

BASAL BRANCHES NO SYMPTOM OF FUSIFORM RUST ON SLASH PINE SEEDLINGS

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A test established in 1937 by Howard Lambi ^{1/} appears to demonstrate definitely that basal branching of slash pine ^{2/} nursery seedlings is not in itself a symptom of infection by the southern fusiform rust.^{3/} The test clears up a point that has sometimes troubled southern nurserymen.

Five hundred slash pine seedlings in each of the following 3 categories were obtained from the W. W. Ashe Nursery, Brooklyn, Mississippi: diseased, i.e., with a pronounced swelling of the stem; doubtful, i. e. , with basal branches but no pronounced swelling; and healthy, i.e., with no pronounced swelling or basal branches.

The seedlings were planted on the Harrison Experimental Forest in southern Mississippi. Planting was done in rows of 50 seedlings each, the rows being arranged in a fixed sequence: row 1--doubtful, row 2--diseased, row 3--healthy, row 4--doubtful, etc.

Had the doubtful seedlings been rust-infected in the nursery they would have survived in the field no better than those known to be diseased.^{4/} However, the survival percentages for the diseased, doubtful, and healthy, respectively, were 27, 79, and 55 after 1 year; and 3, 60, and 47 after 14 years. Thus, from the criterion of survival, there was no indication that the basal-branched seedlings were rust-infected. Furthermore, no typical fusiform swellings developed at the point of origin of the branches.

These results were confirmed by a 1949 installation on the same forest in which 100 slash pine seedlings with basal branches but no swellings survived as well after 3-1/2 years as a similar lot of seedlings without basal branches.

It thus appears that nurserymen need not cull slash pine seedlings that have basal branches. Such seedlings should be regarded as rust-infected only if they also have pronounced globular or fusiform swellings on the stem.

1/ Then Junior Pathologist, Civilian Conservation Corps.

2/ Pinus elliottii var. elliottii (Engelm.) Little and Dorman.

3/ Cronartium fusiforme (Arth. and Kern) Hedgc. and Hunt.

4/ Siggers, P. V. Mortality in slash pine from planting seedlings with fusiform rust cankers. Miss. Farm Res. 12(9): 1. 1949.