



## Building a Tree Root Display Board

### Introduction

Tree planting is an annual activity enjoyed by many throughout the United States. In urban areas and in landscaping, tens of thousands of larger trees are transplanted each year. In addition to all these larger trees, there are millions of tree seedlings planted in fields and forests. In Michigan alone, millions of seedlings are sold each year to landowners each spring. There are many factors which make the planting of a tree seedling successful; including healthy planting stock and correct handling and planting procedures.

This sheet describes how to make a tree planting root display board. This board is an easy and effective way of demonstrating the proper and improper ways of planting tree seedlings. The board can show “J” rooting, excessive root pruning, insufficient root pruning, planting too deep or too shallow, and how correctly planted tree seedling roots should look below the soil surface.

### Materials and Dimensions Required

1. A  $\frac{3}{4}$  x 10 x 24 inch pine board or piece of plywood painted white.
2. Eight No. 8 x 1 inch flat head wood screws.
3. Eight decorative finish washers.
4. A  $\frac{1}{4}$  x 9 x 24 inch sheet of plexiglass.
5. A piece of 1  $\frac{1}{2}$  inch wide foam tape 24 inches long.
6. Drill eight  $\frac{1}{8}$  inch diameter holes as shown on the illustration on page 2.

### Before Constructing Display

1. Select five or six seedlings of the same species. White pine, red pine, blue spruce and Douglas fir seedlings work best in this display.
2. Root prune two seedlings to illustrate eight inches of tree root remaining.
3. Select two seedlings with long roots and do not prune off the excess root length.
4. Root prune one seedling to illustrate leaving only five to six inches of root for planting.

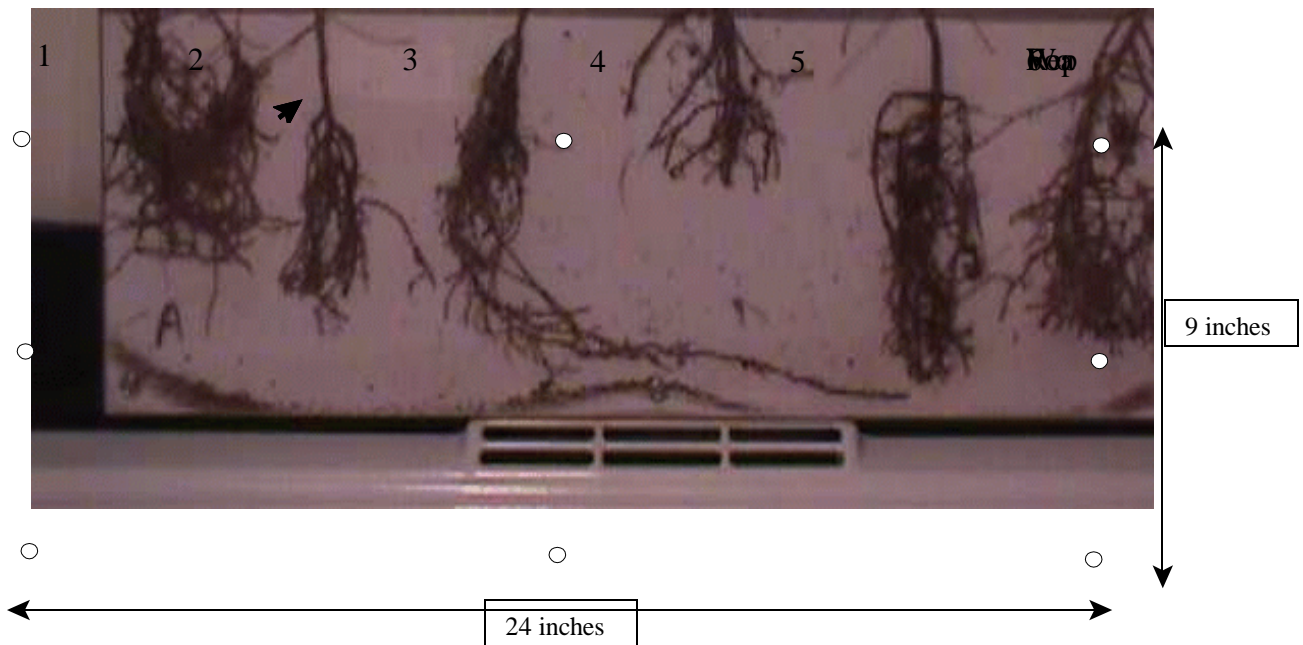
### Constructing Display

1. Permanently apply the top edge of the foam tape along the top edge of the board.
2. Evenly space out the six seedlings on the white board in any order you desire.
3. One of the properly root pruned seedlings should have its root collar placed approximately  $\frac{1}{2}$  to 1 inch below the top edge of the foam tape. (Illustrates proper planting depth.)
4. The other properly root pruned seedling should have its root collar placed approximately 2 to 3 inches below the top edge of the foam tape. (Illustrates too deep of a planting.)
5. One of the long rooted seedlings should have its roots bent to form an “L” or “J” shape. (Illustrates “J” rooting.)
6. The other long rooted seedling should have its roots curled to form a “ball” or circle at the bottom of the hole. (Illustrates root knots.)
7. One short rooted seedlings should be planted deep to make up for the lack of roots. Place the root collar 2 to 3 inches below the top edge of the foam tape. (Illustrates both planting too deep and a poor job of root pruning.)

8. The other short rooted seedlings should be planted correctly. Place the root collar  $\frac{1}{2}$  to 1 inch below the top edge of the foam tape. (Illustrates planting correctly but a poor job of root pruning.)
9. Place the bottom edge of the plexiglass over the top of the seedling roots. The top of the plexiglass should be even with the top edge of the foam tape and represents the soil surface.
10. Hold the plexiglass in place while you place a decorative washer on the screws and screw the plexiglass down onto the white board.
11. Once the seedlings die and brown, clipped the seedling off flush with the top edge of the board. The root display can be used for demonstrations of proper tree planting at any time of the year.

### Example:

1. Correct root collar depth but roots were not pruned causing a root knot over time and seedling death.
2. Root collar planted too deep (greater than  $\frac{1}{2}$  to 1 inch below soil surface) and roots pruned too short (less than 7 inches).
3. Correct root collar depth but roots were not pruned to a 7 to 8 inch length ("J" or "L" rooting)
4. Correct root collar depth but roots were pruned too short (less than 7 inches).
5. Root collar planted too deep but the roots were pruned to a correct length (7-8 inches).
6. Planted properly (root collar  $\frac{1}{2}$  to 1 inch below soil surface, approx. 8 inch root length )



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