

Specific Certification Standards Strawberry Plants

I. Explanation of General Standards as Applied to Strawberry Plants

A. The General Seed Certification Standards as adopted are basic and together with the following specific standards constitute the standards for certification of strawberry plants.

B. The General Standards are further defined/modified as follows to apply specifically to strawberry plant production.

Section IX. Classes and sources of certified seed:

1. Nuclear Plants are micropropagated, virus-indexed plants that are produced by the NCSU Micropropagation Unit (MPU) and are apparently free of major diseases and other pests and evaluated in field test by the strawberry breeder for trueness-to-type. Nuclear Plants are maintained under strict isolation by the NCSU MPU and may exist as in-vitro tissue culture plantlets or Foundation mother plants in screen cages in the greenhouse.
2. Foundation Plants are the progeny of Nuclear Plants produced by NCSU MPU and are grown at the Sandhills Research Station in North Carolina.
3. Registered Plants are the progeny of Foundation plants and are produced at the Sandhills Research Station, and in Registered nurseries in North Carolina.
4. Certified plants are the progeny of Registered plants and are produced by nurseries in North Carolina.

II. Land/Greenhouse Production Requirements

A. Land Requirements

Strawberry plants shall be grown on land that has been free of strawberries for the previous two years or on land that has been treated by an approved method to ensure control of diseases and weeds. Land with a history of Phytophthora crown rot and/or red stele diseases must not be used to produce strawberry plants.

B. Greenhouse Requirements

1. NCCIA must approve all greenhouses before Foundation and Registered Plants will be released to the nursery.
2. Entry should have a system for sanitizing shoes, clothing, etc. Frequency of entrance should be minimized.
3. Screen should be of mesh size to prevent entry of aphids. All openings should be covered.
4. All growing media, containers, etc. used in the greenhouse must be sanitized by an approved method.

III. Field/Greenhouse Standards

A. Isolation

1. Field Standards:

- a. Foundation plants must not have other strawberry plants (cultivated and wild) within 3,000 feet. A fence should be placed around the area to avoid deer feeding injury and disease contamination.

- b. Registered nursery fields must be at least 300 feet distance from non-certified strawberry plants.
 - c. Eight feet or a mechanical barrier must be maintained between different cultivars to avoid mixing bare-root plants.
2. Greenhouse Standards
- a. Only strawberry plants in the certification program are allowed in the greenhouse.
 - b. No non-certified strawberry plants (commercial or non-certified) shall exist within 300 feet of the greenhouse perimeter. Broad-leaf weeds within 10 feet of the greenhouse should be closely mowed to minimize insects and diseases.
 - c. Cultivars must be clearly identified and separated to ensure purity.
 - d. No plants should be transferred between certified nurseries and between registered nurseries.

B. Inspections

Nuclear and Foundation strawberry plants will be inspected two to three times during each production season. The final inspection is just prior to harvest or dormancy. Only Nuclear and Foundation plants will be certified. Registered and certified plants may be inspected at the request of the nursery.

C. Specific disease/pest standards

Factor	Nuclear	Foundation
Colletotrichum Fruit Rot [†]	None	None
Colletotrichum Crown Rot [‡]	None	None
Dwarf	None	None
Phytophthora Crown Rot	None	None
Red Stele	None	None
Root-knot nematode	None	None
Objectionable diseases	None	None

^{††} *Colletotrichum acutatum*

[‡] *Colletotrichum gloeosporioides* and *Colletotrichum fragaria*.

IV.Plant standards

- A. An NCCIA certificate will accompany each transaction of plant sales.
- B. Nursery will maintain a complete record of all sales/transfers of all plant stocks by recording purchaser, date of sale/transfer, variety, and number of plants or plant tips.