



United States  
Department of  
Agriculture

Forest Service

**Northeastern Forest  
Experiment Station**

General Technical  
Report NE-68

1981



# **A Guide for Revegetating Coal Minesoils in the Eastern United States**

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## ABSTRACT

This report provides information, recommendations, and guidelines for revegetating land in the Eastern United States that has been disturbed by coal mining. Included are brief descriptions of major coal mining regions in the East, and a discussion of minesoil properties and procedures for sampling, testing, and amending minesoils. Plant species that have been used for revegetating surface-mined lands are identified and described. Selection criteria for plant species and methods and requirements for seeding and planting are explained. Some of the data on tree species used in reforestation were obtained from recent surveys of 30-year-old experimental plantings in several Eastern States.

## FOREWORD

The mining of coal, especially surface mining, often is dangerous to environmental resources. Existing vegetation is destroyed, ecosystems are altered, and unreclaimed areas are visually displeasing. One of the adverse effects of mining and vegetation removal is the degradation and pollution of water resources. Erosion on raw exposed minesoils can contribute large quantities of sediment to streams. Where the overburden contains acid-bearing rocks, streams also are polluted with toxic chemical substances.

The revegetation of land disturbed by coal mining is necessary primarily for controlling runoff, erosion, and sedimentation. Simultaneously, the establishment of vegetation improves the visual quality of mined areas and aids in or contributes directly to restoring mined land to productive uses.

The principles and guidelines in this report are applicable primarily to past and current surface-mining operations; they may also apply to surface disturbances caused by underground mining. This report is not directed to the establishment of agricultural crops on areas designated as "prime farmland," though many of the revegetation principles and practices will apply.

This study was made possible by funding from the U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, Ohio, and was completed under Contract No. EPA-IAG-DE-E764 by the U.S. Department of Agriculture Forest Service, Northeastern Forest Experiment Station, Broomall, Pa.

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## ACKNOWLEDGMENTS

Grateful acknowledgment is expressed to Rufus Allen, Walter Davidson, Tom Despard, and Bernard Slick of the USDA Forest Service, Northeastern Forest Experiment Station, for their help in preparing portions of the text. Thanks are also due to reviewers of the manuscript and others who willingly contributed advice and additional information, especially Tom Zarger, Tennessee Valley Authority; Bill Berg, Colorado State University; John Sencindiver, West Virginia University; Sam Lyle, Auburn University; Scott Brundage, Peabody Coal Company; Michael Morin, Illinois Department of Conservation; Steve Clubine, Missouri Department of Conservation; Elmore Grim, Kentucky Department for Natural Resources and Environmental Protection; George Holmberg and Wayne Everett, U.S. Soil Conservation Service; Chuck Wolf, U.S. Office of Surface Mining; and Willie Curtis and William Plass, Forest Service.

## CONTENTS

1. Introduction . . . . .	1
Environmental Impacts of Coal Mining . . . . .	1
Reasons for Revegetating Mined Lands . . . . .	1
Purpose and Scope of Revegetation Guide . . . . .	2
Revegetation Planning and Regulations . . . . .	2
2. Coal Mining Regions . . . . .	4
Appalachian Coal Region . . . . .	4
Eastern Interior Coal Region . . . . .	8
Western Interior Coal Region . . . . .	9
Lignite Region . . . . .	10
3. Minesoils . . . . .	11
Properties that Affect Vegetation Establishment . . . . .	11
Soil Replacement . . . . .	18
Sampling and Testing Minesoils . . . . .	19
4. Plant Species for Vegetating Mined Lands . . . . .	24
Types of Plants . . . . .	24
Other Criteria for Selecting and Establishing Species . . . . .	32
Species Descriptions . . . . .	35
Grasses . . . . .	36
Forbs . . . . .	59
Trees . . . . .	74
Shrubs . . . . .	113
5. Vegetation Establishment . . . . .	123
Grading and Leveling . . . . .	123
Seeding Practices . . . . .	124
Planting Woody Species . . . . .	131
Soil Amendments . . . . .	142
Mulches . . . . .	150
Soil Stabilizers . . . . .	156
6. Land Uses and Species Mixtures . . . . .	158
Erosion Control . . . . .	159
Agriculture . . . . .	162
Forestry . . . . .	163
Wildlife Habitat . . . . .	169
Esthetics . . . . .	174
Bibliography . . . . .	176
Glossary . . . . .	183

## FIGURES

<u>Number</u>		<u>Page</u>
1	Coal fields of the Eastern United States . . . . .	5
2	Average annual precipitation for the precipitation zones of the Eastern United States . . . . .	6
3	Weeping lovegrass--one of the more acid-tolerant plant species . . . . .	12
4	Response of vegetation to nitrogen (N) and phosphorus (P) fertilizer typical on most minesoils . . . . .	14
5	Offset disc harrow for preparing the seedbed or incorporating lime . . . . .	125
6	Chisel plow for preparing a seedbed or incorporating lime . . . . .	125
7	The hydroseeder . . . . .	127
8	The rangeland drill . . . . .	128
9	Planting tree and shrub seedlings with a dibble . . . . .	135
10	Planting tree and shrub seedlings with a mattock . . . . .	136
11	Planting trees with a dibble . . . . .	137
12	Methods of handling seedlings before planting . . . . .	138
13	The Estes Spreader . . . . .	154
14	Leaves, bark, and wood chips--mulching materials that can be spread with a standard manure spreader . . . . .	155
15	A 30-year-old mixed hardwood forest on surface-mined land in Ohio that has developed from planted and naturally established vegetation . . . . .	164
16	An informal planting of bicolor lespedeza that provides cover and food for wildlife . . . . .	171
17	Interspersion of trees, shrubs, herbs, water, and landform provides habitat diversity essential for wildlife . . . . .	173

## TABLES

<u>Number</u>		<u>Page</u>
1	Plant Species for Revegetating Coal Surface-Mined Lands in the Eastern United States . . . . .	25
2	Grass Species of Limited Importance or Use . . . . .	56
3	Forb Species of Limited Importance or Use . . . . .	71
4	Tree Species of Limited Importance or Use . . . . .	108
5	Shrub Species of Limited Importance or Use . . . . .	120
6	Planting Stock Standards for Hardwoods Planted on Surface-Mined Land in the Central States . . . . .	133
7	Planting Stock Standards for Conifers Planted on Surface-Mined Land in the Central States . . . . .	134
8	Examples of Planting Patterns for Tree Mixtures . . . . .	140
9	Suggested Herbaceous Mixtures for Erosion Control . . . . .	160
10	Suggested Hardwood Mixtures for Planting on Surface- Mines Lands . . . . .	168

CONVERSION TABLE - ENGLISH TO METRIC

English Unit	Metric Unit	Conversion Factor
<u>Length</u>		
inch, in	centimeter, cm	2.54
foot, ft	meter, m	0.305
mile, mi	kilometer, km	1.609
<u>Area</u>		
square feet, ft <sup>2</sup>	square centimeters, cm <sup>2</sup>	929.030
acre, acre	hectare, ha	0.405
<u>Weight</u>		
pound, lb	kilogram, kg	0.454
short ton, ton	tonne, t	0.907
short ton, ton	kilogram, kg	907.184
<u>Volume</u>		
gallon, gal (liquid)	liter, l	3.785
cubic yard, yd <sup>3</sup>	cubic meter, m <sup>3</sup>	0.764
<u>Yield or Rate</u>		
pounds/acre	kilogram/hectare	1.121
short tons/acre	tons/hectare	2.242
cubic yards/acre	cubic meters/hectare	1.886
gallons/acre	liters/hectare	9.346
<u>Temperature</u>		
Fahrenheit, °F	Celsius, °C	0.555(F-32)