TREEGRAD: A GRADING PROGRAM FOR EASTERN HARDWOODS

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Abstract: Assigning tree grades to eastern hardwoods is often a difficult task for neophyte graders. Recently several "dichotomous keys" have been developed for training graders in the USFS hardwood tree grading system. **TREEGRAD** uses the Tree Grading Algorithm (TGA) for determining grades from defect location data and is designed to be used as a teaching aid. The program takes individual tree inputs and determines the best grade for the tree as well as the location and the length of the grading section giving the best grade. The program can be used to objectively determine grades from field data of defect location and size as well as for instructional purposes to show the effect of defect positioning on grade.

After the introduction screen the user is prompted by the following screen:

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IS THIS A BASSWOOD OR ASH TREE?

ENTER TREE DBH IN INCHES AND TENTHS (FORMAT XX.X)

ENTER DIAMETER INSIDE BARK AT TOP OF GRADING SECTION

ENTER PERCENT CULL DEDUCTION FOR SWEEP AND CROOK

ENTER PERCENT CULL DEDUCTION FOR ROT
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Inputs are provided for each of the prompts and the following screen appears:

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YOU MAY NOW ENTER UP TO 7 DEFECTS AND THEIR SIZES

IF 2 DEFECTS DO NOT HAVE A CLEAR TWO FOOT SECTION
BETWEEN THEM, COUNT IT AS 1 DEFECT

ENTER HEIGHT TO DEFECT IN FEET AND TENTHS (XX.X)

THEN ENTER THE THICKNESS (from bottom to top)
OF THE DEFECT IN FEET AND TENTHS

do not let the top of the highest defect be more than 14 feet

hit any key when you understand these instructions
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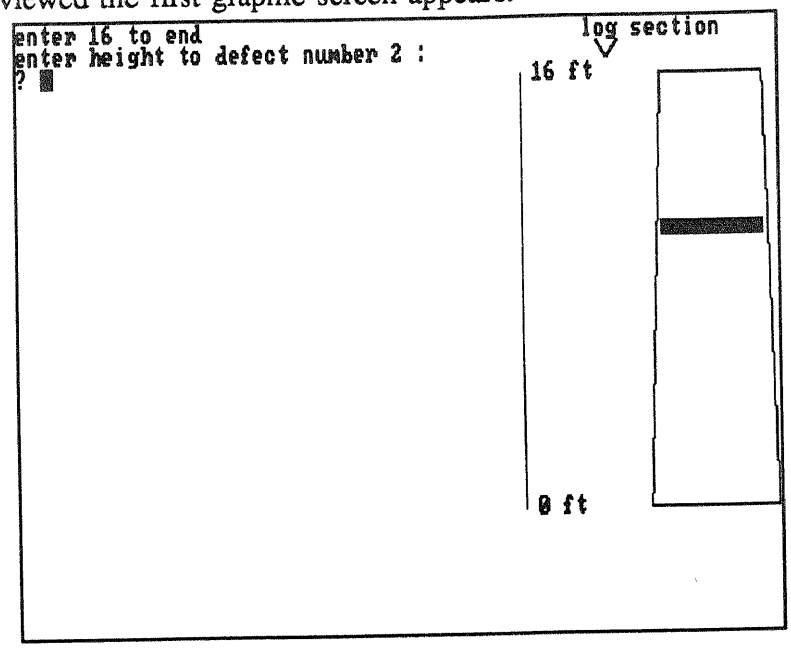
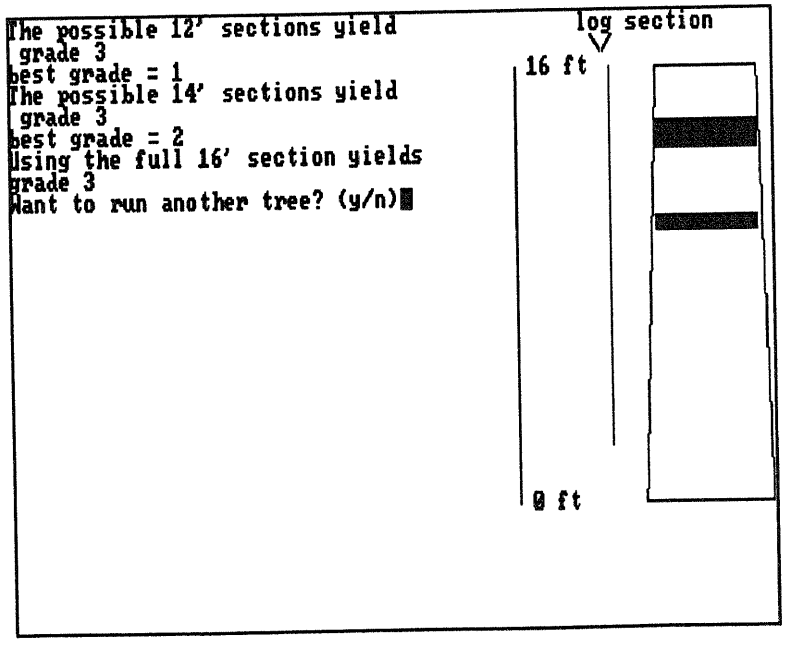
After the previous screen has been viewed the first graphic screen appears.



In this example screen the location and thickness of the first defect has been entered and the program is prompting the user for the second defect location which it will plot on the grading face to the right of the screen.

After the user has input defect location and size TREEGRAD then advances to the following screen.



The user can watch the program analyze each possible, 12 ft, 14 ft, and 16 ft grading section. The program then lists the best possible grade for each length grading section.

TREEGRAD uses 128K of RAM and runs on any IBM or compatible with any color monitor.