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FPMS ANNUAL INDUSTRY ADVISORY MEETING FOR GRAPES, TREES & ROSES

The 1992 FPMS Annual meeting will be held on Thursday, November 19th from 9:00 a.m. to 3:00 p.m. in the new Buehler Alumni and Visitors Center. For details about the meeting or to receive a copy of the FPMS Annual Report please contact the FPMS office.

FPMS FINANCIAL REPORT

by Carole Lamb

In 1991-92 FPMS sold 53,292 unrooted grape cuttings, 23,119 mist propagated grape plants and 265 lbs of grape seed. Income from sales of grape materials was down 34% from last year but the program still had a significant net gain.

Income from direct sales of tree and rose materials more than doubled in 1991-92 from the previous year. FPMS sold a total of 16,307 buds of tree materials, 350 lbs of cherry seed, 422 lbs plum seed, and 251,379 peach seeds. FPMS also sold 6,330 rose scion buds and 42,360 rose rootstock cuttings.

A financial summary for the FPMS Grape, Tree, and Rose Programs is given below. Please note that it includes $180,000 for capital improvements provided by the California Fruit Tree, Nut Tree, and Grapevine Improvement Advisory Board (IAB). The combined income for these crops was $787,165. Subtracting expenses of $733,173 and $25,516 in adjustments to the unallocated reserve (Campus Income Assessment) resulted in a net gain of $28,476 for the year.

	Grape	Tree	Rose	Capital Imp.
Income				
Direct Sales	213,953.38	32,222.90	19,172.51	0.00
User Fees/Maint	173,326.85	2,083.02	8,614.40	0.00
Patent Royalties	0.00	0.00	0.00	0.00
Nursery Assmt	90,107.50	67,684.50	0.00	180,000.00
Expenses	320,878.19	192,095.62	40,198.64	180,000.00
Reserve Adjust	17,053.54	2,820.87	650.97	4,990.77
NET	139,456.00	(92,926.07)	(13,062.70)	(4,990.77)

Accounting for the FPMS strawberry clean stock program is separated from the other crops. In 1991-92 FPMS sold 93 virus indexed, heat treated, meristemed plants. Direct sales income was $21,034 including 91-92 sales and prepayments for several 92-93 orders. The program also received $43,578 in patent royalty support.

NEW STAFF AT FPMS

by Donna Marzolf

Tracey Echeverria is our new Nursery Technician. She has a B.S. degree in Ornamental Horticulture from the University of Illinois/Urbana-Champaign, and six years of greenhouse experience. She worked previously at two large wholesale nurseries and at CDFA in the Analysis & Identification Division. Tracey is in charge of production of mist propagated grape plants, manages greenhouses in the National Grapevine Importation and Clean Stock Facility, and assists with grape and tree indexing.

CHARGES FOR ORDER CHANGES AND MAINTENANCE

by Mike Cunningham and Carole Lamb

Beginning with the 92-93 dormant season, FPMS will reserve the right to retain prepayments if orders are changed after materials have been prepared. FPMS's current policy is to collect or produce plant material orders after a sales contract is completed and prepayment is paid. Starting this season, the prepayment will be used to cover FPMS collection, storage, and processing costs if orders are changed and materials are not sold to another customer.

Beginning in the 1992-93 season FPMS will also start charging a maintenance fee for mist propagated grape orders that are not picked up (or cannot be delivered) within one month of notification that the order is ready. Fees charged will be used to pay for pruning, fertilizing, watering, and pest control necessary to maintain the plants. This policy is also intended to encourage timely delivery of plants and help alleviate space problems encountered in the past.

NEW REGULATIONS GOVERNING GRAPEVINE SHIPMENTS IN CALIFORNIA

by Donna Marzolf

New California Department of Food and Agriculture regulations that govern the shipment of grape material into several California counties have recently been enacted. As of 7/2/92 all grapevine cuttings or plants entering El Dorado, Glen, Lake, Mariposa, Mendocino, Napa, Nevada, Placer, San Joaquin, and Sonoma Counties must be accompanied by a Certificate of Quarantine Compliance. In addition, all shipments of grapevine material to these counties must be held at

destination for inspection by the County Ag Commissioner. The customer receiving the grape material is responsible for notifying their local Ag Commissioner to arrange for the inspection at destination. We will obtain Certificates of Compliance for all FPMS grape orders being shipped into these counties and bill the customer ($15/shipment) for the service.

RIPARIA GLOIRE ROOTSTOCK STATUS

by Susan Nelson-Kluk

Riparia Gloire selections from the Saanichton Plant Quarantine Station (B.C.) and Geneva New York have recently tested negative for disease and are being planted in the Foundation Vineyard. Tests conducted by Dr. Andy Walker showed that the Saanichton, Geneva, and Davis Repository selections of Riparia Gloire all tested the same by isozyme analysis. Registration is being delayed, however, until the new selections can be visually inspected for trueness to variety in the Foundation Vineyard. FPMS will sell nonregistered mist propagated plants of the new Riparia Gloire selections to customers willing to assume all risks associated with unidentified material. David Godfrey, Program Supervisor for Nursery Programs, will allow these plants to be planted in registered increase blocks because disease testing is complete. If the vines prove to be true to variety, FPMS will be allowed to issue retroactive foundation stock tags for qualified Riparia Gloire plants sold.

Isozyme analysis conducted by Walker showed that our misidentified previously registered Riparia Gloire-02 tested the same as our Couderc 1616. He also compared our Riparia Gloire-02 and Couderc 1616 to five French Couderc 1616 selections by isozyme analysis. None of the French 1616 selections matched our 1616 or Riparia Gloire-02 in these tests. More study is needed to determine the true identity of these materials.

INSPECTION OF ITALIAN GRAPE SELECTIONS AT FPMS

by Susan Nelson-Kluk

Dr. Anna Schneider from the Centro di Studio per il Miglioramento Genetico Della Vite in Torino, Italy inspected 110 Italian selections in the FPMS and Viticulture collections from August 25 to September 7. Dr. Schneider is an expert on the Northern Italian varieties and thus is able to comment with authority on our current Barbera selections and many other varieties from northern Italy. She also made some brief comments on varieties from southern Italy.

For the most part, Dr. Schneider found that FPMS Italian varieties were correctly identified. The registered selections that she questioned are summarized here.

Schneider said that our **Paulsen 775-01 is actually Paulsen 779.** Walker confirmed this visual assessment and could not distinguish Paulsen 775 from 779. FPMS will not distribute material from Paulsen 775-01 until more information about the correct identity is available.

Schneider suspects that several selections in the collection are not correctly identified but her observations were incomplete and/or have not been confirmed. Schneider said that **Barbera-02 may not be true Barbera** but it is very similar. She could not identify it as a separate variety--perhaps it is a close relative. Isozyme analysis performed by Walker shows that Barbera-02 is similar to Barbera -01, although tests need to be repeated this fall. Other varieties being questioned are **Charbono -03, -04, -05, -06, -07, -08, Lagrein -02, Malvasia bianca -03,** and **Refosco -02.**

Varieties questioned by Schneider because of a synonym/spelling issue are as follows:

Registered Name at FPMS	Alternate Name/Spelling
Forestera -01, -02	Forastera
Inzolia -01, -02	Ansonica
Lambrusco -01	Lambrusco di Alessandria
Vernaccia -01	Bianchetta trevigiana
Zinfandel	Primitivo

California nursery assessment funds were provided to pay for this project. Copies of the complete report by Dr. Anna Schneider are available from FPMS for $5.00.

TESTING FOR LEAFROLL ASSOCIATED VIRUSES IN THE FOUNDATION VINEYARD BY ELISA

by Susan Nelson-Kluk

This year the FPMS plant pathologist, Dr. Adib Rowhani, tested one vine of each registered grape selection for three leafroll associated viruses by ELISA. Preliminary test results are positive for 100 single foundation mother vine selections from 100 different registered selections. Limited follow-up tests indicate that different vines of the same selection have different test results and positive tests may be related to the date the vines were propagated and the Foundation Vineyard location. Detailed test results are available from FPMS upon request.

These results underscore the unknowns in our certification program as we move toward implementing new disease detection technology in hopes of incorporating faster, more accurate methods. These issues were described a year ago in the FPMS Publication No. 1 titled: "Disease Testing of California Certified Grape Stock" which is available free of charge from the FPMS office.

For now we need to determine if the leafroll ELISA tests are accurate, reproducible, and exclusive for detecting leafroll associated virus. We also need to know how the disease, grapevine leafroll, is related to the viruses being detected; if disease is present, the extent of

infection; if the disease is spreading; and if it is spreading, by what means? Nursery Assessment funding has been approved to conduct tests at FPMS that will help answer some of these questions.

RUPESTRIS STEM PITTING DISEASE OF GRAPEVINES

by Susan Nelson-Kluk

Rupestris Stem Pitting (RSP) is a disease of quarantine status in California. It is also excluded from certified stock by the California Registration and Certification Program. There are currently about 150 RSP infected grape selections in quarantine at FPMS which cannot be released. Since these selections are potentially important new foreign materials there has been much discussion about the advantages verses liabilities of retaining RSP on the state quarantine list. As a result, the California Director of Food and Agriculture, Henry Voss, has recently been asked to remove RSP from the California quarantine list by Industry Representative, Phil Freese, Chairman of the FPMS Grapevine Industry Advisory Committee and Vice President of Winegrowing at Robert Mondavi Winery. For more information about RSP, please request FPMS Publication No. 2 from the office (no charge).

NEW GRAPE REGISTER

An updated edition of the grape register assembled by FPMS which includes the FPMS Registered Grape Selections data and Registered Grape Selections by Nursery and Variety will be available November 15. Providing information for this register is an excellent way to inform the public about California certified materials offered for sale. Information is provided on a voluntary basis and is updated annually. The 1992 edition will include information from 44 out of the 75 program participants and is available from the FPMS office for $10. Also available for $10 is a list of all registered, nonregistered, and quarantine grape selections in the collection at FPMS along with their treatment, testing, and source information.

NATIONAL GRAPEVINE IMPORTATION PROGRAM

by Susan Nelson-Kluk

Construction of Phase II of the National Grapevine Importation and Clean Stock Facility which consists of a primary quarantine greenhouse, indexing greenhouse, and headhouse cover will be completed this November. These facilities will be used to conduct a limited importation and disease testing program this winter. Healthy materials will be released from quarantine but diseased materials will have to be destroyed or held in quarantine until the treatment facilities are completed. Importation service ordering information is available from the FPMS office.

Phase III of the facility will go out to bid upon award of $1,560,730 appropriated by Congress in the FY 1992 budget. In Phase III construction of the lab/office, headhouse, and second screenhouse will occur. Once Phase III is complete we will be able to begin a limited treatment program.

Congress appropriated $582,000 in the FY 1993 budget to complete the facility in Phase IV. This money will be used to install all built-in equipment that was not included in Phase III (plant growth and sterile culture growth chambers). When Phase IV is complete FPMS will be able to offer full scale Grape Importation and treatment and testing services.

NEWS FROM THE FIELD

by Mike Cunningham

Over the next several years the Foundation Orchard, Foundation Vineyard, and Rose collection will be repropagated to include new selections, eliminate unpopular and disqualified materials, increase the availability of popular selections, replace older, less vigorous plants, and to incorporate disease/pest resistant rootstocks. New Foundation plantings will be consolidated together on land recently assigned to FPMS, in the Brooks Farm area (the Brooks vineyard is also in this area). The new area is isolated from other vineyards, orchards, and field disease tests for grapes and trees. Field disease testing will gradually be consolidated in a second site that is over 1/2 mile from the Foundation plantings.

To consolidate all Foundation Mother Vines in the new site all registered grape selections not presently included in the Brooks vineyard were benchgrafted to a phylloxera resistant rootstock and planted in the new Brooks Farm site in the spring of 1992. We plan to collect foundation grape materials exclusively from the Brooks Farm area by the 94-95 season.

As the Foundation Orchard is reestablished in the Brooks farm area several changes will be adopted. The trees will be trained low enough to enable wood collection and pruning without ladders. All fruiting cherry trees will be budded high on scaffolds of Mahaleb rootstock. Any genetic problems that may arise can then be removed on a branch by branch basis rather than destroying the entire tree. All Shirofugen cherry trees in the new orchard will be propagated on Mahaleb rootstock with a Bing interstock for compatibility. In the event of Buckskin virus contamination, the entire Shirofugen tree will collapse quickly as the infection reaches its Mahaleb roots and further spread of the disease will be prevented. All compatible plums, almonds and apricots will be budded onto Marianna 2624 as an indicator for mycoplasma-like organisms. Those varieties which are not compatible with Marianna will be indexed on Elberta peach every few years.

NEW TREE VARIETIES AND TRUENESS-TO-VARIETY DETERMINATION

by Mike Cunningham

FPMS is coordinating with industry and UC faculty to conduct trueness-to-variety inspections in the Foundation Orchard to qualify new selections of cling peaches, freestone peaches, cherries, nectarines, plums, apricots, almonds, and Asian pears for inclusion in the Registration and Certification Program. Materials being inspected are selections from IR-2, repropagations from field trials, and new introductions that have been treated and tested with Nursery Assessment funds at IR-2.

Industry and University personnel are bringing representative samples of ripe fruit from their own trees to compare with the fruit in the FPMS orchard for size, shape, color, ripening time, taste and texture. Each variety is observed on a tree-by-tree basis by several industry and University representatives -- each independent of the others. Notes made by FPMS staff are double checked by those performing the inspections and filed for future reference.

Over the spring and fall of 1992 FPMS received budwood of 22 fruit and nut tree selections recently qualified for Foundation Orchard plantings from IR-2. These selections were chosen by the California Fruit Tree, Nut Tree, and Grapevine Improvement Advisory Board and will help update the collection with varieties currently important to industry.

Budwood of the selections from IR-2 and others which have indexed healthy, but have not yet been checked for trueness-to-variety, is available for distribution if the buyer will assume the risks associated with undocumented material. Registration tags will be issued retroactively when the trees have been properly identified and entered in the Registration & Certification program. For a listing of varieties which have recently been identified as true-to-variety or a complete list of all selections in the collection with source and expected registration date, please contact the FPMS office.

FPMS STRAWBERRY CLEAN STOCK PROGRAM

by Judith Bereczky

In 1991-92 FPMS maintained and produced virus indexed, heat treated, meristemed plantlets for 23 University patented strawberry varieties. FPMS also treated three new advanced breeder selections to eliminate virus and is beginning treatment for six additional advanced breeder selections. Important advanced breeder selections will be tested for disease after treatment.

Virus indexed, heat treated, meristemed cultured plantlets of University patented varieties are available from FPMS in soil or in sterile culture test tubes to licensed propagators. For information about becoming licensed contact Bill Gerlach at the University Office of Technology Transfer (phone: 501-748-6600).

About 16 to 18 weeks are required to produce a plant from a meristem. Once fully developed, plants not sold are stored at 2° C in sterile culture. Cold stored plants can be prepared for sale in sterile culture in about six weeks or prepared for sale in soil in 12-14 weeks. Many varieties can therefore be supplied in sterile culture test tubes in six weeks or in soil in 12-14 weeks after the order is received. Since the cold storage plant inventory is limited, it is advisable to place orders for critical materials 18 weeks in advance to assure availability.

ROSE PROGRAM

by Mike Cunningham and Susan Nelson-Kluk

Interest in the FPMS virus tested rose material is increasing as more states require that rose plants shipped interstate be propagated from virus tested sources. To accommodate the demand we have increased the size of the rose rootstock block and are making plans to repropagate older plants in the rose scion collection. In addition, new varieties are continually added to the collection after they have been treated and tested for virus under contract.

This year the FPMS Plant Pathologist, Dr. Adib Rowhani, tested the entire rose collection (rootstocks and scion varieties) for Rose Mosaic by ELISA. Five out of 358 plants checked tested questionable. The remainder were all negative. Follow up tests on plants that tested questionable will be conducted this spring. Detailed test results are available from the FPMS office upon request.