

FPMS GRAPE PROGRAM NEWSLETTER

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by Susan Nelson-Kluk

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(Area code changes to 530 after November 1, 1997)

Grape Materials

Order deadline for the 1997-98 season

The order deadline for FPMS dormant grape cuttings is November 15, 1997. Grape materials in short supply will be allocated among those who order on or before this date. After November 15th, any remaining materials will be sold on a first-come, first-served basis. An FPMS order form, price list, and various materials lists are enclosed for customers to use when ordering.

New Materials

Five new Italian clones from the Centro di Studio per il Miglioramento genetico della Vite, CNR, Torino are being offered for sale this year for the first time by FPMS.

Barbera CVT 171 is FPMS selections 03 and 05

Barbera CVT 84 is FPMS selection 04

Dolcetto CVT 275 is FPMS 02

Dolcetto CVT 69 is FPMS 03

Grignolino CVT 275 is FPMS 02

Translations of the descriptions of these clones have been prepared and are available upon request from FPMS.

Two new clones from France, Pinot noir 665 (FPMS 51) and Chardonnay 125 (FPMS 40) are being sold for the first time. Pinot noir 665 is a productive champagne clone and Chardonnay 125 is also a high yielding clone, according to the ENTAV catalogue.

An Oppenheim 4 (S04) selection from Germany has just been made available. It is labeled FPMS selection 17 and it came to FPMS via the Centre for Plant

Health in Saanichton, British Columbia. There is currently no specific information about this selection.

Duplicate releases

Sometimes more than one selection from a single source or single European clone is submitted to the FPMS grape program. Often, "duplicate selections" from the same clone come from slightly different sources and/or treatments. Sometimes there are several intermediate agencies between FPMS and the original source. Maintaining duplicate selections is therefore one way to help insure that materials which are true to variety and clone end up in the FPMS collections. If one selection is found to be labeled with an incorrect name, we often have others to use in their place. When tools become available to check for trueness-to-clone, there will be several selections to evaluate for most of the European clones.

One example of a duplicate selection is Barbera CVT 171 (above) for which there are now two FPMS selections, 03 and 05. Other examples that pertain to releases made this year are:

Chardonnay 51 which was derived from the French clone 277 and is being released in 1997-98. Two selections released last year, Chardonnay 42 and 49 were also derived from 277. Chardonnay 51, however, has not been through tissue culture treatment, but 49 and 42 have.

Pinot gris 05 was derived from the French clone 53 and released this year. FPMS selection Pinot gris 04 (released 2 years ago) is also derived from the French clone 53. Tissue culture was used to make both 04 and 05.

Status of new releases

The above new and duplicate selections have passed all the disease tests, but the new mother vines are very young and small. FPMS will only offer mist propagated green plants with "provisional registration status" for sale until the mother vines are big enough for a professional to check the variety identity. If the vines prove to be correctly identified, then retroactive foundation stock tags will be issued upon request. Participants in the California Grapevine Registration and Certification Program may plant materials with provisional registration status in private nursery increase blocks with permission from the California State Department of Food and Agriculture (CDFA).

A sheet entitled "New materials available from FPMS in the 1997-98 season" is enclosed that lists all the selections that FPMS is distributing only as mist propagated green plants with provisional registration status. The list includes all of the new selections released in 1996-97 and 1997-98.

Registered grape selections available from FPMS

Mother vines of 24 grape selections have been confirmed true to variety by

Dr. Andy Walker of the UCD Viticulture and Enology Department and registered for the first time as sources of California foundation grape stock. These selections have been added to the attached list entitled "ALL FPMS REGISTERED GRAPE SELECTIONS (10/14/97)". New selections on the list are underlined. Upon request from customers, FPMS can now provide retroactive foundation stock tags for most mist propagated vines distributed from these selections in the past. Contact the FPMS office to inquire about retroactive tags.

Rupestris Stem Pitting infected materials available

A separate collection of Rupestris stempitting (RSP) infected selections was created at FPMS shortly after RSP was removed from the list of California grape quarantine diseases in 1992. It was created to maintain valuable grape selections, which were known to be infected with RSP, but which had tested negative for all other diseases of concern to the grape Registration and Certification program. These selections are available to FPMS customers who may want to purchase these materials in cases where the RSP infected selection is the best material available in commerce at this time for that particular clone or variety. These materials do not qualify for the California Grapevine Registration and Certification Program because RSP positive selections were eliminated from the program in the early 1980s.

RSP is a graft transmissible disease believed to be caused by a virus. It is common in grapevines worldwide. Although limited research is available on its effect upon mature grapevines, it is known to cause the pitting and grooving symptoms associated with the Rugose Wood Complex, especially on rootstocks with Rupestris heritage. At this time, RSP is detected by grafting a bud from a candidate grapevine into the indicator variety, Saint George. Pits develop in the wood directly below the grafted bud if the candidate grapevine is infected with RSP. Because this test requires 2-3 years to complete, efforts to eliminate the disease from grape germplasm have been slow. Recently, progress has been made in cloning the virus associated with RSP. Faster tests for this disease may be available in the next year or two.

Mist propagated plant supply

A list of all of the selections in the RSP collection, entitled "FPMS Rupestris Stempitting Infected Collection," is enclosed. Work is underway at FPMS to eliminate RSP from some of these selections using micro shoot tip culture; this project is funded by the California Fruit Tree, Nut Tree, and Grapevine Improvement Advisory Board. Treatment and testing work to date for each selection is shown on the list. Customers may order cuttings and/or mist propagated plants of RSP positive selections according to the availability indicated.

Varietal summaries available

Summaries of all the selections at FPMS of Barbera, Cabernet Sauvignon, Chardonnay, Malbec, Merlot, Nebbiolo, Pinot noir, Sauvignon blanc, and Zinfandel are now available from FPMS. Each single variety report includes the source (including European clone numbers when available), disease status, tissue culture, and registration status (registered, nonregistered, or quarantined). Information is given in the summaries for each unrestricted selection. Multiple FPMS selections, that refer to a single European clone, are grouped together. The summaries are useful for determining what is available from FPMS now and what might become available in the future. They are updated every 6-12 months and are available at no charge upon request from the FPMS office.

FPMS propagates and sells small green mist propagated grape plants (MPPs) when hardwood cuttings are unavailable or when the supply is inadequate to meet industry needs. Many customers order MPPs of new selections recently planted in the foundation block before the vines are big enough to produce hardwood cuttings (see "New Materials Available from FPMS in the 1997-98 Season"). California Foundation stock tags are issued upon request for MPPs propagated from vines already registered in the California Registration and Certification program. Retroactive tags can be issued for MPPs sold if and when the source vine becomes registered.

MPPs are only made after they have been ordered by a customer. The amount of time required to make plants varies according to the season, the selection requested, and the number of plants being produced for all customers. Jennifer Collins is in charge of producing all MPPs at FPMS. She estimates the time required to produce the orders and reports that information to the customers. In January of 1998 Jennifer will send out the first letter with estimated MPP completion dates for all new orders.

Orders for mist propagated plants are prepared on a first-come, first-served basis in quantities of up to 500 plants/selection. Second priority is given to quantities over 500 MPPs/selection. It is therefore always advisable to order plants needed at your earliest convenience.

Customers ordering MPPs of selections released for the first time this year should expect to wait 9-24 months before receiving their plants. This is because we anticipate many MPP orders for the new selections, which will have to be produced from a very small amount of material. Any questions about MPP production schedules should be directed to Jennifer Collins at (916)754-8100 (area code 503 after November 1).

Results from 1995-96 Cabernet Franc leafroll test

The nine registered foundation mother vines listed below were positive for leafroll in a test conducted over 1995-96 using the indicator variety Cabernet

Franc. The positive vines in the BKS vineyard have been removed and the vines in the FV vineyard have not been used as a source of foundation stock since 1992. Since 1988, there have only been distributions to three California Registration and Certification program participants from these vines. Those participants have been notified and the materials have been canceled by the California Department of Food and Agriculture. These tests are part of the ongoing effort at FPMS to monitor and exclude leafroll from foundation materials.

Black Malvoisie 02 FV B4 V14
Black Malvoisie 02 BKS F2 V6
Black Prince 01 BKS F2 V7
Early Muscat 02 FV B2 V6
Exotic 01 FV B1 V7
Flame Tokay 01 FV B5 V13
Grenache 02 BKS G2 V3,5
Loose Perlette 01 FV B10 V8
Muscat Hamburg 01A FV B5 V5

Custom treatment testing and quarantine services

We have been feeling a little like the farmer in the movie, "Field of Dreams," who heard the angel say "If you build it, they will come." Ever since moving into the new National Grapevine Importation and Clean Stock Facility, many customers have taken advantage of the new services. In 1995, 96, and 97 FPMS processed 33, 64, and 69 new domestic and quarantine selections, respectively. Judging from customer interest, we expect the demand for future custom contract services to be high as well.

Although we have been doing our best to accommodate every request, a few applications for custom service work have been turned down each year. Late season applications have been the reason, to date. However, if demand for these services continues to increase, an allocation will be necessary in the future. Ideally, customers should make the initial application for custom treatment and testing services before December 15th each year so that the appropriate amount of disease indicator materials can be reserved. Allocation among applications received before December 15th will be used, if necessary, to limit the number of selections accepted. Cuttings from the candidate selections need to reach FPMS sometime between January 1st and May 1st. We prefer cuttings from the northern hemisphere to come before the end of March, but can accept cuttings from the southern hemisphere in April and May.

When adequate resources remain, we will accept late requests for custom grape services. It is always best to call Susan Nelson-Kluk at (916) 752-0538

((530) 752-0538 after 11/1/97) or E-mail sanelsonkluk@ucdavis.edu anytime of the year to discuss your grape testing and quarantine needs. Sample contracts and application forms are provided upon request.

Sourcing Grapevines in North America

For a good overview of the quarantine treatment and testing services available throughout North America, check out the recent article in the April 1997 issue of *Wines and Vines* by Dr. James Stamp entitled "Sourcing Grapevines in North America". Copies of that issue are available from the Wines and Vines office in San Rafael for \$5. Contact them by phone ((415) 453-9700), FAX ((415) 453-2517) or E-mail (geinfo@winesandvines.com)

Carmenere lives at UC Davis

by Carole Meredith, Associate Professor, Viticulture and Enology Department, UCD

Interest is growing in Carmenere, a previously obscure Bordeaux variety. We recently learned that we have Carmenere at FPMS, although it has been hiding under a different name.

Carmenere is an old red wine grape that was once widely cultivated in Bordeaux and was highly regarded for its exceptional wine quality. After the phylloxera devastation in France in the late 1800's, Carmenere was abandoned because of poor fruit set and low yields. Interest in Carmenere has recently been revived, especially in Chile, where many of the 'Merlot' vines are thought to actually be Carmenere. Wine made from these vines is of excellent quality and some consider it superior to Merlot. In response to a petition filed by Chilean producers, the Chilean government has recently approved the use of the varietal name Carmenere for wine.

In collaboration with Dr. Patricio Hinrichsen, a scientist from Chile who worked with us here in Davis for several weeks during the summer of 1997, we recently analyzed the DNA from some Chilean vines thought to be Carmenere. By comparing their DNA profiles to those of an authentic sample of Carmenere that we obtained from the variety collection in Montpellier, France, we confirmed that the Chilean vines were indeed Carmenere.

Carmenere has not been listed as a variety available from FPMS, but we have recently discovered that by a stroke of luck we do indeed have it. During his 1996 inspection of the FPMS vines, Dr. Jean-Michel Boursiquot from France noted that vines labeled as Cabernet Franc O2 (not registered) were not true-to-type and looked more like Carmenere. All the vines of this selection, originally obtained from Italy, were removed. But before it was known that they were not true-to-variety some tissue had been taken for shoot tip culture to eliminate stem pitting. A single vine from this procedure existed!

We compared the DNA profile of this single vine in the FPMS vineyard to the authentic Carmenere from France and confirmed that, as suspected by Boursiquot, it really is Carmenere. How sure are we? We used 14 SSR DNA markers for the comparison and we did it twice. Fourteen is a very large number of markers--six is usually considered enough for routine variety identification. With fourteen markers, the number of possible different DNA profiles is more than 10 billion trillion. The Davis vine and the French Carmenere vine have identical DNA profiles so we can say with a great deal of confidence that the Davis vine is Carmenere.

Tests will be conducted on the Carmenere at FPMS in 1998-99 to determine whether the stem pitting was eliminated by the shoot tip culture. If stem pitting tests are negative and a visual ID is successfully completed, then the earliest that FPMS could sell mist propagated plants that might eventually qualify for retroactive foundation tags would be 2001. At the present time, FPMS can offer mist propagated plants of this selection but their disease status is unknown and they can never qualify for retroactive tags.

Commercial grape variety identification services

There is now one company in the country, ETS Laboratories in St. Helena, that offers commercial grape variety identification services employing the same DNA genotyping techniques used by Dr. Meredith to sort out the Carmenere identity issues. ETS collects samples and sends them to the Australian Wine Research Institute (AWRI) for analysis. For more information call ETS at (707)963-4806 or visit the AWRI website: www.waite.adelaide.edu.au/AWRI/.

For rootstock identification, isozyme analysis services are offered by Agri-Analysis in Davis. For more information contact them by phone at (916)757-4656.

Grape rootstock flash cards

For those who want to use a less high tech approach to identify grape rootstock materials, FPMS is offering identification flash cards. This set of laminated cards with photos and descriptions of 27 major California rootstocks is available from FPMS for \$40. To order, use the enclosed FPMS publications order form.

Proposed California Grapevine Registration & Certification Program Changes by Umesh Kodira, Associate Plant Pathologist, CDFA Nursery and Seed Program

In March 1996, the California Grapevine Registration and Certification Working Group was formed to revise the regulations for the California Grapevine Registration and Certification program. The group is composed of nurserymen, growers, California State Department of Food and Agriculture (CDFA) and University personnel. The group has produced new draft

regulations that are ready for review by a wide group of nursery program participants and commercial grape growers. The draft regulations will be presented at various state and county meetings this fall and winter. When the review is completed, the regulations will be published for a 45-day public comment period. This will give all interested parties another chance to have input. A public hearing may be held, if requested, during this 45-day period. To request a schedule of the presentations and/or copy of the draft regulations, contact Umesh Kodira at the Nursery Program office by phone: (916) 654-0435 or E-mail: Ukodira@cdfa.ca.gov.

Some of the major proposed program changes:

Additional terms have been defined to reduce possible sources of confusion. Program responsibilities for participants and the University are more clearly explained, and specific Department responsibilities are spelled out for the first time. Several new responsibilities have been added for participants, including payment of user fees legally due to Foundation Plant Materials Service and keeping records that document the exact foundation block vine sources for all increase block vines.

Significant changes have been made that affect which materials will be eligible for inclusion in the future program. Two generations of increase blocks are proposed --- "primary increase blocks" established from foundation stock or from registered grapevines in the same contiguous planting and "secondary increase blocks" which may be planted with registered stock from participants= own primary increase block or from registered grapevines in the same contiguous secondary increase block. The ability to establish additional nursery plantings using propagative materials harvested from another nursery row planting was eliminated.

Provisions have been added to regulatory language for greenhouse and *in-vitro* propagation of certified materials. There are also allowances for both foundation and increase blocks to be maintained in a greenhouse.

A distance of 100 feet is still required between foundation, primary or secondary field increase blocks and grapevines not in the program, but the separation required between certified and noncertified nursery plantings has been reduced from 100 feet to 10 feet. If the soil has been treated to control nematodes, the distance separating registered and nonregistered vines in the nursery row is proposed as being reduced even further, at the discretion of a CDFA biologist.

Additional disease tests using Enzyme Linked Immunosorbent Assay (ELISA) techniques to detect fanleaf degeneration, Tomato ring spot and leafroll associated viruses have been added. To control diseases that appear to be spreading in vineyards, grapevines in foundation, primary and secondary

increase blocks will have to be tested at least once every 5 years for fanleaf degeneration, tomato ring spot and leafroll associated viruses. Provisions have been made to legally incorporate new disease testing procedures, of equal or better reliability, into the program in the future.

Suspension, cancellation and/or reinstatement of grapevines is specifically addressed in the draft.

Nonpayment of legally due FPMS user fees has been included as a cause for suspension or cancellation of registration. A schedule of fees for the program is also included.

FPMS user fee enforcement

Enforcement of contracts, which all customers sign promising to pay FPMS user fees, was stepped up last year. Customers who did not pay their 1995 user fees or submit a report showing that no user fees were due were excluded from the 1996-97 allocations of FPMS grape materials in short supply. As a result, compliance increased significantly. According to several FPMS industry advisors, however, analysis of the user fee income compared to grape nursery sales suggests that all are not yet paying the amount legally owed.

This season, customers who have not submitted their user fee reports will again be excluded from the limited materials allocations. In addition, FPMS is arranging to have selected customers audited to determine if all user fees have been paid correctly. In the future, the regulations that govern the California Grapevine Registration and Certification program may be amended to require payment of user fees legally due to FPMS.

If you have any questions about the user fees due or reports required, please call Cheryl Covert at (916)752-3590 (or (530)752-3590 after 11/1/97).

New surcharge on foreign grape orders

As of March 1, 1997 foreign customers will be required to pay \$2,000.00 per selection before FPMS grape materials are shipped out of the country from FPMS. This fee is assessed in addition to the regular material packing, handling, and shipping charges. These charges were added because of the low foreign customer user fee compliance rate and to help offset the time and expense required to ship plant materials outside the country. Foreign customers who make this payment will receive \$2000 credit toward any user fees due.

New FPMS Customers

An information sheet explaining the underlying FPMS grape program philosophy and mission and how that affects FPMS business practices will be sent to all new FPMS Grape customers this year. The allocation process and priority system designed to make materials originating from FPMS available to as many

growers as possible with the resources available is also explained. A copy is enclosed so all of our current customers can review the same information.

New FPMS address and phone number

At the beginning of October 1997, UC Davis added a new line to its standard mailing address so that the University could qualify for postage discounts under new U.S. Postal Service classifications. Since "One Shields Avenue" does not actually exist, the new address is only for items mailed via the U.S Postal Service.

Please continue to address letters and packages sent via UPS, FedEx, and other couriers to our actual street address, "Corner of Hopkins and Straloch Roads," omitting any reference to "One Shields Avenue."

Foundation Plant Materials Service

University of California, One Shields Ave, Davis, CA 95616-8600

In addition, the telephone area code for UCD and the town of Davis will be changing from 916 to 530 as of 11/1/97. The new main FPMS phone number will be (530)752-3590 and the FAX will be (530)752-2132. Please note these changes in your address and phone files.



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