

Volumetric Measurement of Cherries

1 NYCRR Part 223

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Statutory Authority: Agriculture and Markets Law §§ 18 and 196-a

Section

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223.1 Quantity determinations. When persons, firms, or corporations voluntarily sell or purchase cherries by volume suspended in water, the quantity determination shall be made as follows:

- (a) Cherries shall be held in a tank containing sufficient water to at least entirely cover the cherries at the time of measurement. The determination shall be made only after the cherries have been transported a distance of at least one-half mile in the tank and any ice used to cool the cherries has been removed.
- (b) The determination shall be made at the time custody of the cherries is transferred from the grower to the buyer or an agent of the buyer.
- (c) The determination shall be made using a standardized cherry measurement tank and a calibrated gauge rod, both of which shall meet the requirements of this Part.
- (d) The determination shall be made only when the cherry measurement tank is in a level condition.
- (e) The determination shall be made and recorded in terms of cubic feet and decimal fractions of a cubic foot, with no conversion to weight allowed.

223.2 Cherry measurement tanks. Tanks used in the volumetric measurement of cherries shall be as follows:

- (a) A cherry measurement tank shall be designed to be in a normal operating position when it is in level.
- (b) A tank shall be of the center reading type, that is, it shall be so designed that a gauge rod, when properly positioned for use, will be approximately in the vertical axis of the tank centrally positioned with respect to the tank walls.
- (c) A tank shall be rectangular or square in design but its length shall not exceed its width by more than one third.
- (d) The cross sectional area of a tank shall be constant at any level and the tank shall be so constructed that under any condition of lading it will not be distorted sufficiently to cause a change in the capacity at any level equal to more than 16 cubic inches. This requirement prescribes a limit on permissible distortion only, and is not to be construed as an additional tolerance to subdivision (h) hereof.

(e) A tank shall be of such material, design and construction that under normal handling it will maintain its rectangular or square design and required accuracy for a reasonable length of time.

(f) A tank shall be conspicuously and permanently marked to indicate the cubic capacity of the tank per inch depth throughout its measurement range.

(g) A tank manufactured and offered for sale after the effective date of this section shall be marked with a model number, serial number and the name and address of the manufacturer.

(h) The maintenance and acceptance tolerance on a tank with a capacity of 30 cubic feet or less shall be 150 cubic inches in excess or deficiency, that is, the cubical content at any point in the tank within the measurement range shall not differ more than 150 cubic inches from a calculated volume determined by multiplying the depth of the tank from that point by the indicated cubical capacity of the tank per inch depth, except as provided for in subdivision (i) hereof.

(i) The maintenance tolerance for a tank now in use for the determination of volume measurement shall be one percent excess or deficiency within the measurement.

223.3 Cherry gauge rods. Gauge rods used to measure cherries shall be as follows:

(a) The indicating means shall consist of a calibrated gauge rod and level indicating plate.

(b) The rod shall be of rigid design, made of stainless steel smoothly finished with the probe end tapered to one half inch, and when properly seated in position, shall touch the bottom of the holding tank being measured. The rod shall be graduated throughout an interval corresponding to the range within which readings of the cherry level are to be made.

(c) On a rod the spacing of the graduation center to center shall be not more than .0625 (1/16) inch and not less than .03125 (1/32) inch. The graduation shall be not less than .005 inch in width and the clear interval between adjacent edges of successive graduations shall be not less than .015625 (1/64) inch. The graduations shall be designated in inches, 0.5 inches, 0.1 inches, and 0.02 inches.

(d) The level indicating plate assembly shall consist of a rigid plate and a slider tube designed to move up and down the calibrated gauge rod. The rigid plate shall be a perforated round disk of stainless steel, 10 inches in diameter, with the perforations not exceeding three eighths of an inch in diameter. The plate shall be permanently attached to the slider tube. The slider assembly shall move freely on the gauge rod without slope and shall weigh four pounds, plus or minus one tenth of one percent.

223.4 Price of cherries measured volumetrically. The price of cherries in water shall be established on a cubic foot basis with no conversion to weight allowed.

223.5 Delivery ticket. A delivery ticket in duplicate shall be issued by the receiver for each lot of cherries received. The original shall be retained by the receiver and a copy given to the grower. A delivery ticket shall bear the following information:

(a) Name and address of receiver.

(b) Name and address of grower.

(c) Date of receipt.

(d) Cubical content of the tank per one inch depth.

(e) Depth of the cherries contained in the tank to the nearest .02 of an inch.

(f) Total cubic feet of cherries and decimal fraction thereof contained in the tank.

(g) Signature of the person making the quantity determination.

223.6 Procedures and responsibility for calibrating cherry holding tanks for volumetric measurement.
Procedures and responsibility for calibrating cherry holding tanks for volumetric measurement shall be as follows:

- (a) Equipment required:
 - (1) Level surface, preferably a cement slab.
 - (2) Stand of a size and type to hold test measure full of water in a level position above tanks being calibrated.
 - (3) Measuring rod of the type approved for the commercial measurement of red tart cherries, or its equal.
 - (4) Test measure, preferably six cubic foot test measure or 50 gallon test measure with adjustable legs, bottom-opening "quick-closing" valve. Test measure will be calibrated and certified to New York State standards.
 - (5) Level: a sensitive level three to four feet long for leveling tanks.
 - (6) Angle iron: a three inch angle iron long enough to bridge tank (approximately 38 inches long) to suspend measuring rod.
 - (7) "C" clamps: large enough to clamp angle iron.
- (b) Calibration of tank.
 - (1) Place holding tank on level surface directly under the outlet valve of test measure.
 - (2) Secure angle iron and measuring rod to top of tank so the measuring rod is directly over the center of the tank.
 - (3) Level the holding tank.
 - (4) Read and record the reading on the measuring rod with the rod extended to the bottom of the tank.
 - (5) Fill test measure with water.
 - (6) Discharge water from test measure into holding tank. Let test measure drain 30 seconds after the main flow of water has stopped (drainage period must be timed).
 - (7) Repeat steps (5) and (6) hereof.
 - (8) Allow surface motion of water in holding tank to subside. Lower measuring rod to the surface of the water. Read and record the reading on measuring rod. Record in inches and .02 inches.
 - (9) Lower the measuring rod to the bottom of tank. Allow surface motion of water in tank to subside. Read and record the reading on measuring rod.
 - (10) Record the difference between the readings in step (7) and step (8) as depth of water in the holding tank.
 - (11) Repeat steps (5), (6), (8), (9) and (10) hereof two more times.
 - (12) Determine the cubic foot per inch depth at each of the three levels. Cubic foot per inch depth equals the amount of measured water added divided by the inch depth of water. (Do not include the results of the first dump of water.)
 - (13) Determine the average cubic foot per inch depth by adding together the cubic foot per inch depth at the three levels and dividing by three.

(14) If the actual cubic foot/inch depth at any of the three levels varies from the average cubic foot/inch depth more than one percent, the tank must be rejected.

(c) It shall be the responsibility of the owner of cherry holding tanks to have the tanks calibrated. The person or persons calibrating tanks shall be someone other than a weights and measures official.