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Remote Measurement Method for Three-dimensional Especially Volumes, of Attached Fruits Using Stereo

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The remote measurement of the three-dimensional shapes and volumes was examined using software for stereo photogrammetry. It reads the coordinates of many surface points on viewing fruit from two sides, those of fruit boundary lines, and, if necessary, those of the cavity surface surrounding the fruit cavities. The volume of each square pole, composed of surface points, was calculated by a computer program within an area of the surface, and totaled as the fruit volume. If necessary, a similar volume was calculated for the cavity area, and totaled as the cavity volume. The latter was used to deduce the volume of the fruit.

from the former. The relations between the measured volumes and 1
volumes of detached fruits were satisfactory. A field photography d
which consisted of a tripod, a ground control-point set and a board
slid from left to right. Remote measurements of the volume of attach
out successfully using this device. Other fruit shapes excluding the v
measured easily using the software.

Key Words: [apple](#), [cavity volume](#), [computer program](#), [pear](#), [phot](#)

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