

TOP PRUNING

Howard Stanley'

TOP PRUNING IN THE STATE NURSERIES IN GEORGIA BECAME OPERATIONAL SEVERAL YEARS AGO. WE FEEL THAT THIS IS NECESSARY IN OBTAINING A UNIFORM TOP HEIGHT.

THE SPECIES THAT WE TOP PRUNE ARE SLASH, LOBLOLLY & LONGLEAF.

WHEN OUR SEEDLINGS REACH A TOP HEIGHT OF 9 TO 10 INCHES THEY ARE TOP PRUNED BACK TO APP. 8 TO 8 1/2 INCHES, CUTTING ONLY THE NEW GROWTH.

WHEN THIS INITIAL CUT IS MADE APP. 50% OF THE SEEDLINGS EXCEED 8 INCHES.

THE SECOND TIME WE TOP PRUNE WE TRY TO HAVE THE HEIGHT OF OUR SEEDLING NEAR 11 INCHES. AT THIS TIME WE CUT THEM BACK TO APP. 10 INCHES. THIS BEING THE LAST TIME WE CUT THEM.

OVER THE LAST SEVERAL YEARS WE HAVE TRIED VARIOUS TYPES OF MOWERS, ROTARY MOWERS & CYCLE TYPE MOWERS WITH DIFFERENT TYPES OF MODIFICATIONS. ALL THESE LEFT A LOT TO BE DESIRED AS A VERY UNEVEN HEIGHT WAS OBTAINED FROM THESE. WE ARE NOW USING A FLAIL OR HAMMER KNIFE MOWER. THIS IS MANUFACTURED BY THE MOTT COOPERATION. AN EQUIPMENT DEALER IN MIDDLE GEORGIA DID THE MODIFICATION ON THIS MOWER FOR US.

THIS TYPE MOWER IS 5 FEET WIDE AND HAS TWO SENSING RODS THAT SLIDE ALONG ON TOP OF THE BEDS & BETWEEN THE DRILLS OF SEEDLINGS & IS CONTROLLED BY BEING ATTACHED TO THE LIFT SYSTEM OF OUR TRACTORS. SLIDES WILL SHOW PRIMARILY HOW THIS WORKS.

THERE HAS BEEN A LOT OF DISCUSSION OVER THE YEARS AS TO THE POSSIBILITY OF SEEDLINGS FORKING.

1 Georgia Forestry Commission, Page Walker Nursery, Reidsville, GA. 30453.

DR. JIM ROWAN CONDUCTED A STUDY OF TOP PRUNED SEEDLINGS FROM A GEORGIA NURSERY TO DETERMINE IF THIS PROBLEM EXISTED. THE STUDY RAN FOR TWO YEARS. SEEDLINGS WERE TOP PRUNED TO A HEIGHT OF 4", 6" & 8". THESE WERE OUT PLANTED ON FOUR DIFFERENT SITES IN GEORGIA. THE RESULTS WERE VERY LITTLE FORKING AFTER THE TWO YEAR PERIOD.

FROM THIS SAME STUDY WE LOOKED AT: TOP PRUNING VERSUS HEIGHT GROWTH.

TOP PRUNING VERSUS SURVIVAL

TOP PRUNING VERSUS FUSIFORM RUST.

SEE ATTACHED INFORMATION ON THESE STUDIES.

TOP PRUNING VERSUS FORKING

First Year Data

| Pruned Height | Davisboro | Gracewood | Baldwin | Early |
|---------------|-----------|-----------|---------|-------|
| | % | % | % | % |
| 4" | 39.9a | 40.4a | 61.7a | 47.1a |
| 6" | 32.8b | 24.7b | 56.3a | 46.8a |
| 8" | 20.4c | 12.9c | 46.2b | 36.3b |
| Check | 12.5d | 10.1c | 20.3c | 9.6c |

Second Year Data

| | | | | |
|-------|------|------|------|------|
| 4" | 1.2a | 0.4a | 1.6a | 0.5a |
| 6" | 0.6a | 0.3a | 1.3a | 0.2a |
| 8" | 0.1a | 0.1a | 1.5a | 0.6a |
| Check | 0.2a | 0.1a | 0.5b | 0.2a |

TOP PRUNING VERSUS HEIGHT

| Pruned Height | Davisboro (cm) | Gracewood (cm) | Baldwin (cm) | Early (cm) |
|------------------|-------------------|-------------------|-----------------|---------------|
| 4" | 66.6a | 63.6a | 53.7a | 72.6a |
| 6" | 85.2b | 77.9b | 59.7b | 69.2a |
| 8" | 90.1b | 85.1c | 65.1c | 74.1a |
| Check | 90.6b | 88.2c | 71.4d | 89.1b |

TOP PRUNING VERSUS SURVIVAL

| Pruned Height | Davisboro | Gracewood | Baldwin | Early |
|---------------|-----------|-----------|---------|-------|
| | % | % | % | % |
| 4" | 47.3a | 68.4a | 77.4a | 99.3a |
| 6" | 76.7b | 76.2a | 85.6b | 98.6a |
| 8" | 75.3b | 89.4b | 82.8ab | 99.1a |
| Check | 79.6b | 89.5b | 88.5b | 98.2a |

TOP PRUNING VERSUS FUSIFORM RUST

| Pruned Height | Davisboro | Gracewood | Baldwin | Early |
|------------------|-----------|-----------|---------|-------|
| | % | % | % | % |
| 4" | 13.5c | 7.9a | 9.7a | 12.1a |
| 6" | 9.0b | 3.4b | 9.4a | 8.6b |
| 8" | 0.9a | 1.1c | 7.6a | 4.4c |
| Check | 0.1a | 0.4c | 4.2b | 1.5c |