participants 12/18/92, 1/6/93, and 3/8/93. Final ELISA results for 1992-93 showed that less than 1% of the rootstock vines were positive and about 4% are to be retested in 1993-94 for leafroll-associated viruses. Thirteen percent of the scion vines tested positive and 5% are designated for retest. Most of the vines that tested positive are located in vineyards that have been abandoned. Final ELISA results which were issued 7/30/93 are summarized in the table below.

Selection Type	# Vines Tested	LRTI		LRTII		LRTIII		LRTIV	
		+	R	+	R	+	R	+	R
Rootstock	705	1	0	1	25	4	7	0	0
Scion	634	1	0	0	16	81	14	1	5

(Key: + = positive test result; R = retest needed in 93-94 season; LRTI, LRTII, LRTIII, LRTIV = grapevine leafroll associated virus types I, II, III, and IV.)

The certification status of California grape nursery stock produced by private nurseries will not be affected by leafroll ELISA data in the 1993-94 season. CDFA may decide to exclude leafroll ELISA positive nursery materials in the 1994-95 season if tests in progress now confirm the correlation between the disease Grapevine Leafroll and positive ELISA results. CDFA started ELISA testing private nursery materials in the fall of 1993 so there will be data to use when decisions about registering and certifying grape materials are made for 1994-95. For more information, a booklet entitled "Leafroll and the California Grapevine Certification Program, Questions and Answers" is available from the FPMS office upon request.

1992-93 GRAPE SEASON REPORT

The amount of foundation grape stock available from FPMS in 1992-93 was severely reduced because mother vines that tested leafroll ELISA negative were the only qualified sources. Vines that tested positive were disqualified and there was not time to test all the mother vines registered in the past.

For the 1992-93 season, the allocation deadline for grape materials was changed to January 15, 1993 to give FPMS

customers time to designate the status needed for materials ordered. Some customers chose to order nonregistered cuttings with an unknown or positive leafroll ELISA status because greater quantities and more selections were available at that level. Nurseries establishing registered increase blocks indicated they would only accept leafroll ELISA negative material of California foundation stock status.

Foundation tags were not included with orders shipped in the spring of 1993. The packing list sent with the cuttings indicated the registration status based on interim leafroll ELISA data. If requested, tags were sent out in September 1993 along with a disease test report that incorporated the final leafroll ELISA results. In a few cases the registration status of cuttings changed because the final ELISA data used to determine eligibility for tags was different than the interim data used to generate packing lists. Disease test reports for grape materials purchased in 1992-93 are available upon request to customers who did not request tags.

NEXT GENERATION GRAPEVINE CERTIFICATION PROGRAM

The grapevine leafroll ELISA results from last season demonstrated that the California certification program can be improved by incorporating new disease detection technology. A workgroup appointed by the UCD Dean of Agriculture and the Director of the California Department of Food and Agriculture (chaired by Dr. Deborah Golino, USDA/ARS in the UCD Plant Pathology

Department) is addressing the short-term consequences of leafroll ELISA testing and long-term needs for the certification program. In addition, California nursery assessment funds have been provided to continue testing foundation mother vines using ELISA and other new technologies.

Many program advances are being implemented at the Foundation Vineyard level. As of 12/16/92 only leafroll ELISA-negative vines qualify as sources for foundation stock. All foundation mother vines have been isolated from vines that test positive for disease by field index or for virus by ELISA as of September 1993. All mother vines in mixed (infected/healthy) plantings have been abandoned. The leafroll ELISA status of all foundation mother vines will be confirmed by additional ELISA testing in 1993-94. ELISA testing for fanleaf virus will also be continued for all foundation mother vines. Varieties judged commercially unimportant will be moved out of the Foundation Vineyard to nonregistered viticulture collections. This will reduce the number of foundation mother vines, making intensive testing and monitoring more feasible. Starting in the 1993-94 season, pruning, training, and cultivation will be used to eliminate all overlap of canes between foundation mother vines and improve accuracy of single vine source identification.

Documentation of grape materials distributed by FPMS

has also been upgraded. A report will be provided for all grape orders showing the FPMS vine source, registration status, original selections source, treatment, and testing history. As noted above, these reports were provided to all 1992-93 season customers who requested tags. This documentation will be issued automatically for all grape orders filled in the 1993-94 season.

In the future, more changes in the California Certification Program are expected at all levels as the certification workgroup makes recommendations for incorporating new disease detection technology and improving propagation practices.

AVAILABILITY OF FOUNDATION AND CERTIFIED STOCK IN 1993-94 SEASON

Once again FPMS will offer, for \$10.00, an updated edition of the California Grape Register which includes the source, treatment, and testing history for all registered grape selections. The register also includes an index that shows increase block sources for the various selections.

Not all of the selections listed in the California Grape Register will be available from FPMS as foundation stock in 1993-94 because of downsizing in progress. Some selections will only be available from private nurseries as certified stock.

The enclosed list of grape varieties available from FPMS as California foundation stock in the 1993-94 season reflects the removal of some noncommercial selections. However, this downsizing process is not yet complete and additional changes may be made.

PRICE INCREASES FOR FPMS GRAPE MATERIALS

Changes in FPMS grape program practices (leafroll testing, stricter isolation, removal of materials, etc.) are expected to improve the quality of foundation stock, increase production costs and decrease the quantity of cuttings available by approximately 75% (200,000 cuttings/year to about 50,000 cuttings/year). Since FPMS is mandated to continue to operate on a self supporting basis, FPMS industry and technical advisors recommended price increases which have been adopted. The enclosed current price list incorporates the new charges which are \$10/each for mist propagated plants; \$5/each for less than 100 cuttings/selection; and \$3/each for over 100 cuttings/selection. The minimum charge has been increased to \$100/order and the minimum quantity of mist propagated plants that may be ordered is now 40 plants/selection.

Reducing the number of foundation cuttings available may increase demand for mist propagated plants of foundation status. In anticipation, FPMS is implementing a new policy giving first priority to mist propagated plant orders in quantities of 40 to 500 plants/selection to be used for establishing California registered increase blocks.

Available mist propagation resources will be allocated among orders received before November 15 each year. After November 15, all orders will be accepted on a first-come, first-served basis as long as sufficient greenhouse space remains.

GRAPEVINE IMPORTATION PROGRAM

FPMS now offers importation services to private industry on a fee-for-service basis. The first foreign materials since 1989 were imported last winter (1992-93). Imported cultivars are maintained and tested in the National Grapevine Importation and Clean Stock Facility greenhouses which were completed in December 1992 with California Nursery Assessment, University, and Federal funds. Materials imported last winter included 40 selections from France and Italy that were sponsored with California Nursery Assessment funds. Selections that qualify will be released from quarantine to the industry.

Anyone interested in importing foreign grape materials in 1993-94 should contact the FPMS office for application materials. Arrangements will be made to ship dormant hardwood cuttings of foreign materials from the northern hemisphere to FPMS in December, January, or February. Materials from the southern hemisphere must be shipped by April or May.

Construction of the National Grapevine Importation and Clean Stock Facility lab/office, headhouse enclosure, and second screenhouse is now underway and projected to be completed in the summer of 1994. Funding for the fourth phase of construction has been provided by the federal government and the University.

NEW GRAPE MATERIALS RELEASED FROM QUARANTINE

In December 1992 the California Department of Food and Agriculture approved release of 80 stem pitting-infected grape selections. These selections do not qualify for the California Registration and Certification program but they can be propagated as nonregistered stock. FPMS is establishing a field planting of the more important newly-released stem pitting-infected selections that will serve as a nonregistered budwood source. Please contact the FPMS office for a list of the 80 selections. Small quantities of budwood are currently available, but there will be an additional charge to hot water dip the cuttings before release.

MICRO SHOOT-TIP CULTURE TO CLEAN UP GRAPE MATERIALS

For the last 3 years, FPMS has been using micro shoot-tip culture to eliminate virus from grapevines. This technique involves regenerating grape plants from shoot-tips that are less than 0.5 mm long. To date, plants from 75 different selections have been regenerated, transferred to soil, and are now growing in the screenhouse. When the regenerated plants grow big enough, they are tested for

diseases using ELISA and field indexing methods. Fifteen selections are undergoing field indexing with results expected in December 1993.

TREE PROGRAM

FPMS is continuing to update the Foundation Orchard by eliminating unpopular selections, adding new varieties of interest, and using self-indexing rootstocks as disease indicators. This summer 26 additional selections were verified true to variety by the nursery industry and University advisors and registered as foundation mother trees. Combined with the selections that were registered in 1992, FPMS now has 90 selections of deciduous fruit and nut trees that are available as California foundation stock. Many nonregistered selections are also available for distribution at this time. Retroactive registration of nonregistered tree materials may be possible after the mother trees are verified true to variety. Enclosed is a list of all deciduous fruit and nut tree varieties available from FPMS at this time. Varieties marked "R" are available as California foundation stock. Nonregistered material is available from varieties marked "N".

The newly-formed FPMS Fruit and Nut Tree advisory committee has taken an active role in updating the FPMS program. Recently the committee circulated a variety survey to industry representatives to identify varieties to add and delete from the FPMS Foundation Orchard. The survey is also expected to provide information that will result in recommendations to reduce the number of selections and trees for varieties of lesser importance and increase plantings of potentially important selections. The advisory committee is also discussing such subjects as protocol and funding sources for MLO testing of the Foundation Orchard, charges to be levied for maintenance of proprietary selections at FPMS and the results of progeny testing of various almond selections in commercial orchards. Recent meetings have also included reports by UCD Pomology Department faculty regarding the potential release for new breeder materials and foreign introductions.

STRAWBERRY PROGRAM

In 1992-93 FPMS maintained and produced virus-indexed, heat-treated, meristem cultured plantlets from 23 University of California patented strawberry varieties.

Five of the six new UC patented strawberry varieties released in the spring of 1993 (Carlsbad, Cuesta, Camarosa, Anaheim, and Sunset) were available from FPMS in spring 1993 as California Foundation Stock. The sixth variety, Laguna, will be available next spring (1994). FPMS also treated 5 new advanced breeder strawberry selections to eliminate virus. Important advanced breeder selections will be tested for disease.

Five UC varieties that have gone off patent or were nonpatented (Cruz, Toro, Fresno, Aiko, and Tioga) will no longer be maintained at FPMS. Mother plants will be

sent to the National Germplasm Repository at Corvallis, Oregon for permanent retention.

Virus-indexed, heat-treated, meristem cultured plantlets of University patented varieties are available from FPMS in soil or in sterile culture tubes to licensed propagators. For information about becoming licensed, contact Bill Gerlach at the University Office of Technology Transfer (phone: 510-748-6600).

ROSE PROGRAM

The FPMS rose scion collection has been used as a repository for 250 new and old varieties. Although this collection is recognized as a valuable resource in terms of virus-tested rose stock, sales and maintenance fees charged for proprietary materials have not been sufficient to cover program costs. To address these losses, charges to maintain proprietary varieties have been increased to \$50/variety. Repropagating and downsizing the collection by eliminating unimportant varieties is also being considered. A rose advisory committee is being formed to help address these issues. Anyone interested in serving should contact the FPMS office.

Demand has been high for FPMS rose rootstock materials, particularly Dr. Huey. The rootstock materials were allocated to all who ordered before October 15 this year. Remaining rootstock materials are sold on a first-come, first-served basis up to January 30 when the plants are winter pruned. Scion materials are available until December 15. Anyone who would like to be added to the mailing list used to announce rose rootstock availability and order deadlines should contact the FPMS office. Lists of scion varieties in the collection are available upon request from the FPMS office.
