

Inspection Procedure

- Set up a systematic sampling system using $1/100^{\text{th}}$ acre plots for pine and $1/50^{\text{th}}$ acre plots for hardwoods
- Tally all trees within each plot checking seedling quality, 4-needle test (pine), depth, firmness, etc.

Plot Size:

Plot Size	Circular Plot Radius	Linear Plot Length
$1/100^{\text{th}}$ acre	11.78'	435.6 divided by the avg. distance between rows
$1/50^{\text{th}}$ acre	16.66'	871.2 divided by the avg. distance between rows

Sample Size:

Acres Planted		# of Plots	Spacing between Plots
Pine	Hardwood		
1 - 60		1 per 1 acre	210 feet
61 - 90	1 - 60	1 per 2 acres	300
91+		1 per 3 acres	360
	61+	1 per 4 acres	420

- Excavate seedlings outside the plot and inspect for problems listed below
 - 2 per plot for the first 5 plots
 - If there is more than 1 below root condition with the first 10 excavated seedlings, inspect 4 seedlings per plot until a 10% below ground level is reached.
- Calculate the "Satisfactory Root Condition" factor by dividing the number of trees with satisfactory root conditions by the total number of seedlings excavated
- Multiply the number of satisfactory above ground seedlings (total number of seedlings with the plots minus the number of unsatisfactory seedlings) by the "Satisfactory Root Condition" factor

Planting Problems

Above Ground

"Too Deep" - Excessively deep planting

"Too Shallow" - Root collar not at least 1inch below the ground surface for pine and at ground surface for hardwoods
Roots showing above the ground

"Too Loose" - Fails the 4-needle test for pine
No second dibble hole
Top of planting hole not closed
Seedling pushed over by the packing wheels

"Cull" -

	Pines	Hardwoods
Min. root collar diam.	$1/8$ "	$1/4$ "
Min. height	5"	14"
Min. root length	8"	8"

Below Ground - "Root Condition"

Place applicable letter in "Not Satisfactory" box

- **X** Improper planting angle (>30°)
- **J** "J" rooted
- **L** "L" rooted
- **T** Twisted or balled roots
- **P** Pruned improperly
 - Torn off laterals
 - Tap root less than 5 inches long
 - Tap root pruned with a dull instrument