

Lagrein 02 is currently planted in the foundation block at FPMS. It will be advanced to California Foundation status when the identity is confirmed. Tissue culture plants produced from Lagrein-01 will be tested for disease starting in 2001.

Malvasia bianca is still unknown

Anna Schneider says that our Malvasia bianca does not correspond to any of the Malvasia varieties that she knows well. She thinks that it might be a variety she called Moscato Greco. We do know that the DNA profile of our Malvasia bianca does not match several Malvasia types for which we have been able to obtain data, but we have not yet been able to find a positive match. Dr. Schneider is sending us samples of several Malvasia types from Piemonte as well as the Moscato greco that she thinks is our Malvasia. As soon as we receive those samples we will be able to further pursue this issue.

Lambrusco type is still unknown

There are many different Lambruscos in Italy, all with different names. In an effort to determine what our Lambrusco 01 is, we compared it to nine Lambrusco types from the Emilia Romagna region of Italy and to Lambrusca di Alessandria from Piemonte. None of them match our Lambrusco, so we still do not know what it is.

Bonarda is still unknown

Schneider has questioned the identity of our Bonarda 01 and 02, suggesting that they might be Croatina or Vespolina. We compared the DNA profiles of our Bonarda selections to those of Bonarda Piemontese, Croatina and Vespolina obtained in Italy. Our Bonarda does not match any of them. So for the moment we know that it is not any of those three varieties, but we do not know what it is.

IAB-funded retesting of selected mother vines

The IAB has been providing funding each year for the ongoing re-indexing of individual vines of important selections. We are also generating a DNA profile for each of these vines each year and confirming their identity when we can obtain an authentic reference sample. In 1999-00 we tested 20 rootstock vines. We have not been able to confirm the identity of most of them by DNA typing because independent reference samples are not available. Few research groups in other countries have been analyzing rootstock varieties.

RSP and the CA Grapevine R & C Regulations

Rupestris stem pitting disease (RSP) was first recognized in California in 1976 according to Dr. Austin Goheen. He showed that RSP is caused by a graft transmissible agent and suspected that it caused a slow decline in infected grapevines. Goheen tested for RSP by grafting a bud from a candidate grapevine into the indicator variety St. George. If pits developed in the woody cylinder of St. George after growing in the field for about 18 months, the candidate was considered RSP+. As of 1984, selections that test RSP positive do not qualify to be included in the California Grapevine Registration and Certification Program. At the same time, as a matter of policy, the USDA, Animal and Plant Health Inspection Service (APHIS) and California Department of Food and Agriculture (CDFA) began to require freedom from RSP before foreign grape selections could be released from federal or state quarantine.

By the early 1990s, the grape quarantine collection at FPMS was swamped with RSP+ selections imported, mostly, from Europe. Since there was no good scientific evidence of serious deleterious effects caused by RSP in grapevines, it seemed pointless to tie up the limited quarantine resources because of RSP. APHIS and CDFG were consequently petitioned successfully by the California grape industry and University to drop RSP from the list of quarantineable grape diseases. Selections that tested positive for RSP, but negative for all the other important virus diseases (leafroll, corky bark, fanleaf, tomato ring spot, etc), were released from quarantine and distributed to the public as nonregistered-RSP+ material. Selections that tested RSP+, however, were not included in the California Grapevine Registration and Certification Program.

In 1998, Dr. Adib Rowhani developed a new type of PCR test that reliably detects a virus associated with RSP (see the October 1998 FPMS Grape Program Newsletter, "A New Test for Grapevine Rupestris Stem Pitting") as part of his

ongoing program at FPMS to develop and implement better, faster, and cheaper testing methods for all the important grape diseases. His research has shown that all of the St. George mother vines and 25- 30% of the first group of selections sampled in the Foundation block are positive for the RSP-associated virus by PCR. In addition, field tests conducted in 1997-98 and 1998-99 to recheck 37 Foundation mother vines showed that 13 were RSP+ by St. George index. This data suggests that a significant amount of CA certified grape material may have been RSP+ for years. More testing of vines in the Foundation mother block using St. George and PCR methods is still underway. However, by January 5, 1999 there was enough data to cause FPMS Director, Dr. Deborah Golino, to write to CDFA asking that RSP be dropped from the list of diseases targeted by the California Grapevine Registration and Certification Program. She made this request to allow for the uninterrupted sale of California certified grape stock while research to develop a better understanding of the effects, distribution and spread of RSP is in progress. She pointed out that it is impractical to include RSP in the Program in a meaningful way without more information. She also noted that many other grape clean stock programs worldwide do not certify against RSP.

Thanks to the efforts of Kathleen Harvey, CDFA Program Supervisor for Nursery, Seed and Cotton, and Barbara Hass, CDFA Special Assistant for Permits and Regulations, draft regulations for the California Grapevine Registration and Certification Program which omit all reference to RSP, along with justification for deleting RSP, were sent to the State Office of Administrative Law on 8/29/00. The Administrative Law Office approved the change and sent out notices to interested parties asking for comment before 10/23/00. If requested, a public hearing will be held to discuss the proposed change. If there is public support for dropping RSP from the Regulations, the Office of Administrative Law will take final action on the proposed change by the end of December. The change will become effective by the end of January 2001 if the regular course is followed. However, if the final action is expedited, it may become effective as soon as January 1.

Currently there are more than 2,600 registered and provisional mother vines in the Foundation block at FPMS which represent the accumulation of 50 years of work on the California Grapevine Registration and Certification Program. All of these vines were propagated from sources that tested negative in the past on the field and herbaceous indicators prescribed by State regulation. In addition, since 1993, each of these vines has been ELISA tested for leafroll-associated viruses, grapevine fanleaf virus and Tomato ring spot virus at least every 3 years. Since 1997, about 20 vines/year are retested using 20 field, herbaceous and ELISA tests (See article "Retesting Foundation Mother Vines" in this newsletter). Visual inspections of each vine are conducted by CDFA and Dr. Rowhani twice each year. Vines with disease-like symptoms are placed on hold and/or retested. Vines confirmed to be diseased are removed from the block. To date, 537 mother vines have been checked for RSP by PCR. PCR tests on about 800-1000 additional vines are expected to be completed by the end of December 2000. Meticulous testing records for each vine are maintained in a database, and reports showing tests and results are provided with all grape materials distributed by FPMS. The mission of the FPMS Grape Program continues to be to make California Foundation and Certified grape stock the best that is available.

History has shown that transitions in the California Grapevine Registration and Certification Program are never easy, but they are necessary to keep up with changing technology that can improve the quality of grape materials. Preserving the integrity of the Program while in transition must be given the highest priority so that accomplishments achieved over the last 50 years are not lost. Removing RSP from the Regulations until there is good information about its distribution and importance is the best way to continue to supply high quality grape planting materials in California.