

TREE PLANTING - STRIP-MINED AREA IN MARYLAND

Part I

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Fred L. Bagley
Energy Resources Officer
Energy Administration
Maryland Bureau of Mines
69 Hill Street
Frostburg, Maryland 21532

INTRODUCTION

Maryland is relatively small in relation with other coal-producing states. Only one and one-third Counties in extreme Western Maryland is involved in mining. Elevation for the mining region is from a low of 1200 feet to a high of 3800 feet. Rainfall is well distributed ranging from 40 to 48 inches per year.

Until 1975, the revegetation of strip mined areas was the responsibility of the Maryland Forest Service, thus the concentration on tree planting. Since 1975 all mining responsibilities have been transferred to the Bureau of Mines.

Planting of trees on strip-mined areas began in 1963 with herbaceous planting, a requirement beginning in 1974. Trees were the primary revegetation method with an average of 350-400 thousand trees planted each year. Since 1974, the trend has been for herbaceous planting, consequently tree planting has declined considerably (approximately 150 thousand per year in recent years). However, because of the Office of Surface Mining's requirements, the future dictates a substantial increase in tree planting.

PROBLEMS EXPERIENCED WITH TREE PLANTING

The problems we are encountering with tree planting at the present time are (1) establishment in heavy herbaceous cover, and (2) the people of Western Maryland would like replanting with more hard wood species (Oak, Hickory, Maple, Cherry, etc.). Past year's tree planting has leaned heavily on pine species.

SOLUTIONS TO PROBLEMS OF TREE ESTABLISHMENT ON STRIP-MINED AREAS

To help alleviate these problems and to get good practical reclamation of strip-mined land, we in Maryland are planting Black Locust and Black Alder as a first crop tree. We decided this was the best method to follow because these trees were leguminous; Black Locust is a natural invader and we have an easily accessible market. Westvaco has a paper mill located in the center of our coal region.

The problem of heavy herbaceous cover curtailing the survival and growth of trees, can be overcome with proper care and planting techniques.

I would like to point out Part II of this paper on the methods we have found to be successful. In particular the conclusion.

We in Maryland believe that four basic requirements must be met to ensure successful tree planting on strip mined areas.

1. The planting stock must be properly cared for from the time of lifting until the actual planting on the mining site. We do not recommend long storage periods. Less than four weeks is preferred.

2. It is absolutely essential that proper supervision of the tree care and the planting practices are maintained at all times. Many agencies or coal companies do not want to spend the money that is needed for this supervision.

3. Planting of trees as early as possible in the spring. We recommend the planting season not to exceed April 20th in Maryland. In other words, start as soon as frost leaves the ground and complete planting within a four week period. Here again, pre-planning such as having trees ordered, crews hired, job sites determined, etc., is very important so time will not be wasted during the actual tree planting period.

4. Last, scalping an area of approximately 12 to 18 inches in diameter will be needed where herbaceous cover is heavy.

RESEARCH

The Bureau of Mines and Forest Service in Maryland has worked closely with the Agriculture Research Service located in Beltsville, Maryland during the early and mid-1970's in conjunction with revegetation research projects of strip mined land. However, the emphasis was for herbaceous establishment. The planting of trees and shrubs has been done since 1963, basically using practicality, natural species approach, availability of species and good seed and planting techniques.

Parts III and IV of this paper has been the results of many years of revegetation experience in Maryland. Our research and experience results has always been towards the goal of being able to apply and relate to the normal daily reclamation and revegetation encountered by the coal operators. We feel research has fallen short if results cannot be applied in a reasonable and practical sense including the economic consideration. We would like to have more data on direct seeding of tree species and hardwood species planting. Possibly we will obtain data from this Symposium.

CONCLUSION

Maryland has a very small area where strip mining is conducted. That is an asset because the Bureau of Mines has a much closer relationship and possibly better control over the mining process, particularly reclamation and revegetation.

Our revegetation standards are high. Our efforts to date are producing good results which we hope to continue. Thank you.