Proceedings

Forest Fertilization Conference

September 25, 26, and 27, 1979

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PREFACE

Forestry in the Pacific Northwest has made many advances in the last decade or so and perhaps none is more significant than that of the use of chemical fertilizers. Throughout the region, landowners are now applying large quantities of nitrogen and other elements to young stands to increase growth and improve the economic gain from forest operations.

Responding to the need for current comprehensive information in all aspects of fertilization, the College of Forest Resources and the U.S. Forest Service Pacific Northwest Forest and Range Experiment Station sponsored a three-day conference at Alderbrook Inn in September 1979. At the conference invited speakers from the United States and abroad addressed the topics that are of concern, ranging from economics through mineral cycling and growth response. In addition to the formal presentations of invited papers, informal evening discussions contributed to the opportunity for obtaining new ideas and new information.

This document represents the most comprehensive collection of information related to forest fertilization in the Pacific Northwest that is available today. It will be a useful tool for both managers and scientists who are involved in any of the many aspects of improving forest growth by manipulation of mineral nutrition in forest stands.

ACKNOWLEDGMENTS

It would be impossible to express our appreciation to all the individuals and organizations that contributed to the success of this conference and the compilation of papers contained in this volume. There are several, however, who deserve special mention. The stimulus for the program arose from the increasing activity in all research and management phases of forest fertilization and from the interest of the Northwest Forest Soils Council and participants in the Northwest Regional Fertilizer Project. Members of these and other organizations met as a planning committee in 1978 to define the conference program and to identify and recruit speakers. The planning committee consisted of:

| Mr. Harry Anderson | Washington Department of Natural Resources |
|-----------------------|--------------------------------------------|
| Dr. William Atkinson | University of Washington |
| Dr. Paul Barker | British Columbia Ministry of Forests |
| Dr. Stanley Gessel | University of Washington |
| Dr. Paul Heilman | Washington State University |
| Professor Reid Kenady | University of Washington |
| Dr. Denis Lavender | Oregon State University |
| Dr. Richard Miller | U.S. Forest Service |
| Dr. Robert Strand | Crown Zellerbach Corporation |
| Mr. Jack Walters | University of British Columbia |
| Dr. Steve Webster | Weyerhaeuser Company |

The efforts of this committee and the commitments of individual authors in donating time and effort to this conference resulted in an excellent program. The moderators, Dr. T. M. Ballard, University of British Columbia; Dr. G. W. Bengston, Oregon State University; Dr. B. Thomas, Bureau of Land Management; Mr. L. Hillman, Union Chemicals Division; Mr. N. S. Parker, Western Helicopter Services, Inc.; Mr. W. Hite, Champion International; Mr. R. Dickhaus, Georgia-Pacific Corporation; and Mr. R. Tarrant, U.S. Forest Service, did a most appreciated job of running the program and keeping the conference on schedule.

Ms. Ruth Jacobson of the College of Forest Resources was responsible for overall coordination and conference arrangements, a real challenge in a conference of this magnitude.

Finally, the vast job of preparation and technical editing of this publication was in the capable hands of Mr. John Murphy, editor for the College of Forest Resources.

We hope that this volume will be useful to all those involved in forest fertilization in the Pacific Northwest.

S. P. Gessel R. M. Kenady W. A. Atkinson

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