



2019/20 HAZENUT RENEWAL PROGRAM REQUIREMENTS

FALL PLANTING-REMOVAL

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Appendix A- Removal of infected hazelnut trees: Requirements and Guidelines

Appendix B- Guidelines for removal disposal of Hazelnut Orchards Infected with Eastern Filbert Blight
(included in a separated document)

Appendix C-Hazelnut varieties resistant to Eastern Filbert Blight -OSU

Appendix D-Links and resources

FURTHER INFORMATION - please contact:

BC Ministry of Agriculture Phone: 604 556 3001

Email: AGRI.HazelnutRenewal@gov.bc.ca

Website: <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/hazelnut-renewal-program>

1. GENERAL PROGRAM INFORMATION

IMPORTANT NOTICE: PLEASE READ CAREFULLY TO ENSURE ELIGIBILITY AND COMPLIANCE WITH PROGRAM GUIDELINES AND CRITERIA.

Before proceeding with a renewal and/or new planting application project under the 2019/20 Hazelnut Renewal Program; it is required that you consult with a horticulturist or Agrologist in order to ensure the project's viability and success.

For the 2019/20 Hazelnut Renewal Program, the B.C. Ministry of Agriculture (Ministry) will be accepting applications from **March 30, 2019** to **July 15, 2019** (Fall planting/removal 2019-20). Annual application timelines for the following year's Renewal Program will be posted on the Ministry and BCHGA websites.

At present the program is only accepting applications for Fall 2019.

Completed applications will be accepted by Ministry in two ways:

- By email to: AGRI.HazelnutRenewal@gov.bc.ca no later than 11:59 pm July 15, 2019
- By mail to: Abbotsford Agriculture Centre, 1767 Angus Campbell Road Abbotsford, BC V3G 2M3
ATTN: Hazelnut Renewal Program; post-marked no later than July 15, 2019

Review of applications will begin after the application period has closed.

Applications must be complete to be eligible.

The application deadline is July 15, 2019. Applications will not be accepted after this date.

Projects submitted for 2019/20 funding that have already been planted, but not funded, are not eligible in future program years.

Submission of an application does not guarantee funding for your project.

Projects will be reviewed by the Application Review Committee (ARC) and funding will be determined based on review and likelihood of successful planting.

Once the funding for the 2019/20 Hazelnut Renewal Program has been fully allocated, the Renewal Program will be closed for the year.

Unsuccessful (or unqualified) applications will not be carried over the subsequent years. In this case, a new application must be filled out.

Applicants who apply and later decide to postpone their project may re-apply in the following year.

2. TYPES OF PROGRAM FUNDING

a. HAZELNUT NEW PLANTING AND RENEWAL FUNDS

Funding for planting of new hazelnut orchard or renewal of existing hazelnut orchards will be funded at \$5.00 per tree to a maximum eligibility of \$1,345 per acre (218 trees per acre (10'X20') or 269 (9'X18') based on double density spacing)

B. REMOVAL OF EFB INFECTED HAZELNUT TREES FUNDS

A maximum of \$1,800/acre will be available to applicants who remove hazelnut trees from orchards infected with Eastern Filbert Blight (EFB). When applying for Removal Funding, the applicant must indicate this on the application and should follow the Guidelines for Removal and Disposal of EFB infected orchards (Appendix B-BCAGRI 2018).

3. PROGRAM ELIGIBILITY

a. REQUIREMENTS

For the purposes of this program, eligible hazelnut trees are defined as hazelnut varieties released by the Oregon State University hazelnut breeding program that have resistance to EFB. (See the list of hazelnut varieties resistant to EFB in Appendix C). Applicants must meet the following criteria.

1. The applicant must be a new or existing hazelnut grower in the province of British Columbia.
2. The applicant must be the owner (or lessee) of the land to be planted. The owner (and in the case of leased property, both the owner and the lessee), must maintain the property as a commercial orchard operation for a period of at least 10 years from the date of replanting.
3. The minimum eligible acreage for planting new orchards in 2019/20 is **1 acre**. If the project includes an expansion of an existing hazelnut orchard, then the total contiguous area of the existing and new orchard must be at least 1 acres. The intention of the program is to support renewal projects that are larger than 1 acre.
4. The maximum eligible acreage for 2019/20 planting is 10 acres per farm operation.
5. Approved applicants must plant EFB-resistant varieties, and must obtain planting stock according to the instructions of the CFIA Directive "D-00-03: Import requirements from the United States and domestic movement requirements for material to prevent the introduction of Eastern filbert blight into British Columbia"
<http://epe.lac-bac.gc.ca/100/206/301/cfia-acia/2011-09-21/www.inspection.gc.ca/english/plaveg/protect/dir/d-00-03e.shtml>

The following types of projects are not eligible for consideration:

- a. Interplantings in existing orchards (planting young trees between each existing tree in the row).
- b. Planting of hazelnut varieties that are not resistant to EFB
- c. Purchasing hazelnut planting stock not in accordance with the CFIA Directives D-00-03

4. APPLICATION/PROJECT PROCESS OVERVIEW AND REQUIREMENTS

a. IMPORTANT FUNDING INFORMATION

- Applications must be complete to be eligible.
- The application deadline is July 15, 2019. Applications will not be accepted after this date.
- Submission of an application does not guarantee funding of the submitted project.
- All required documentation must be submitted within 30 days of submitting your application or the application deadline, whichever date comes first.
- Projects will be reviewed by the Application Review Committee (ARC) after the deadline (July 15, 2019) and assessed based on the likelihood of success.
- The applicant should not proceed with the project prior to receiving the approval letter from the Ministry.
- Once the funding for the 2019/20 Hazelnut Renewal Program has been fully allocated, the program will be closed for the year.
- Projects submitted for 2019/20 and planted, but not approved by the Ministry are not eligible in subsequent years.

b. APPLICATION SUBMISSION AND COMPONENTS

In order to be considered for new planting, renewal, and/or removal funding, an applicant must meet all the program requirements and submit an application to the Ministry including:

1. A completed 2019/20 Project Application (available on the Ministry website). Please ensure that you are applying as a taxable entity of your farm or orchard;
2. Confirmation of ownership/lease of the land;
3. A Renewal Plan (including orchard plot plan) signed by recognized horticulturalist or agrologist;
4. Confirmation of nursery tree order or copy of stock planting purchase- assurance that the plants will be available.
5. Recommended: Cash Flow Projection or Business plan over 5 years, and a marketing plan

c. APPLICATION REVIEW

Applications are reviewed by the Application Review Committee (ARC) represented by the Ministry and the British Columbia Hazelnut Growers Association (BCHGA). Criteria or priorities for the program may vary year-to-year. The Ministry may choose to re-open the application process from time-to-time, if funds are available. Applications are reviewed after the closing date of July 15, 2019. Assessment is based on the BC Hazelnut New Planting and Renewal criteria found below.

Application and Project Review Process:

- Applications are reviewed by the ARC for eligibility
- Ministry reviews recommendations from the ARC
- Ministry notifies applicants on the status of their application (approved, waitlisted, ineligible) by a letter or email
- Qualified applicants start tree planting or removal of EFB infected trees (Fall 2019)
- Inspection report determines amount paid out to the maximum approved in application.
- Ministry processes payment and administers cheques

NOTE: Applications will be returned if they are incomplete or fail to meet program requirements.

NOTE: The ARC may seek for an onsite farm visit with the applicant during the application process.

2019/20 Hazelnut Renewal Program:

Hazelnut applications will be assessed based on, but not limited to the criteria below:

1. Completion of program requirements:
 - a. To be eligible for horticultural adjudication and scoring, applications must meet minimum program requirements (please see Section 3a and 4a);
2. Strength and quality of application and likelihood of success;
 - a. Thorough Renewal and Removal plan
3. Horticultural soundness
 - a. Tree spacing appropriate for variety and location;
4. Variety selection;
 - a. Eastern Filbert Blight (EFB) resistant varieties
5. Submission of application prior to deadline.

Once the funding for the 2019/20 Hazelnut Renewal Program has been fully allocated, the program will be closed for the year.

d. PROJECT APPROVAL

The Ministry delivers approval documents to qualified project applicants including a confirmation form with an assigned project number as well as an approval letter listing the details of their replant plans. Qualified applicants will be asked to review this information, and confirm project participation via confirmation form.

No response by the applicant within 2 weeks of the date of the approval letter will result in the cancellation of the project.

- **NOTE:** The program reserves the right to create an annual wait list once the funding is fully allocated to the approved projects.
- **NOTE:** At any point in the process, project holders must immediately notify the Ministry of project cancellation or any modifications to the project.

Also note the following:

1. The Ministry expects that the program will be fully subscribed and committed each year;
2. Changes to the project may not be approved.
3. Modifications to previously approved applications that result in an increase in the approved funding and/or acreage may be considered for a review by the Ministry if submitted by July 15, 2019.
4. If the applicant proceeds with the project prior to receiving the approval letter from the Ministry, the project not be funded.

e. PLANTING REQUIREMENTS

The following requirements must be considered in your new planting /renewal plan.

1. Planting stock must be robust and under good husbandry.
2. Support and irrigation systems must be installed at the time of planting. Funding for projects may be cancelled if the support and permanent irrigation system are not completed at planting time.

PLANTING SPECIFICATIONS

1. See Appendix E: Links and resources for guidelines from Oregon State University and OMAFRA- Hazelnuts in Ontario.

IRRIGATION SYSTEMS

1. Irrigation systems should meet the standards and specifications outlined in the B.C. Trickle Irrigation Manual and the B.C. Sprinkler Irrigation Manual
https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/water/irrigation/sprinkler-irrigation-manual/563000-1_web_chapter_1.pdf . It is recommended that growers use Certified Irrigation Designers for the irrigation plan.

HAZELNUT TREE VARIETY

1. Only EFB- resistant hazelnut varieties are eligible:
 - a. Variety must be horticulturally suited for your location and site.
 It is the responsibility of the applicant to ensure the choice of varieties are culturally suited to the location and operation as per the Project Renewal Plan in consultation with the ARC and/or a Horticulturalist/Agrologist.

f. INSPECTION PROCESS

1. Ministry will contact the applicants with approved projects in January and February 2020 to arrange for a field inspection.
2. Orchard inspection process (Fall 2019): The program may require updates from the project holders prior to or at different stages during planting. Such as:
 - a. Pre-planting field work completion (soil conditioning, fumigation, and/or other specifications listed by project plan);
 - b. Receipt of planting stock (confirming varieties and target numbers);
 - c. Other data relevant to the program or inspection
3. Planting must be completed prior to November 20, 2019 (Hazelnut renewal funds)
4. Removal of EFB infected hazelnut trees must be completed by December 31, 2019 (Removal of EFB infected hazelnut tree funds)
5. Inspection of renewal projects are expected to occur during January and February 2020.
6. The project must be completed to the satisfaction of the Ministry as per the program requirements and approved project Renewal Plan.
7. A permanent irrigation system is required for all plantings and must be completed prior to inspection.
8. A support system for all plantings is required. Hazelnut trees must be tied to the support system at the time of inspection; (See Planting Specifications above)
9. During inspection, the Ministry will undertake the following actions:

- a. Verify the source of planting stock and varieties
- b. Measure average tree height and row spacing;
- c. Conduct a tree count by variety and block;
- d. Ensure support system is completed and trees are tied;
- e. Ensure permanent irrigation system is installed;
- f. Assess nursery tree quality in terms of overall health;
- g. Assess site preparation and overall planting quality;
- h. Access weed and pest control, best management practices and records of use of pesticides;
- i. May take photos and GPS measurements.

10. Projects that appear to be fraudulent or inaccurate at any point by the Ministry will be rendered ineligible for payment.

g. PROJECT PAYMENT

1. The Ministry reserves the right to delay payment until satisfactory new planting, renewal, and/or removal project performance are demonstrated;
2. Payment is made based on the outcome of the inspection and project progress assessment by the Ministry. Payment amount will be subjected to the approved Renewal Program requirements such as, but not limited to:
 - a. Allocated maximum number of trees per project;
 - b. Allocated maximum number of acres per farm operation;
3. Operational Policies

For overall program evaluation, project holders are requested to provide progress updates to the Ministry during the course of their projects.

Any changes to project plans made after the program application deadline risk ineligibility. However, some changes are considered for eligibility:

- a. A project will remain eligible for payment if there is a reduction in the area planted, as long as spacing, variety and other factors remain the same as in the submitted project Renewal Plan;
- b. The location of pre-approved replanting/removal blocks must be the same as the location shown on the application, unless the horticultural/agrology advisor and the Ministry provide written approval for a change in location and the approvals are completed prior to planting;
- c. A project will remain eligible for payment if there is an increase in density of planting; However, the funding available for the project will be limited to the spacing information noted on the original application.

NOTE: Funding by the Ministry for additional planting will depend on the availability of funds remaining in the Program.

5. GUIDELINES FOR PROJECT AND APPLICATION

a. HAZELNUT

- Site description (location (city), zone, drainage, soil type, other)
 - Irrigation System
 - Support System
 - # of trees per acre
 - Varieties
 - Soil preparation
 - Planting/Plot Plan including density per acre, pollinator type and distribution
 - Marketing Plan
 - Use of best management practices
-
- **NOTE:** While it is not a general requirement, applicants are encouraged to complete Farm Business Plan to review planting projects in terms of their horticultural, marketing, human resource and financial impacts. The Ministry may require the applicant to complete a satisfactory Business Plan in cases where financial viability is a concern owing to financial losses indicated from the replant cash flow projection or farm income and expense statement submitted with the application. The development of a Business Plan is important in the decision to plant and revitalize the orchard to improved profitability.

6. APPENDIX A – REMOVAL OF EFB INFECTED HAZELNUT TREES REQUIREMENTS AND GUIDELINES

a. GENERAL PROGRAM REQUIREMENTS

Please see the main 2019/20 Hazelnut Renewal Program: Requirements document. Requirements in the main document are the same as for the Removal Program except where noted in this Appendix.

b. FUNDING

A maximum of \$1,800/acre will be available to applicants who remove hazelnut orchards infected with Eastern Filbert Blight. When applying for Removal Funding, the applicant must indicate on the application and should follow Guidelines for Removal and Disposal of EFB infected orchards (Appendix B-BCAGRI 2018).

c. PROGRAM ELIGIBILITY

Please see Section 3 and Section 4 of the 2019/20 Hazelnut Renewal Program: Program eligibility and requirements with the exception of Section 3a: Requirements (line 3)

NOTE: Minimum eligible acreage of a hazelnut orchard for the Removal Program is **1 acre (or ½ hectare)**

d. APPLICATION PROCESS

Same as Section 4 of the 2019/20 Hazelnut Renewal Program: Requirements with the exception of Section 4b Application Submission and Components points 3, 4 and 5 and Section 4.e Planting requirements.

e. INSPECTION PROCESS

Same as Section 4f of the 2019/20 Hazelnut Renewal Program: Requirements with the exception of Section 4f, 1a, 2, 6, 7 and 8.

f. PROJECT PAYMENT

Please see Section 4h of the 2019/20 Hazelnut Renewal Program: Requirements.

APPENDIX C: HAZELNUT VARIETIES RESISTANT TO EASTERN FILBERT BLIGHT –OSU

NOTE: Some cultivars may not be available in BC.

PLEASE NOTE THAT OTHER VARIETIES FROM OREGON STATE UNIVERSITY (NOT LISTED HERE) MAY BE AVAILABLE IN BC. CHECK WITH YOUR NURSERY

Table 1 Nut and Kernel Characteristics of Hazelnut Varieties with the Gasaway Gene for Resistance to Eastern Filbert Blight

Variety	Alleles	Nut wt. (grams)	Kernel ¹ (%)	Nut shape	Grade size	Blanching ²	Good nut (%)	Kernel fiber
Dorris	1, 12	3.4	43	Round	Medium	2.4-2.9	79-81	2.0
Jefferson	1, 3	3.7	45	Round	Medium	4-5	76-84	3.0
Yamhill	8, 26	2.3	49	Round	Small	4.4-5.0	75-91	2.5
Wepster	1, 2	2.4	46	Round	Small	3.0	80	2.5
Felix	15, 21	2.5	50	Round	Small	1.8	95	3.0
York	2, 21	2.8	44	Round	Small	4.4-4.8	81-84	3.0
Eta	11, 26	2.8	48	Round	Small	3.0	75	3.5
Theta	5, 15	2.3	50	Round	Small	2.5	85-93	2.5
Gamma	2, 10	2.5	52	Round	Small	6.0	80	3.0

¹ Percentage of nut weight that is from the kernel

² Scale is 1-7, with 1 = 100% removal of the pellicle and 7 = no pellicle removal after roasting at 266°F - 302°F (130°C -150°C) for 15 minutes

Note: Shaded rows Indicate varieties released as pollinizers.

Table 2 Nut and Kernel Characteristics of Hazelnut Varieties that are either susceptible or moderately resistance to Eastern Filbert Blight

Variety	Alleles	Nut wt. (grams)	Kernel ¹ (%)	Nut shape	Grade size	Blanching ²	Good Nut (%)	Kernel Fiber ³
Barcelona (standard)	1, 2	3.3 - 3.8	39-43	Round	Medium to large	4-5	70-85	3
Carina	10, 21	1.4 - 2.2	50-53	Round	Small	6.0	78-89	2
Clark*	3, 8	2.5 - 2.8	4-8-51	Round	Small	16-33	69-81	2
Ennis	1,11	3.1 - 4.6	43-46	Oblong	Large	6-7	64-92	2
Gem	2,14	4.7 - 5.0	37-42	Long	Large	6.5-7.0	67-81	2
Hall's Giant	5, 15	3.3 - 4.5	38-44	Round	Medium	3.0	79-95	2
J-5	2, 3	3.4 - 3.6	50-51	Round	Medium	6.0	34-45	2.5
Lewis*	3, 5	2.7 - 2.9	46-48	Round	Small	4-5	83-90	1-2
Sacajawea*^	1, 22	3	48-50	Round	Small	2.5-3.5	84	1
Tonda di Gifford^	2,23	2.7 - 3.2	45-50	Round	Medium	2.5-3.5	71-79	2

1 Percentage of nut weight that is from the kernel

2 Scale is 1-7, with 1 = 100% removal of the pellicle and 7 no pellicle removal after roasting at 266oF-302oF (130oC -150oC) for 15 minutes.

3 Scale is 1-4, with 1 = no fiber and much fiber.

* Developed by Oregon State University.

^ Sacajawea and Tondo di Giffoni exhibit **moderate resistance to EFB** but do not carry the Getaway gene for resistance. They are suitable for planting in locations where disease pressure is low, but EF B preventative sprays are required.

PLEASE NOTE THAT OTHER VARIETIES FROM OREGON STATE UNIVERSITY (NOT LISTED HERE) MAY BE AVAILABLE IN BC. CHECK WITH YOUR NURSERY

Source: Growing Hazelnuts in the Pacific Northwest Hazelnut Varieties

<https://catalog.extension.oregonstate.edu/em9073/html>; <https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/em9073.pdf>

APPENDIX D: LINKS AND RESOURCES

Oregon State University Extension Service-HazelnutsGrowing Hazelnuts in the Pacific Northwest HazelNut

<https://extension.oregonstate.edu/produce-forage/nuts/growing-hazelnuts-pacific-northwest>

Growing Hazelnuts in the Pacific Northwest: Orchard Design

<https://catalog.extension.oregonstate.edu/em9077/html>

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/em9077.pdf>

OMAFRA

<http://www.omafra.gov.on.ca/english/crops/facts/12-011.htm>

CFIA Directives D-00-03

<http://epe.lac-bac.gc.ca/100/206/301/cfia-acia/2011-09-21/www.inspection.gc.ca/english/plaveg/protect/dir/d-00-03e.shtml>