

Effect of Wet and Cold Conditions on Avocado Seedbed Stock

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Avocado seeds were planted in sand beds in a non-heated glasshouse in December 1943 and January 1944. As they germinated they were transferred to bottomless tar paper pots filled with soil.

Later in the season part of the potted seedlings were transferred to a lath house in order to slow down their development. Shortly afterward a prolonged period of cold wet weather set in.

The remaining seedlings were transferred to the lath house for hardening off, late enough to escape this unfavorable condition.

In early May both lots of seedlings were lined out in the nursery, discarding the weak ones. At that time there was little apparent difference in size or condition between the two lots.

The subsequent behavior of the two sets of seedlings was quite different, however. Figure 1 shows a representative plant from each lot after two months in the nursery. Plant A is typical of the lot of seedlings kept in the glasshouse until after the rainy spell, and plant B is typical of the lot moved to the lath house prior to the rainy period.

Note the abundance of new root growth and height of plant A, and the absence of root and top growth in B. By October most seedlings of lot A were large enough to bud while most seedlings of lot B had failed to start growth and were removed.

It seems logical to assume, therefore, that the failure of the B lot seedlings was due to root injury suffered as a result of the wet and cold condition to which they were exposed prior to lining out in the nursery.



Fig. 1

Bare-root Handling- of Avocado Seedlings

Avocado seedlings ordinarily have their leaf surface reduced when transferred bare root from the seed bed to the nursery.

In the spring of 1944 a trial was made to test the feasibility of eliminating leaf pruning by conditioning the seedlings prior to planting.

During the months of March, April, and May, seedlings with expanding leaves were pulled from sand beds in a glasshouse and placed in boxes of peat moss, with the moss well packed around the roots and cotyledons.

After three to four weeks new root growth had started and the seedlings were lined out in moist soil in nursery rows without cutting back the leaves.

Irrigation water was applied behind the planters. There was no appreciable wilting of the tops when the planting was done even on warm days.

Weak seedlings will show up during the conditioning period and can be discarded at the time of planting. This additional culling permits the planting of more first grade seedlings and a resultant fewer blanks in the nursery row.