

**Chapter 16-354 WAC**  
**HOP PLANTING STOCK CERTIFICATION**

Last Update: 9/2/09

**WAC**

16-354-005	Hop planting stock—General.
16-354-010	Definitions.
16-354-020	Field standards for registered mother blocks.
16-354-030	Registered mother block inspections.
16-354-040	Hop planting stock certification application and fees.
16-354-050	Hop planting stock tags and identity.
16-354-070	Hop planting stock field standards.
16-354-090	Hop planting stock grades and standards.
16-354-100	Hop planting stock tolerances.

**DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER**

16-354-001	Promulgation—Rootstocks classified—Negation of warranty—Participation voluntary. [Order 1023, Promulgation, filed 6/16/66; Order 996, Promulgation, filed 11/30/65; Order 947, Promulgation, filed 4/13/64.] Repealed by Order 1264, filed 5/10/72.
16-354-002	Promulgation. [Order 1264, § 16-354-002, filed 5/10/72.] Repealed by WSR 98-09-049, filed 4/15/98, effective 5/16/98. Statutory Authority: Chapter 15.14 RCW.
16-354-060	Standards for hop rootstock (early and late cluster type). [Order 1023, Regulation VI, filed 6/16/66; Order 996, Regulation VI, filed 11/30/65; Order 947, Regulation VI, filed 4/13/64.] Repealed by Order 1264, filed 5/10/72.
16-354-080	Effective date. [Order 1264, § 16-354-080, filed 5/10/72.] Repealed by WSR 85-15-046 (Order 1867), filed 7/16/85. Statutory Authority: Chapter 15.14 RCW.

**WAC 16-354-005 Hop planting stock—General.** (1) Planting stocks of hops and hop plants (*Humulus lupulus L.*) may be designated as foundation stock, registered stock or certified stock, if the planting stock and plants from which it was produced have been inspected and tested in accordance with procedures and requirements outlined in this chapter. At a minimum, these procedures and requirements deal with hop stunt viroid, arabis mosaic viruses, Iilar viruses and virus-like diseases, downy mildew, verticillium wilt, crown gall, rootknot nematode, hop cyst nematode and other serious pests.

(2) Issuance of a state of Washington certified plant tag, stamp, or other document under this chapter means only that the tagged, stamped, or otherwise documented planting stock has been subjected to procedures and requirements described in this chapter and determined to be in compliance with its standards and requirements. The department disclaims all express or implied warranties, including without limitation implied warranties of merchantability and fitness for particular purpose, regarding all plants, plant parts, and plant materials under this chapter.

(3) The department is not responsible for disease, genetic disorders, off-type, failure of performance, mislabeling, or otherwise, in connection with this chapter. No grower, nursery dealer, government official or other person is authorized to give any expressed or implied warranty, or to accept financial responsibility on behalf of the department regarding this chapter.

(4) Participation in the hop planting stock certification program is voluntary.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-005, filed 9/2/09, effective 10/3/09. Statutory Authority: Chapter 15.14 RCW. WSR 98-09-049, § 16-354-005, filed 4/15/98, effective 5/16/98. Statutory Authority: RCW 15.14.030 (2), (5). WSR 95-18-034 (Order 5083), § 16-354-005, filed 8/28/95, effective 9/28/95. Statutory Authority: Chapters 15.14 and 17.24 RCW. WSR 91-08-016 (Order 2077), § 16-354-005, filed 3/27/91, effective 4/27/91. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order

**WAC 16-354-010 Definitions.** "Arabis mosaic viruses" means a grouping of viruses that are polyhedral, have a bipartite genome and induce diseases such as bare-bine, spidery hop, split leaf blotch and hop chlorotic disease. In combination with satellite RNA, arabis mosaic virus induces hop nettlehead disease.

"Broken or mutilated stock" means the breaking of the root section or splitting of the plant part or other mechanical injury that would affect the normal growth of the plant.

"Certified stock" means planting stock produced from foundation stock or a registered mother block that complies with the requirements of this chapter.

"Crown" means a slip or layered stem cutting with visible buds, that has been grown for one or two years.

"Crown gall" means the disease caused by *Agrobacterium tumefaciens* E. F. Sm. & Towns., Conn.

"Department" means the Washington state department of agriculture.

"Director" means the director of the Washington state department of agriculture or the director's authorized representative.

"Downy mildew and/or black rot" means the disease caused by *Pseudoperonospora humuli* Miy. & Tak., G. W. Wils. Black roots caused by this disease may not be certified.

"Fairly clean" means that the plant parts are not matted or caked with dirt.

"Fairly fresh" means that the roots or cuttings are not excessively wilted.

"Firm" means that the plant parts are not soft or spongy, although they may yield to slight pressure.

"Foundation stock" means planting material taken from hop stocks established and maintained by Washington State University, which are indexed and believed to be free from known viruses and hop stunt viroid, and which are genetically uniform. Cuttings or rooted plants, which are used to establish registered mother blocks shall be furnished to the applicant for a fee determined by Washington State University.

"Free from damage caused by freezing injury" means that the roots shall be of a normal color and only moderately affected by discolored roots which affect the normal growth of the plant.

"Free from damage caused by mold" means that the plants shall be free from excessive mold or decay. Plants slightly affected by mold may be allowed.

"Hop cyst nematode" means the nematode *Heterodera humuli* Filipjev.

"Hop stunt viroid" means a group of viroids consisting of hop stunt viroid and its genetic variants.

"Iilar virus" means a grouping of viruses, including apple mosaic virus and Prunus necrotic ringspot, which share common characteristics including spherical in shape, with genetic material in three different particles and commonly inducing ring spots in hosts.

"Index" means to determine virus infection by means of inoculation from the plant to be tested to an indicator plant or by any other method.

"Moist" means that the plant parts are reasonably turgid and not dried to a degree that would affect normal growth.

"Powdery mildew" means the disease caused by *Podosphaera humuli* (DC) Burrill = *Podosphaera macularis* (WALLR.: FR) Lind.

"Registered mother block" means a planting of hops established from foundation stock.

"Rootknot nematode" means the nematode *Meloidogyne* sp.

"Verticillium wilt" means the disease caused by *Verticillium albo-atrum* Reinke & Berth. or hop strains of this organism.

"Virus-like" means a transmissible disorder of unknown cause.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-010, filed 9/2/09, effective 10/3/09. Statutory Authority: Chapter 15.14 RCW. WSR 98-09-049, § 16-354-010, filed 4/15/98, effective 5/16/98. Statutory Authority: RCW 15.14.030 (2), (5). WSR 95-18-034 (Order 5083), § 16-354-010, filed 8/28/95, effective 9/28/95. Statutory Authority: Chapters 15.14 and 17.24 RCW. WSR 91-08-016 (Order 2077), § 16-354-010, filed 3/27/91, effective 4/27/91. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order 1867), § 16-354-010, filed 7/16/85; Order 1264, § 16-354-010, filed 5/10/72; Order 1023, Regulation 1, filed 6/16/66; Order 996, Regulation 1, filed 11/30/65; Order 947, Regulation 1, filed 4/13/64.]

**WAC 16-354-020 Field standards for registered mother blocks.**

(1) Certified stock may be produced only from foundation stock or registered mother blocks. In order to be a registered mother block, a proposed hop planting site must meet all of the following requirements:

(a) The site must be inspected and approved by the department during the growing season immediately prior to planting. An exception may be made to allow inspection and planting during the same growing season, if exclusively greenhouse grown certified plants are planted on or after August 15th.

(b) The site must have been out of hop production, and all poles and trellis removed, for a minimum of three full growing seasons prior to planting.

(c) The site must be entirely free of residual hop plants or hop hullings.

(d) The site must be separated from any other hop plants by a strip of land at least twenty-one feet wide.

(2) A registered mother block must consist of no more than one hop variety or strain.

(3) Registered mother blocks of different varieties or strains must be separated at all points by a strip of land at least twenty-one feet wide and free of hop plants.

(4) Any material planted in a registered mother block must comply with at least one of the following requirements:

(a) Foundation rootstock produced by Washington State University;

(b) Rootstock from another registered mother block;

(c) Growing plants or cuttings from foundation mother plants grown by Washington State University; or

(d) Growing plants or cuttings from another registered mother block.

(5) Plant material, including rootstock and plants described in subsection (4) of this section, may be moved from one registered mother block to another registered mother block site only after appropri-

ate testing by a Washington State University plant pathologist and written approval by the department.

(6) A registered mother block must be kept free of hop hullings at all times.

(7) No registered mother block location may retain certification for more than:

(a) Four consecutive growing seasons, if the registered mother block was produced from rootstock; or

(b) Five consecutive growing seasons, if the registered mother block was produced from cuttings or growing plants.

(8) If a male plant or pollinated female plant is found during any inspection, the grower may harvest certified planting stock from the registered mother block for the subsequent harvest only. After this harvest, the registered mother block site must be decertified.

(9) Plant pests and weeds must be effectively controlled.

(10) Growers shall rogue (i.e., dig and remove) and immediately destroy all male, diseased, unhealthy appearing or otherwise abnormal plants.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-020, filed 9/2/09, effective 10/3/09. Statutory Authority: Chapter 15.14 RCW. WSR 98-09-049, § 16-354-020, filed 4/15/98, effective 5/16/98; WSR 93-17-019 (Order 5000), § 16-354-020, filed 8/10/93, effective 9/10/93. Statutory Authority: Chapters 15.14 and 17.24 RCW. WSR 91-08-016 (Order 2077), § 16-354-020, filed 3/27/91, effective 4/27/91. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order 1867), § 16-354-020, filed 7/16/85; WSR 79-06-038 (Order 1631), § 16-354-020, filed 5/17/79; Order 1264, § 16-354-020, filed 5/10/72; Order 1023, Regulation II, filed 6/16/66; Order 996, Regulation II, filed 11/30/65; Order 947, Regulation II, filed 4/13/64.]

**WAC 16-354-030 Registered mother block inspections.** (1) A minimum of three inspections per year will be conducted by the department at each registered mother block. Additional inspections may be conducted as needed.

(2) Timing and inspection methods will vary, depending on weather conditions, the disease or pest being sought, and other factors.

(3) The first inspection is intended primarily to detect downy mildew, as well as other diseases and pests.

(4) The second inspection is intended primarily to detect Ilar viruses, viroids and virus-like diseases.

(5) The third inspection is intended primarily to detect powdery mildew, as well as other diseases and pests.

(6) Inspection reports may contain observations and information on diseases, pests, and other factors for which no specific tolerances are established or which do not affect the certification status of the planting stock.

(7) The presence of verticillium wilt, detected at any time, shall cause immediate decertification of the site. The grower must dig and destroy all affected plants immediately. Affected material may be removed from the site under suitable precautions only by a Washington State University plant pathologist or the department for diagnostic or verification purposes.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-030, filed 9/2/09, effective 10/3/09. Statutory Authority:

Chapter 15.14 RCW. WSR 98-09-049, § 16-354-030, filed 4/15/98, effective 5/16/98. Statutory Authority: Chapters 15.14 and 17.24 RCW. WSR 91-08-016 (Order 2077), § 16-354-030, filed 3/27/91, effective 4/27/91. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order 1867), § 16-354-030, filed 7/16/85; Order 1264, § 16-354-030, filed 5/10/72; Order 1023, Regulation III, filed 6/16/66; Order 996, Regulation III, filed 11/30/65; Order 947, Regulation III, filed 4/13/64.]

**WAC 16-354-040 Hop planting stock certification application and fees.** (1) Application for inspection and testing of registered mother blocks and certified stock shall be filed with the department by April 1 of each year accompanied by a seventy-five dollar application fee.

(2) As a condition of participation in the hop planting stock certification program, the applicant grower must furnish to the department all requested information pertinent to the operation of the program and must give consent to the department to take material from registered mother blocks and/or greenhouses for examination and testing.

(3) Fees for field inspections or inspection of harvested planting stock for grade, phytosanitary certification, or other purposes are assessed at the appropriate rate established in chapter 16-401 WAC.

(4) Payment for each inspection is due upon completion of the inspection. Billing may be arranged subject to department policies and processes.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-040, filed 9/2/09, effective 10/3/09; WSR 04-24-050, § 16-354-040, filed 11/29/04, effective 12/30/04. Statutory Authority: Chapter 15.14 RCW. WSR 98-09-049, § 16-354-040, filed 4/15/98, effective 5/16/98. Statutory Authority: Chapters 15.14 and 17.24 RCW. WSR 91-08-016 (Order 2077), § 16-354-040, filed 3/27/91, effective 4/27/91. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order 1867), § 16-354-040, filed 7/16/85; WSR 79-06-038 (Order 1631), § 16-354-040, filed 5/17/79; Order 1264, § 16-354-040, filed 5/10/72; Order 1023, Regulation IV, filed 6/16/66; Order 996, Regulation IV, filed 11/30/65; Order 947, Regulation IV filed 4/13/64.]

**WAC 16-354-050 Hop planting stock tags and identity.** (1) Any person selling or offering for sale hop planting stock bearing a certification tag or otherwise identified as certified is responsible for the following:

(a) Accurately identifying the planting stock as to variety and year of harvest;

(b) Accurately identifying the planting stock as complying with all of the conditions of the certified hop planting stock program.

(2) Any person issued certification tag(s) must keep written records of stock produced and sold. These records must be produced at the request of the department.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-050, filed 9/2/09, effective 10/3/09; WSR 04-24-050, § 16-354-050, filed 11/29/04, effective 12/30/04. Statutory Authority: Chapter 15.14 RCW. WSR 98-09-049, § 16-354-050, filed 4/15/98, effective 5/16/98; WSR 85-15-046 (Order 1867), § 16-354-050, filed 7/16/85;

Order 1264, § 16-354-050, filed 5/10/72; Order 1023, Regulation V, filed 6/16/66; Order 996, Regulation V, filed 11/30/65; Order 947, Regulation V, filed 4/13/64.]

**WAC 16-354-070 Hop planting stock field standards.** (1) The unit of certification is the entire registered mother block.

(2) Each entire registered mother block may have no more than the following percent of affected plants:

	<u>Tolerance</u>
Downy mildew	1%
Visible nematode damage	1%
Verticillium wilt	0
Ilar viruses	0
Arabis mosaic viruses	0
Hop stunt viroid	0

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-070, filed 9/2/09, effective 10/3/09. Statutory Authority: Chapter 15.14 RCW. WSR 98-09-049, § 16-354-070, filed 4/15/98, effective 5/16/98. Statutory Authority: RCW 15.14.030 (2), (5). WSR 95-18-034 (Order 5083), § 16-354-070, filed 8/28/95, effective 9/28/95. Statutory Authority: Chapters 15.14 and 17.24 RCW. WSR 91-08-016 (Order 2077), § 16-354-070, filed 3/27/91, effective 4/27/91. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order 1867), § 16-354-070, filed 7/16/85; Order 1264, § 16-354-070, filed 5/10/72.]

**WAC 16-354-090 Hop planting stock grades and standards.** (1) Grades for hop clones which inherently produce slips or rhizomes and/or layered stem cuttings of small caliper shall be determined by a committee appointed by the Washington hop commission.

(2) Washington No. 1 shall consist of hop slips or rhizomes and/or layered stem cuttings of one strain, not less than five inches in length and not less than five-sixteenths inch in diameter and containing at least one visible bud, crowns not less than six inches in length and not less than three-fourths inch in diameter, with one or more visible buds which are:

- (a) Fairly fresh.
- (b) Firm.
- (c) Moist.
- (d) Fairly clean.
- (e) Free from damage caused by:
  - (i) Mold.
  - (ii) Freezing injury.
  - (iii) Broken or mutilated planting stock.
  - (iv) Crown gall.
  - (v) Black rot.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-090, filed 9/2/09, effective 10/3/09. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order 1867), § 16-354-090, filed 7/16/85.]

**WAC 16-354-100 Hop planting stock tolerances.** (1) In order to allow for variations incident to proper grading and packing, not more than a combined total of six percent, by count, of the planting stock in any lot shall fail to meet the requirements of Washington No. 1, and not more than six percent of the planting stock shall have rhizomes or layered stem cuttings less than five inches in length.

(2) In order to insure lot uniformity, no individual container within a lot may contain more than one and one-half times the established tolerance.

(3) Hop plants shall be packed to retain a fresh condition.

(4) The department may inspect planting stock from registered mother blocks after harvest and packing for the purpose of verifying that it meets grades and standards established in rule.

[Statutory Authority: Chapters 15.14 and 34.05 RCW. WSR 09-18-115, § 16-354-100, filed 9/2/09, effective 10/3/09. Statutory Authority: Chapter 15.14 RCW. WSR 98-09-049, § 16-354-100, filed 4/15/98, effective 5/16/98. Statutory Authority: Chapters 15.14 and 17.24 RCW. WSR 91-08-016 (Order 2077), § 16-354-100, filed 3/27/91, effective 4/27/91. Statutory Authority: Chapter 15.14 RCW. WSR 85-15-046 (Order 1867), § 16-354-100, filed 7/16/85.]