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FRMPS:
A
FOREST RESOURCE
MANAGEMENT PLANNING SIMULATOR
FOR
EAST TEXAS PINE PLANTATIONS



REPORT NUMBER 25

THE
EAST TEXAS PINE PLANTATION RESEARCH PROJECT

A STUDY OF
LOBLOLLY AND SLASH PINE PLANTATIONS
IN
EAST TEXAS

CENTER FOR APPLIED STUDIES
SCHOOL OF FORESTRY
STEPHEN F. AUSTIN STATE UNIVERSITY
NACOGDOCHES, TEXAS, 75962

JANUARY, 1990

Javis L. Eckhart 1985

FRMPS:
A
FOREST RESOURCE
MANAGEMENT PLANNING SIMULATOR
FOR
EAST TEXAS PINE PLANTATIONS

by

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ABSTRACT. FRMPS is designed to provide a landowner an opportunity to simulate the establishing, growing and harvesting of loblolly pine (*Pinus taeda* L.) and slash pine (*Pinus elliotti* Engelm.) plantations in East Texas. Also included in the model is a procedure to simulate the growing of an existing non-plantation with a future conversion to pine plantation. The effect of different cash flows from various activities and operations is analyzed using net present value as the decision-making criterion. FRMPS runs on a Macintosh SE or II personal computer and requires STELLA FOR BUSINESS v. 2.1 software.

INTRODUCTION

A comprehensive, readily available tool to simulate loblolly and slash pine plantation resource management in East Texas should assist landowners in optimizing decision-making. FRMPS is designed as a management instrument to provide this assistance (Hartz 1989).

FRMPS was developed as a part of the East Texas Pine Plantation Research Project, School of Forestry, Stephen F. Austin State University.

FRMPS utilizes the STELLA FOR BUSINESS program for the Macintosh personal computer. STELLA is a general, all-purpose computerized simulation program, which provides the framework for the construction of specialized simulation models. STELLA was created by Richmond et al. (1988) and is produced by High Performance Systems, Inc.

FRMPS is designed to simulate certain activities and operations, which may be considered in 6 different East Texas forest resource management planning situations as:

01. Establishing, growing and harvesting one rotation of a loblolly pine plantation.
(Decision-making criteria = NPV.)
02. Establishing, growing and harvesting an infinite number of rotations of loblolly pine plantations.
(Decision-making criteria = BLV.)
03. Establishing, growing and harvesting one rotation of a slash pine plantation.
(Decision-making criteria = NPV.)
04. Establishing, growing and harvesting an infinite number of rotations of slash pine plantations.
(Decision-making criteria = BLV.)
05. Growing and harvesting an existing non-plantation.
(Decision-making criteria = NPV.)
06. Growing and harvesting an existing non-plantation with a conversion into an infinite number of rotations of loblolly or slash pine plantations.
(Decision-making criteria = NPV.)

NPV represents net present value, and BLV represents bare land value.

All mensurational components of FRMPS were developed for East Texas pine plantations as a part of the East Texas Pine Plantation Research Project (ETPPRP).

The STELLA software package can be obtained from various Macintosh software mail order companies. STELLA is required for running FRMPS, and depending on where you buy STELLA, it may cost \$250-\$300.

A suggestion is that prior to purchasing STELLA, contact

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and request a free copy of a very detailed 26-page FRMPS user's manual. Check over the manual and determine if the certain activities and operations considered in FRMPS can assist you in managing your loblolly or slash pine plantations. If FRMPS looks good, then you can purchase STELLA and send a 3.5" 800K floppy disk to Dr. Lenhart for a free copy of FRMPS.

LITERATURE CITED

Hartz, T. M. 1989. FRMPS: A forest resource management planning simulator for East Texas pine plantations. Master's thesis. Stephen F. Austin State University. 101 p.

Richmond, B., Yescuso, P. and S. Patterson. 1988. A Business User's Guide to STELLA. High Performance Systems, Inc. New Hampshire.