

FINAL STATEMENT OF REASONS
DEPARTMENT OF FOOD AND AGRICULTURE
SUBMISSION OF REGULATIONS PERTAINING TO
Title 3, California Code of Regulations
Sections 3024, 3024.1, 3024.2, 3024.3, 3024.4, 3024.5,
3024.6, 3024.7, 3024.8 and 4603(h)

Update of Initial Statement of Reasons

Section 3024.3(c)(2). The proposed regulation as originally noticed to the public would have allowed rootstock increase blocks to be topworked once for conversion to a scion variety. However, in response to comments from members of the directly affected public, the Department revised that section to allow rootstock increase blocks to be topworked once for conversion to either a new scion or to a new rootstock variety.

Section 3024.3(e)(3). The proposed regulation as originally noticed to the public would have allowed cuttings taken from certified rootstock nursery plantings that are less than 12 months old to be used as a supplemental source of cutting for production of additional certified stock. However, in response to comments from the directly affected public, the Department revised that section to make the same allowance for both rootstock and scion nursery plantings.

Summary and Response to Comments Received During the Notice Period of November 27, 2009 through January 11, 2010

Comments not included and/or responded to were outside the scope of this rulemaking.

Comment 1.1

In the regulation proposal Micro shoot culture is covered. Will Macro shoot culture be recognized as certified if the process is performed by a nursery lab or outside lab?

Response to Comment 1.1

Aside from apical microshoot tip culture, which is restricted to FPS in the proposed regulations, neither current nor proposed regulations address propagative methods or state who must perform

the propagation. This allows participants the option to choose the propagative method(s) best suited to the practices of their respective nurseries. Therefore, the Department would not be precluded from recognizing eligible material entered into the program as certified.

Comments 1.2 and 1.3

Per the proposed regulations Micro shoot tip culture will be limited to FPS. We are in agreement with this regulation. If Macro tip can be performed by an independent nursery lab for the purpose of establishing a certified nursery increase block, the question is, will the establishment of the certified increase block be retroactive under the new regulations or will only blocks established from acceptance of the regulations forward be recognized as certified?

Will plant materials generated through tissue culture during the past few years be grandfathered in as certified or only vines produced after ratification of the new regulations?

Response to Comments 1.2 and 1.3

Since propagative methods are not addressed, thus not restricted, under current regulations, any propagative method using an eligible propagative source could produce material eligible for the program. Neither the existing nor the proposed regulations provide for retroactive certification.

Comment 2.1 *(The Department was unable to ascertain the significance of the numbers in parentheses in Commenter #2's comments)*

Virus testing of certified increase blocks should be increased. The number of samples, as reported by CDFA staff (7), currently equates to about 1.5 samples per acre on average, so the proposed three-fold increase would still not exceed five samples per acre. With sampling levels that low, one cannot possibly hope to detect a new infection in a certified increase block, even at infection rates as high as 10-20%. This is especially true in rootstock blocks because rootstocks are not grapevine leafroll-associated virus (GLRaV) symptomatic. The Department contends that its approach is a "statistically valid sample" but no detailed sampling scheme is presented to support that contention.

Response to Comment 2.1

The Department concurs that no comprehensive detailed sampling scheme was presented and that it used the term, "statistically valid sample." However, the Department gave an overall

example of the program's sampling in the Initial statement of Reasons which stated, “. . . [the] Department relies on the ELISA to test for the presence of fanleaf or leafroll. Fanleaf samples are composited five vines/sample prior to performing the ELISA; therefore, the 4,500-fanleaff samples represent 20,000 vines.” The sampling methodology used in increase blocks is fixed-risk sampling based on a hyper-geometric distribution. Currently, the number of samples taken in each increase block is sufficient to provide a 95% confidence level of detecting a 1% infection rate. The actual number of samples taken from an increase block is dependent upon the number of grapevines in that block. The Department believed that the overall example given was more easily understood by those affected rather than providing the actual statistical methodology description.

The Grapevine Registration and Certification Program (R and C Program) is a voluntary program whose costs (including sampling and testing) are born by the participant nurseries. Additionally, the grapevine nurseries pay an assessment to the California Fruit Tree, Nut Tree and Grapevine Improvement Advisory Board (IAB). The Department meets with the IAB at least three times a year. Part of the assessments paid to the IAB is used to offset the costs of the R and C Program's sampling and testing costs and are set by the IAB. The IAB can provide input to the R and C Program on sampling and testing protocols and any associated confidence levels for detecting disease. This enables industry through the IAB to set a certain level of confidence in the disease status of nursery stock, while not causing an undue cost-burden on the nurseries. The IAB could recommend to the Department that the statistically valid sampling protocol be adjusted up or down based upon funding or acceptable levels of risk for the targeted disease(s). The IAB could recommend the number of samples taken in each increase block be sufficient to provide a 95% confidence level of detecting a 0.5% (a higher standard) or 3% (a lower standard) level of infection. These would be equally statistically valid based upon the level of acceptable risk.

Comment 2.2

To our knowledge, the 100-ft setback assumption has never been tested and should be, given the evidence that mealybugs can spread long distances in the wind (8). Golino et al (9) reported that virus in Napa appears to have spread to nearby vineyard blocks, not once but twice in the same

site, first in an east-to-west direction and the second time west-to-east, both in about 10 years. The distance between these block was 35 ft (10), one-third of the distance the regulations suggest is a safe setback for nurseries.

Response to Comment 2.2

The 100-ft setback has been in the grapevine regulations since at least 1984. In the absence of data that would indicate otherwise, Department staff believes the 100-ft buffer is a buffer that both protects nursery stock and doesn't have a significant adverse impact on a nursery's ability to conduct business.

Comment 2.3

The new regulations propose the establishment of secondary increase blocks and argue that these blocks are just as safe as primary increase blocks. However, this is likely not true in two regards. First, secondary increase blocks allow, under certain conditions, the planting of vines within the 100-ft buffer. This is likely to facilitate the spread of viruses because mealybugs can move viruses easily vine to vine (11). Second, the owners of these secondary blocks will be growers, not nurserymen, who have more limited sensitivity to clean stock issues. They are free to use the same equipment and personnel to manage these secondary increase blocks as they do their other, possibly infected, blocks without sanitation. Further, owners are apparently not prohibited from using commercial management companies whose crews and equipment are exposed to a wide range of vineyard infections. In both of these ways, secondary increase blocks are more vulnerable and present a higher risk of virus infection than do primary increase blocks.

Response to Comment 2.3

The comparison of the requirements for primary and secondary increase blocks is in the ISR, not the proposed regulations. In the proposed regulations, planting location, testing requirements and farming and sanitation practices are the same for both primary and secondary increase blocks, including allowing non-registered grapevines within the 100-ft. buffer. For both primary and secondary increase blocks nurseries are required to meet the nursery standards of cleanliness as set forth in Title 3, Section 3060.2. There are no specifications regarding who may perform farming operations in either primary or secondary increase blocks.

Comment 2.4

The ISOR also states (p. 21) that a selection in which a graft-transmissible agent has been detected can have its certification re-instated if the nursery simply informs the buyer. This is extremely short-sighted. First, the implication is that the vine in question can stay in place in the increase block. If so, it becomes a risk as a source of virus capable of spreading to neighboring uninfected selections at the nursery. Second, there is a significant difference between a nursery selling uncertified material where the virus status is unknown and selling material where the virus status is known. We believe that if buyers were given a true disclosure informing them that their vines may grow poorly, may not mature fruit properly, may have a shortened lifespan and may infect their neighboring blocks, they would not buy them.

Response to Comment 2.4

The discussion on the bottom of page 21 of the ISR refers to current, not proposed, regulations. The discussion of proposed regulations governing vines testing positive for graft-transmissible disease begins at the top of page 22. The proposed regulations make no provision for the sale of material that has tested positive for a graft-transmissible disease as registered or certified stock. If a vine tests positive in the increase block, delimitation sampling is performed by the program. Any vine(s) testing positive for a disease listed in the regulation would have to be removed from the increase block for the block to remain in the program.

Comment 2.5

The section on “liable to be infected” (p. 22) changes the regulations to no longer make automatic the cancellation of progeny registration when the parent material is found to be infected with a graft transmissible agent. This notion is flawed in that it does not take into account that the material is a risk to its neighboring selections in the nursery while the test is in progress. This is especially critical if the test is not a rapid PCR but rather an 18-month woody index.

Response to Comment 2.5

Automatic cancellation for progeny of infected plant material is not part of the current regulations, which state that “registration or certification **may** be refused or canceled if . . . it is determined that registered foundation block vine or registered increase block vine is transmissible disease-infected and the plants propagated from such source also are liable to be

infected.” The language is essentially the same in the proposed regulations (Section 3024.6), except that now the disease status of the progeny may also be confirmed prior to cancelling registration. This is an added protection for nurserymen since it is possible that the foundation vine became infected after the nursery stock was propagated. With the exception of grapevines at Foundation Plant Services, leafroll, fanleaf and tomato ringspot virus are the only diseases for which grapevines in the registration and certification program are required to be tested. Either PCR or ELISA, not woody indexing, is used to test for these diseases, thus the results would be available rapidly.

Comment 2.6

In the previous proposed version of the regulations included the following statement: “However, problems with the leafroll virus in increase blocks continue so the proposed regulations will downgrade the older blocks to secondary increase block status.” There is no similar language in the new proposed regulations. The previous statement clearly says that older blocks are problematic but the new regulations place no greater burden on them to show that they remain virus-free.

Response to Comment 2.6

The statement referenced above was in a previous ISR, not regulation. Under the proposed regulations, older blocks where vines continue to be tested and found negative will retain their current registered status.

Comments 3.1, 6.1 and 8.5

I would like to bring your attention to page 7, paragraph 4 of the Statement of Reasons allowing top working of secondary increase blocks. This conflicts with page 13, paragraph 4 which does not allow secondary increase block top working. Section 3024.2 Participant Responsibilities #4 makes no reference to secondary increase block top working. Section 3024.3 Eligibility Requirements Secondary Increase Block #3 also clearly prohibits top working.

Response to Comments 3.1, 6.1 and 8.5

The Department concurs with these comments. Page 7, paragraph 4 of the ISR should read, “Under the proposed regulations, a participant will have up to six months to apply to the Department for registration of any planting or topworking in primary [increase blocks] or [of any

planting in] secondary increase blocks. However, there is no conflict in the regulation text. Proposed Section 3024.3(d) (3) expressly prohibits topworking in secondary increase blocks.

Comments 3.2, 6.3 and 8.6

In Section 3024.3, Eligibility Requirements, Certified Nursery Plantings #3 allows rootstock cuttings to be taken from a certified nursery planting which is less than 12 months old. I can see no scientific reason for not including scion material in this provision. There are so many more scion selections than rootstock selections in the program and this would allow the nurseryman the ability to meet industry demand, especially for newly released scion selections.

Response to Comments 3.2, 6.3 and 8.6

The Department agreed with these comments and revised the text of 3024.3(e)(3) to allow cuttings from either rootstock or scion to be taken from a certified nursery planting which is less than 12 months old to be used as a supplemental source of cuttings for production of additional certified stock.

Comments 4.1, 5.1, 7.1 and 8.1

I have been in all the meetings for the upgrades to the grapevine cert programs. I feel all the nurseries have had fair time to give input. I support moving forward with the changes in the regs. I support the new CDFG Grape certification regulations. This has been a long process and the final product is one that we can be proud of. These new regulations, will, over time, lead to a cleaner healthier grape growing industry in California and worldwide.

I want to congratulate you on the latest draft of our Grapevine R&C program regulations. Both the regulations and the supporting documentation are first rate.

I have reviewed the Department of Food and Agriculture's proposed amendment of the regulations, Title 3, California Code of Regulations; Sections 3024, 3024.1, 3024.2, 3024.3, 3024.4, 3024.5, 3024.6, 3024.7, 3024.8 and 4603(h). This latest issue is by far the most accurate, well intentioned version of the regulations released to date. I would like to commend you on all of your hard work and diligence in getting this task accomplished. This is a dramatic improvement over the 1984 regulations that are so out of date. And I believe that this release is

as close to meeting the desires of all entities involved as possible, including CDFA, the scientific communities, the nursery industry, and the consumers.

Response to Comments 4.1, 5.1, 7.1 and 8.1

The Department thanks these commenters for their expressions of support.

Comment 6.2

On page 12 there is a reference to top working a primary increase block one time to a scion variety. I believe this should be allowed for rootstocks as well if done correctly due to the length of time required for a rootstock block to come into production and the need for a change in demand.

Response to Comment 6.2

The Department agrees with this comment and revised Section 3024.3(c)(2) to allow rootstock increase blocks to be topworked once for conversion either to a scion or to a new rootstock variety.

Comment 6.4

Going forward I have some concerns about the status of the ground that the existing certified increase blocks are on. Will the nurseries be able to plant newer foundation stock on them, replacing the older certified material without affecting the certification status?

Response to Comment 6.4

The proposed regulations prohibit planting on sites where non-registered grapevines have been grown within the past 10 years. In the absence of evidence of soil-borne diseases or the vectors of such, ground that is currently planted with registered or certified vines would be eligible under the new program.

Comment 7.2

Viroid diseases are mentioned alongside virus diseases in many places in the text (for example page 2 of the Plain English Policy Statement Overview). I know the viroid diseases are a very important part of the citrus R&C program. However, in the case of grapevines, there are several mild viroid diseases that are ubiquitous in grape stock and worldwide in distribution. Very likely, much of our grape stock is infected with one or more of these viroids which have not been shown

to be detrimental. Therefore, I would like to suggest that the word (sic) ‘Viroids’ is dropped any place it appears in the text.

Response to Comment 7.2

The Department concurs that the word ‘viroids’ should not have been included in the text of the ISR. ‘Viroid’ does not appear anywhere in the text of the proposed regulation.

Comment 7.3

In Subsection 3024.2(a), the regulations state that microshoot tip culture is solely the responsibility of FPS. I think it might be clearer to say that the use of microshoot tip culture is RESERVED in the R&C program for FPS and will be used as determined by FPS to be beneficial to the program.

Response to Comment 7.3

The Department concurs with this comment and has made a non-substantive change in Section 3024.2(a) of the proposed regulations.

Comment 7.4

I believe there may be a mathematical error on page 20 of the Plain English Policy Statement Overview. I believe the Department will be taking 5 vine samples and that would mean testing 4,000 samples representing 20,000 vines. (The current text says 4,500 samples).

Response to Comment 7.4

The number of samples referred to above in the ISR was rounded off to 20,000, rather than stating 22,500.

Comment 7.5

I noticed two items in the definitions. First, I wonder if you intend ‘Approved by the Department’ to be out of sequence alphabetically. I realize that may be intention but everything else is strictly alphabetical so I wanted to call it to you (sic) attention. Second, our college is the UC Davis College of Agricultural and Environmental Sciences, not the College of Agriculture and Environmental Sciences.

Response to Comment 7.5

The Department concurs with this comment and has made non-substantive changes in Section 3024.

Comment 7.6

In the old versions of the draft regs, FPS was only responsibly (sic) for documentation for grapevines distributed *after 1986* – that date is not in the new version. Although we do have some older records, they are not at our current level of detail and they are not electronic. I would prefer to keep the date in the text if there is not some other reason for removing it.

Response to Comment 7.6

The Department concurs that FPS should only be responsible for documentation for grapevines distributed after 1986 and has made a non-substantive change in Section 3024.2(a)(12) of the proposed regulations.

Comment 8.2

I saw a conflict in the regulations 3024. Definitions, (bb) – at the end of the sentence it states “or from the foundation block and registered with the department” which is incorrect because if it comes from the foundation block it should be considered Primary increase block.

Response to Comment 8.2

This definition provides more choices to nurseries by allowing either foundation stock **or** primary increase block material to be used in a secondary increase block. For instance, a situation could arise where a participant desires to use foundation stock material to augment an existing secondary increase block.

Comment 8.3

I would also like to expand the tissue culture definition to specifically exclude the use of “Mother Cultures”, which is used to do massive expansion of a clone by growing callous tissue in vitro and dividing it and re-dividing multiple times. I have worked with two different labs and they told me that this is the most dangerous type of Tissue Culture that can result in the highest rate of genetic variability. So the Statement of Reasons 3024.2(b) should be modified in paragraph two so that it specifically states that the nursery can use Apical Macroshoot Tip

Culture, or that it states specifically that the use of Mother Cultures is prohibited. We might also consider the wording of prohibiting the use of Mother Cultures in the regulations Section 3024.2. Program Responsibilities, (a), (3) so it is clear that FPS should not use this type of tissue culture technique either.

Response to Comment 8.3

Apical microshoot tip culture is considered the type of tissue culture that has the greatest potential to induce genetic variation. Aside from this method, which is restricted to FPS in the proposed regulations, neither current nor proposed regulations address propagative methods. This allows participants the option to choose the propagative method(s) best suited to the practices of their respective nurseries. While macroshoot tip culture has some potential to induce genetic variation, the proposed regulations clearly state that trueness-to-variety is the responsibility of FPS (Section 3024.2(a)(5) and (13)) and the participants (Section 3024.2(b)(10)). Grapevines not true-to-variety are ineligible for registration and/or certification. The Department is adopting this section for the reasons set out in the ISR.

Comments 8.4 and 9.2

I would also like to state that the use of this release of the regulations should be used for all nursery activities from this date going forward, and that no retroactive registration and certification of increase blocks planted more than (sic) 6 months prior to this release be allowed.

Response to Comments 8.4 and 9.2

These regulations specify all of the eligibility criteria for establishing secondary increase blocks. An applicant must demonstrate compliance with all of those eligibility criteria at the time they apply in order to have a secondary increase block in the program. Under these regulations, the Department cannot refuse an applicant's request to enter a Secondary Increase Block into the program without cause.

Comment 9.1

The inclusion of Secondary Increase Blocks in Section 3024.3(c), is justified in the Initial Statement of Reasons because of the fact that only 10% of the grapevines sold in California are currently certified and that by allowing Secondary Increase Blocks, a higher percentage of

grapevines sold would be Certified. I oppose the inclusion of this language for the following reasons:

In the Initial Statement of Reasons it also states, “The purpose of the R&C Program is to establish a grapevine nursery stock production system that targets the elimination of specific grapevine diseases.....”, Secondary increase blocks do not help accomplish these goals for material within the program, but only makes more of something called certified available. There are currently many questions from within the industry about the disease status of materials in the R&C Program. Without the implementation of the new testing procedures described in the amended regulations these questions are unanswered and it remains unclear what percentage of material in the current program that may have some level of infection. The current disease diagnostics methods are less than perfect and could allow material, depending on when and how and where a sample is obtained, to pass as clean when in fact it may not be so. More research is needed showing how and at what rate diseases are spread, the prevention of their spread, disease diagnostic techniques, and in what levels or combinations of their existence do they have a significant economic impact. The sum of these questions in my estimation is not to make more of the material available, but rather implement the new protocols and continue to do research in an effort to answer these questions, ultimately making the material currently in the program better. Additionally, secondary increase blocks will most likely be located in areas of commercial vineyard production, exposing them to higher levels of possible infections. Typically these blocks will be farmed by commercial viticulturalists who will use personnel and equipment in both certified and non-certified blocks, again exposing them to higher levels of risk. This risk was acknowledged by the working group when secondary increase blocks were described as “... less safe than primary increase blocks...” and is the reason why Secondary Increase blocks of rootstocks are not allowed. At some point in the future when a better risk assessment can be made, we should reconsider the addition of Secondary Increase blocks, however the current level of risk to the R&C Program is greater than any perceived benefit from the inclusion of Secondary Increase blocks. At a very minimum, material coming from a Secondary Increase block should have to be labeled as such and disclosed to the consumer.

Response to Comment 9.1

This is a general objection to the adoption of this section of the regulations and the Department is adopting this section for the reasons set out in the ISR.

Comment 9.2

“... nor do (these regulations) allow for the planting of secondary increase blocks with grapevines that aren't foundation stock.”

Response to Comment 9.2

The Department does not concur with this comment. The proposed regulations (Section 3024.3(d)(1)) state that “foundation stock, provisional foundation stock, or registered stock from a primary increase block” is eligible for planting in a Secondary Increase Block.

Comment 9.3

Additionally the language that allows Topworking in Secondary Increase Blocks established prior to July 1, 2010 suggests that these blocks already exist, which they don't.

Response to Comment 9.3

Depending on the date these regulations take effect, a participant nursery might establish a secondary increase block prior to July 1, 2010.

Comments Received During the Period the Modified Text was Available to the Public.

The modified text was made available to the public from February 25, 2010 through March 12, 2010. The Department did not receive any comments on the modified text.

Mandate on Local Agencies and School Districts

The Department of Food and Agriculture has determined that Sections 3024, 3024.1, 3024.2, 3024.3, 3024.4, 3024.5, 3024.6, 3024.7, 3024.8 and 4603(h) do not impose a new mandate on local agencies or school districts. This is a voluntary program administered by the State. Therefore, no reimbursement is required for Section 3434 under Section 17561 of the Government Code.

The Department also has determined that no savings or increased costs to any state agency, no reimbursable costs or savings under Part 7 (commencing with Section 17500) of Division 4 of the Government Code to local agencies or school districts, no nondiscretionary costs or savings to local agencies or school districts, and no costs or savings in federal funding to the State will result from the proposed action. The cost impact of the changes in the regulations on a

representative private person or business is not expected to be significantly adverse. The Department has also determined that this action will not have a significant adverse economic impact on housing costs or California businesses, including the ability of California businesses to compete with businesses in other states.

Assessment

The Department has made an assessment that this amendment to the regulations would not (1) create or eliminate jobs within California, (2) create new business or eliminate existing businesses within California, or (3) affect the expansion of businesses currently doing business within California.

Alternatives Considered

The Department of Food and Agriculture has determined that no alternative considered would be more effective in carrying out the purpose for which the action is proposed or would be as effective as and less burdensome to affected private persons than the proposed action.