



Modular Based Training Facilitator's Guide





Ministry of Forests
Forest Practices Branch

Acknowledgements

Thanks are extended to Rob Brockley with the Ministry of Forests' Kalamalka Research Station; Reid Carter, formerly with TimberWest Forest Ltd.; and Mel Scott at the Forest Practices Branch, Ministry of Forests, for their assistance and advice in producing this course material. As well, Mike Fidgeon, Ron Gray, Guy Newsome, Ivan Listar, Les Herring and Lou Tromp, all from the Ministry of Forests, contributed comments and suggestions on a pilot version of the course material. Frank Barber, of the Ministry of Forests, Forest Practices Branch, Bryce Bancroft of Symmetree Consulting Group Ltd. and Jane Perry, forestry consultant, updated the facilitator's guide and participant's workbook to produce these revised editions. TM Communications is gratefully acknowledged for final compilation and production. Funding for this course material was provided by Forest Renewal BC.

Contents

Acknowledg	gements			
Instructions	to the Facilitator			
How to	Use this Guide			
Workshop II	ntroduction			
Purpose				
Specific	Learning Objectivesv			
Target A	udiencev			
Format.	v			
Material	lsvii			
Facilitat	orsvii			
Instructi	onsvii			
Introductio	on			
Lesson 1	Workshop Overview			
Lesson 2	Introduction to Forest Fertilization			
Program P	8			
Lesson 3	Forest Fertilization Program 3 • 1			
Lesson 4	Biological Factors			
Lesson 5				
Lesson 6	Stand Selection			
Operations	5			
Lesson 7	Foliar Analysis 7 • ·			
Lesson 8	Contract Administration 8 •			
Lesson 9	Operational Fertilization9 • ·			
Lesson 10	Monitoring 10 •			
Appendix				
	zation and Management ObjectivesA • •			
	sis Exercises			
Calculating I	Fertilizer Application Rates A • 6			

Instructions to the Facilitator

How to Use this Guide

You have been contracted to communicate the information included in this facilitator's guide to workshop participants. You must have the approval of the Ministry of Forests contact person before adding information or changing any portions of the intended message of this workshop.

The success of any workshop will depend on how well the facilitator selects activities to communicate the intended message to the participants. This guide is a complete package and should address the needs of most audiences. However, the care and thoroughness with which you plan and prepare for each workshop will make the difference between a mediocre and a successful event. Please review these materials carefully and enjoy your role in the learning process.

This guide is designed to help you prepare for and deliver this workshop.

The Workshop Introduction contains general information on the background, objectives, target audience and format for the workshop. Please read this information to ensure that you understand why and how this workshop was developed.

Lesson plans at the beginning of each lesson provide learning objectives, suggested delivery techniques and specific equipment and material requirements that you will have to coordinate. Each lesson contains explanatory information and copies of required overhead transparencies.

The participant's workbook has been created from the facilitator's guide. You should also review the workbook and become familiar with that material and the way in which it is presented.

Workshop Introduction

Purpose

The main purpose of this workshop is to provide participants with an overview of planning and operations for forest fertilization programs and projects through clarification of the use, intent and requirements of the *Forest Fertilization Guidebook* and the associated legislation and regulations under the Forest Practices Code.

Specific Learning Objectives

Participants will:

- ▲ be introduced to the concepts and principles of forest fertilization
- ▲ learn the strategic purposes of forest fertilization
- ▲ review the basic conditions for using forest fertilization as an appropriate forest management tool
- learn to select, evaluate and rank stands for fertilization
- gain the information needed to collect samples for an analysis of foliar nutrient concentrations
- ▲ learn the main points of forest fertilization contract administration
- ▲ investigate the requirements for the operation, implementation and monitoring of forest fertilization, as outlined in the Forest Practices Code
- ▲ understand the correct and safe manner with which to apply fertilizer and monitor its effects.

Target Audience

This workshop will be of interest and use to industry, government and consulting personnel responsible for preparing, implementing or monitoring prescriptions and contracts for fertilization.

Format

This forest fertilization workshop consists of ten lessons and is divided into two main sessions to separately address program planning and operations. Each session will require approximately a half day. This workshop has been designed to cover one day but it could be expanded, where required, to two days during the field season for an audience with advanced needs for program and operations details. The facilitator's guide and participant's workbook include appendices of useful reference documents that provide an expanded foundation for program planning and project operations. The review and discussion of the appendices could be combined with a half-day field trip to view active operations, monitoring methods or treated stands showing fertilization response.

The program planning session presents workshop participants with an overview for planning and prescribing fertilization, in relation to the

Forest Practices Code, at the forest estate and stand levels. The second session covers the operational aspects of a forest fertilization program – operation, implementation and monitoring. The purpose is to explain the important points of the Forest Practices Code *Forest Fertilization Guidebook* that pertain to the successful and correct operation, implementation and monitoring of a fertilization program.

Depending on the backgrounds and information needs of the participants, you, as the facilitator, may wish to minimize or even eliminate some of the lessons in the guide in order to concentrate on more relevant sections of the course to better meet the participants' needs. The time allotments for each lesson are suggestions for covering the entire *Forest Fertilization* course in seven hours. Note that the appendices include useful background information that has significant value for the participants, either as part of the workshop or as reference material for later use.

The video, *Forest Fertilization in British Columbia* is best used throughout the course as a supplement to the lecturettes and group discussion. The facilitator should decide whether to show the relevant portion of the video at the beginning of the lesson or as a summary at the end. In general, if the participants' experience is low or minimal, it is best to use the video as an introduction to the lesson. If the participants have a higher level of experience, the video can be used as a lesson summary or even skipped altogether if time is running short. The use of a video, however, gives the facilitator a short break and presents information in a refreshing form for the participants.

Various instructional techniques can be used to achieved the workshop objectives, including:

- lecturettes
- ▲ Forest Fertilization video
- **\(\)** case studies
- group exercises
- ▲ class discussion.

Participant involvement throughout the workshop should be the focus. The role of the facilitator is to direct discussions and clarify points. Maintaining tight control over time during the exercises is an important task.

Materials

Materials included with this guide include:

- overhead transparencies for all lessons
- ▲ Forest Fertilization in British Columbia video
- participant's workbook, including Forest Fertilization Guidebook
- references.

The workshop is designed for a maximum of 20–24 participants per course. Including more participants may make the group difficult to manage and will reduce the value of the learning experience for everyone.

Facilitators

This workshop is designed to be delivered by one facilitator, who should be very familiar with the subject matter.

Instructions

Read through all of the materials in the facilitator's guide carefully and ensure that you are comfortable with the flow and the materials for all the workshop exercises. If you have any questions, please ask the Ministry of Forests contact person.

You should also review the following references:

- ▲ Forest Fertilization Guidebook, September 1995, Ministry of Forests
- ▲ Forest Fertilization in British Columbia video
- ▲ Technical references included with facilitator's guide
- ▲ Biosolids ... An Opportunity for Growth video.