

Germinating Power of Avocado Seed from Frost-Injured Fruit

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One of the many questions which arose immediately after the January 1937 freeze was "To what extent is the germinating power of the seed of the frost-injured fruit affected?"

In order to quickly obtain an answer to this question, seeds from frost-injured Fuerte fruits were planted in propagating frames in a greenhouse at the University of California at Los Angeles on February 5, 1937, germination being hastened by supplying bottom heat to the sand-beds in which they were planted.

The fruit was segregated into four groups: slight injury, moderate injury, severe injury, completely frozen. The "slight injury" fruit would easily have passed the standardization requirements as only a few of the vascular bundles (fibers) were dark in color. The "moderate injury" fruit showed a greater number of darkened bundles but would probably have been marketable. The "severe injury" fruit was worthless for shipping but the external appearance differed little, if any, from normal. The "completely frozen" was discolored on the outside as well as inside.

REMARKABLE GERMINATION

Sprouts began to appear on March 1, or a little over three weeks after planting. The germination percentage was determined on April 13, and the results are summarized in the following table:

Degree of Injury	Number of seeds planted	Per cent Germination
Slight	26	100
Moderate	25	100
Severe	21	100
Completely frozen	45	58 (rest decayed)

The sprouts in all lots varied from 10 to 15 inches in height and they appeared to be growing normally at the time the count was made. As an additional check on their growth some of the plants in each lot were planted in the nursery on April 14. At the time of this writing (September 1937) there are no visible differences in growth.

It would therefore appear that temperatures low enough to severely injure Fuerte fruits do not affect the germinating power of the seeds, but that it is unwise to use seed from completely frozen fruit.