Canadian Grapevine Certification Network

CGCN · RCCV

Réseau Canadien de Certification de la Vigne

March 10, 2025

Statement on Recommended Eligibility of Material From France's Grapevine Certification System For Provincial Vineyard Replant Programs

Background: With the need to replant many vineyards across the majority of Canada's main grape growing regions, it is more important than ever to ensure that vineyards are being replaced with certified clean, virus-tested plant material that growers can have confidence in. In response to this need, governments have launched vineyard replant programs to help growers plant vines that improve the quality, production, and marketability of the fruit, while ultimately contributing to a more competitive and resilient domestic industry. To accomplish these objectives, replant program administrators have identified eligibility criteria that includes the requirement that vines must be purchased from approved certified sources for applicants to receive reimbursement. When program guidelines were being developed, the Canadian Grapevine Certification Network (CGCN-RCCV) was asked to act in an advisory role to recommend grapevine certification systems in Canada and the USA that meet these criteria. At the same time, prompted by industry demand, CGCN-RCCV initiated a formal review of France's grapevine certification system (hereafter referred to as The Review) to determine if their protocols meet a similar standard to potentially be included in the list of approved certified sources for replant program criteria. This statement outlines the results of that formal review.

Disclaimer: This statement serves only as a consultative letter of advice, NOT a final decision on vine eligibility for each provincial replanting initiative. Vine eligibility criteria are established by the administrators of each respective replant program. Additionally, this statement DOES NOT change or influence the Canadian Food Inspection Agency's (CFIA) vine importing requirements.

CGCN-RCCV's Mission: CGCN-RCCV is the culmination of a collaborative effort between four of Canada's provincial grape-growers' associations: British Columbia Wine Grape Council (BCWGC), Grape Growers of Ontario (GGO), Conseil des vins du Québec (CVQ), and Grape Growers' Association of Nova Scotia (GGANS). Not only is it our mission to ensure Canadian grape growers have access to domestic, high-quality, certified clean grapevine material, but it is also to empower them through education to make more informed and confident decisions for the long-term sustainability of their farms and businesses.

The Review Committee: CGCN-RCCV established The Review committee in September 2024 and concluded The Review with a recommendation to the CGCN-RCCV Board of Directors at the end of February 2025. To ensure each grape growing region was represented appropriately, each of the four provincial grape growing associations appointed 1-2 individuals to sit on the committee. These individuals included grape growers, vineyard and winery managers, and researchers. Additionally, CGCN-RCCV invited a variety of scientists within the fields of virology, entomology, pathology, and viticulture to join the committee to offer their expert opinions throughout the evaluation process.

The Review Process: Over the course of five months, CGCN-RCCV hosted five meetings with the committee and one meeting between the committee and nursery representatives from France. The Review constitutes an evaluation of France's official grapevine certification system overall, not an evaluation of specific nurseries that participate in their certification system. The committee initially established four factors that it deemed to be the most important considerations in a grapevine certification system in order to evaluate France's model. The committee then determined minimum baseline requirements for each of these factors by compiling the "least stringent" protocols between the four USA Certification programs that had already been recognized and recommended by CGCN-RCCV (see "CGCN-RCCV Recognized Sources of Vines" below), as well as taking into account CGCN-RCCV's programming as the highest standard. The baseline items are as follows:

1. **Viruses of concern** - At a minimum, the system must test for:
    a. Grapevine Red Blotch Virus
    b. Grapevine leafroll-associated viruses 1-4
    c. Grapevine Fanleaf Virus
    d. Tomato Ringspot Virus
2. **Testing frequency** - At a minimum, must test 100% of the certified block once every 5 years (i.e. every vine in the certified block must be tested at least once in 5 years).
3. **Monitoring model** – At a minimum, must meet the following:
    a. Visual inspections are conducted by a credible and qualified source; aligned with times of the year when virus is most prominent;
    b. Visual inspections must be corroborated by testing to confirm possible symptoms and sample collection and testing must be scheduled as described in "Testing frequency" above;
    c. Testing must be conducted by approved lab(s) according to the certification system's protocols, and positive cases must be removed/destroyed or the block removed from certification programming.
4. **Traceability** - At a minimum, there must be a system in place that tracks the phytosanitary status of a vine from Generation 1 (nuclear) to Generation 4 (certified).

Results: The CGCN-RCCV Board of Directors does *NOT* recommend that French grapevine material be eligible for replant programming initiatives in Canada at this time.

Rationale: The committee determined, and the CGCN-RCCV Board of Directors supports the findings, that France's grapevine certification protocols do not meet the minimum requirements to be considered for replanting initiatives when compared against already-recommended certification systems.

1. France's certification system does not test for Leafroll-2 or -4, nor Red Blotch or Tomato Ringspot viruses. CGCN-RCCV recognizes that Red Blotch and Tomato Ringspot viruses are not reported to occur in France, however the committee could not identify data to verify if this information is up to date and satisfactory. This does not meet the minimum baseline requirements for the item "Viruses of concern."

2. A proportion of mother blocks of certified scion and rootstock are tested for the first time in the 5th year after planting, and then every 10 years after that point if the block is clean. This does not meet the minimum baseline requirements for the item "Testing frequency." The Review committee and CGCN-RCCV expressed concerns with the lack of testing, stating that the length of time between tests provides too much opportunity for viruses to spread unnoticed. Additionally, health tests are exclusively performed using ELISA, with the protocols allowing 5-10 plants per sample. The committee cautions, and the French National Laboratory for Plant Protection suggests, that this sample size is not recommended to benefit from the chosen diagnostic method, which itself is not considered particularly sensitive or state-of-the-art. In addition, France's certification system is using a statistical approach to sample size based on the number of plants of the same age and clone in a contiguous planting, which can be as low as 8% sampling rate for blocks of 5,500 plants or more.
3. Regarding the "Monitoring model," the sub-item that France's certification system does not meet is the requirement that sample collection and testing be scheduled on a 5-year cycle of 100% of the certified block. The remaining sub-items of visual inspections, approved lab(s), and removal of infected plants were met. However, the committee and CGCN-RCCV caution that it is very difficult to visually detect infection on white varieties and hybrids. Additionally, this concern is heightened for rootstock blocks because identifying visual symptoms on rootstocks is nearly impossible. Overall, this minimum baseline requirement is not met.
4. Lastly, The Review committee and CGCN-RCCV Board of Directors identified that France's grapevine certification system has a protocol in place that exceeds the minimum baseline requirements for the item "Traceability." Therefore, this item has been met.

For additional details on the results of The Review, please see Appendix A.

CGCN-RCCV Recognized Sources of Vines:

Domestic vines: *Certified Plus*, *Certified* or *Verified* by the CGCN-RCCV and produced by a CGCN-RCCV registered nursery. All participating Canadian nurseries can be found on our website by clicking the "Learn more" buttons at www.cgcn-rccv.ca/site/grapevine-certification. We are always accepting applications for additional nurseries to get involved. Please encourage your favourite Canadian nurseries to get in touch with CGCN-RCCV to apply.

USA imported vines*: Must be certified and sourced from a nursery participating in at least one of the following State certification programs:

1. California - Protocol 2010
2. New York – Virus-tested Plant Material Certification Program
3. Washington and Oregon harmonized programs – Grape Planting Stock Certification

*If importing, vines must also be designated to be free of any viruses and pathogens listed on the CFIA's quarantine list.

Contact: If you have any questions or concerns about this statement, please don't hesitate to contact CGCN-RCCV's Executive Director, Darien Temprile.

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Appendix A

Baseline items (minimum protocol requirements):

1. **Non-negotiable viruses of concern**
    a. Grapevine Red Blotch Virus
    b. Grapevine leafroll-associated viruses 1-4
    c. Grapevine Fanleaf Virus
    d. Tomato Ringspot Virus

Red blotch and Leafroll viruses were "no brainers" to include on the non-negotiables list, as these viruses are causing the most damage to Canadian vineyards.
The committee advocated for adding Tomato ringspot virus to the list of non-negotiables as it is a growing concern in Quebec and may not retain its status on CFIA's quarantine list.
Fanleaf virus was recommended as a non-negotiable virus of concern as a proactive measure to prevent it from regaining foothold in Canada.

France's system is testing for leafroll 1, 3, fanleaf and Arabis mosaic viruses within scion and rootstock mother blocks of certification programming. Additionally, it is important to note that vine shipments scheduled for export to Canada are tested again for leafroll 1 & 3 right before being shipped. If shipments are positive for either of these 2 viruses, the shipment would be restricted for export and destroyed.

France's certification system is not testing for Leafrolls 2 and 4. They also are not testing for Red Blotch and ToRSV because these 2 viruses are not reported in France. Since ToRSV is a regulated pest in Canada, if CFIA were to randomly test a shipment and it turns up positive for ToRSV, then this would restrict the shipment from entering Canada.

Does this meet the baseline established? No.

2. **Testing frequency**
    a. Minimum testing of 100% of the block once every 5 years (similar to California Department of Food and Agriculture certification).

A proportion of mother blocks of certified scion and rootstock are tested initially in the 5th year, and then every 10 years after that point. Mother vine blocks must be registered with and tested according to FranceAgriMer by July 31st, 5 years after the block was planted. If this does not occur by the 6th year, the plants are removed and uprooted. Then health tests must be renewed by July 31st of the 10th year. If all tests come back clean, health tests do not need to be renewed for 10 years. If health tests do not occur by the 10th year, and on a regular 10-year cycle, propagation of the block is restricted, deleted from registration and mother vines are uprooted.

Level of sampling/testing on this cycle depends on the size of the block, see Appendix 1 below. If positive samples are identified, the protocols require that the whole block be retested at 100%

in order to check if the remainder of the block is within the acceptable 5% threshold and identify all the positive plants to remove. The acceptable level of infection of 5% is based on the number of plants in the block, not plant samples. If the block is within 5%, they may remove the positives to keep the certification status. If the level of infection exceeds 5%, the block is not eligible to continue producing at the certified level and is deregistered.

Appendix 1: Protocol recommended by FranceAgriMer for initial sampling

Number of plants in unit plot	Sampling rate	Protocol to be applied
Less than 200	100%	All plants (1)
From 200 to 350	50%	All plants, every 2nd row OR Every 2nd plant in every row
From 351 to 600	25%	One plant in 2, one row in 2
From 601 to 1,000	17%	One plant in 3, one row in 2 OR One plant in 2, one row in 3
From 1,001 to 5,500	11%	One plant in 3, one row in 3
Over 5,500	8%	One plant in 3, one row in 4 OR One plant in 4, one row in 3

(1) In the case of small contiguous clonal plots, with fewer than 200 plants, these can be grouped together or joined to the larger neighbouring plot to form a single sampled unit, as they are part of the same crop unit and are not separated by roads of ditches. In this case, each clone must be sampled from at least one whole row, and the sampling rate must be at least 25%.

Does this meet the baseline established? No.

Additionally, the committee noted that health tests are conducted using ELISA exclusively, which is known to be less sensitive than PCR or HTS, with false negatives/positives being a concern. France's system requires samples to be within 5-10 plants per sample, and cautions users about the pitfalls with this technique.

C - Groupings

In certain situations, at the customer's request, samples from several plants may b e grouped together.

	Nepovirus	Ampelovirus	Closterovirus
Leaves	20 plants	15 plants	5 plants
Wood	10 plants		5 plants
Roots	10 plants	4 plants	

However, if you want to benefit from the detection potential offered by the technique, this practice is not recommended.

The above chart is written by the National Laboratory for Plant Protection in France in Appendix 2 of their standards for detecting viruses in vines using DAS-ELISA diagnostic methods (Laboratoire National de la Protection des Végetaux; *Végétal : vigne (Vitis Sp.) detection des virus par la technique sérologique DAS-ELISA*). The National Laboratory, itself, recommends against grouping 5-10 plants into one sample.

In addition, the French certification protocol is using a statistical approach to sample size based on the number of plants of the same age and clone in a contiguous planting. This ranges from 100% of the plants sampled in a block of less than 200 plants to 8% of plants sampled in a block of more than 5,500 plants.

3. **Monitoring**
    a. **Who is conducting monitoring and are they a credible source?**
        i. Visual inspections must be conducted by qualified representatives, identified by the nursery. Appropriate training must be administered in order to identify suspected infections.

Visual inspections are conducted by representatives of the nursery that are trained as Authorized Professional Operators (OPAs). OPAs are trained in plant virology and vine disease identification, with specialized modules on the symptoms of regulated pathogens by IFV, as part of the VITIPEPS training. VITIPEPS is a private training organization.

Does this meet the baseline established? Yes.

However, the committee would like to note that visual inspections on white varieties and hybrids are very difficult. Indication suggests that there needs to be a high viral load in the plant in order to see prominent symptoms, which may not always be the case. Additionally, identifying visual symptoms in rootstocks is nearly impossible.

        ii. Sample collection must be conducted by an individual according to the approved lab(s) collection protocols. A third-party source is preferred, but not mandatory.

Sample collection is conducted by OPAs for plants that are suspected of virus symptoms upon annual visual inspections. OPAs also conduct sample collection for health tests on the 5 or 10 year cycle for certified blocks.

Does this meet the baseline established? Yes.

        iii. Testing must be conducted by approved lab(s) according to the respective certification system's protocols.

Testing is conducted by labs approved by FranceAgriMer, and samples are submitted anonymously. Only approved labs are authorized to provide results.

Does this meet the baseline established? Yes.

    b. **How often is monitoring occurring? At a minimum:**
        i. Visual inspections occur once during the growing season, and once during the harvest season; aligned with times when viruses of concern are most prominent (i.e., inspections occur at least twice a year).

Visual inspections occur on an annual basis at the optimal time for showing symptoms of transmissible diseases, usually one in early summer, late June to early July (for fanleaf disease / Japanese beetle and bacterial necrosis), and the second at the end of summer, September (for leafroll and Xylella).

Does this meet the baseline established? Yes.

ii. Sample collection and testing must occur at a minimum of 100% of the certified block(s) within a 5-year period (as identified in "Testing Frequency" above).

Sample collection and testing occurs in certified blocks initially on year 5, then on a 10-year cycle after this point, and is based on statistical sampling. The larger the block, the smaller the percentage of sampling.

Does this meet the baseline established? No.

c. **How is monitoring conducted? (i.e. visual inspections, lab tests, removal of plants from programming, etc.).** At a minimum:
   i. Visual inspections must be corroborated with testing.

Visual inspections occur annually and are reported to FranceAgriMer. If any plants are identified to be suspect for infection within annual visual inspections, they are marked for implementation of follow-up measures according to the suspected harmful organism, which involves reporting to FranceAgriMer and/or collecting samples to be sent to an approved lab for testing. Samples are wood cuttings of up to 10 plants, and ELISA is the only diagnostic method used for testing.

Does this meet the baseline established? Yes.

ii. Suspected infections must be tested, and positive cases immediately removed/destroyed, or the block removed from certification programming.

Suspected infections are tested, and if samples are confirmed positive for any of the 4 viruses of concern (leafrolls 1, 3, fanleaf or Arabis mosaic), they must be removed from the block, or the block deregistered from certified programming.

Does this meet the baseline established? Yes.

4. **Traceability**
   a. Is there a system in place that tracks the phytosanitary status of a vine from G1 (nuclear) block to G4 (certified) block?

Yes, there is a rigorous system in place to track vines from G1 through G4 stages. FranceAgriMer controls production of plants through their registers. The Committee also identified that a "phytosanitary passport" must accompany the final shipment.

Does this meet the baseline established? Yes.